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Building a Better Pedestrian Flow Model for the Indianapolis Motor Speedway

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BUILDING A BETTER PEDESTRIAN FLOW MODEL FOR THE INDIANAPOLIS
MOTOR SPEEDWAY

A Dissertation

Submitted to the Faculty

of

Purdue University

by

Charles Edward Anklam III

In Partial Fulfillment of the

Requirements for the Degree

of

Doctor of Philosophy

May 2015

Purdue University

West Lafayette, Indiana

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To my loving wife, Angela-her incredible support over the past 20 years has enabled me to accomplish so much in this life. Truly, God gave me you.

To my children, Ayden, Gracie, and Charlie-they, above all else, are my GREATEST accomplishment in this life.

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As I conclude this effort I am constantly humbled by the efforts of others that allowed me to arrive at this moment. To state that this achievement is solely a product of my academic success in higher education denies the foundation on which it was built. My parents had by far the greatest impact on my life and future success. Their steadfast love, guidance, and dedication taught me to always strive for the path of the hard right over the easy wrong, and provided me with an unshakable faith in God that allowed me to commit to excellence in all that I undertake. Without that beginning, I would not have made the life's choices I have to date, and would not have accomplished this task; to be half the parent to my children they were to me, would be my greatest honor.

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Finally, to my greatest heroes: the Marines I had the honor and privilege of serving and leading in combat. The memory of the fallen and wounded are a burden I will always bear, but daily reminds me of God's grace, and provides a measure of steeled resolve to live each day of the rest of my life, honoring theirs. *Semper Fidelis.*

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ABSTRACT

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Undeniable shifts in how public events are conducted with regard to security have occurred since the terrorist attacks on the United States on September 11, 2001. Increased security requirements are a product of the paradigm shift in security for Mega-Event locations. This study examined the Indianapolis Motor Speedway during Mega-Event status events, with specific focus on the 2013, Indianapolis 500 automobile race. The objective was to study the phenomenon of pedestrian flow as it related to entry gate procedures and resulting impacts. This data was then used to compile modeling scenarios employing AnyLogic computer software that allowed for free-agent, variable play to replicate the conditions of the security processing. Through manipulation of agent variables the researcher was able to determine the optimal pedestrian throughput under maximum load conditions. This data was therefore used to identify the processing time standard required in order for security personnel to achieve steady-state flow, which allowed for adequately conducted security checks, and reduction of patron wait times.

CHAPTER 1. INTRODUCTION

This chapter provides an overview of the stated research topic and justification for its study. It is intended to provide the reader with information concerning the background, scope of study, research question, and key terms and definitions. It will conclude with a summary outlining the main points of the chapter.

1.1 Background

Since the terrorist attacks on the United States on September 11th, 2001 a heightened state of security has existed. Traditional views of what constitute security, and how to provide it, have changed as well. Events that previously focused security efforts on how to control for riots, respond to natural disasters, or other more common considerations have since shifted to incorporate terroristic threats as a primary concern. Efforts to curb these potential threats have manifested in myriad forms of scrutiny and security application at all manner of events where high profile or large gatherings of spectators are present. In this regard, locations such as the Indianapolis Motor Speedway which hosts events such as the Indianapolis 500 automobile race have directly been impacted by the perceived need to thwart potential terrorist attacks through increased security. The effects of these increased security considerations have resulted in increased entry control procedures and lengthened wait time for patrons desiring access to events at

the Indianapolis Motor Speedway. This is a result of existing infrastructure and operational frameworks for procedures not adjusting to the new security paradigm.

1.2 Scope

The Indianapolis Motor Speedway has been an independently owned and operated business since it opened in 1909. As a privately owned and operated business expenditures on matters such as security are paid directly by the owners, rather than from state or local funding sources that typically cover equally sized sporting events such as football games. Due to this unique challenge, security associated with entrance and admission is the responsibility of the Indianapolis Motor Speedway ownership, while external security falls on the shoulders of local, state, and federal agencies. Since its founding, drastic changes to the environment surrounding the Indianapolis Motor Speedway has occurred through urban development. This development has continually restricted access and hampered traffic flow for pedestrians attending sporting events held there. In years past, only ticket stubbing and brief, random cooler checks looking for glass bottles was required at the event. Under these conditions, despite increasingly larger crowds and greater pedestrian flow challenges, the flow of patrons into the facility still managed to move relatively smoothly.

After the terrorist attacks on the United States in 2001, additional security control procedures implemented at the Indianapolis Motor Speedway have resulted in enhanced security at checkpoints in conjunction with ticket stubbing. These checkpoints require each patron to have their personal effects such as coolers and bags checked in accordance with Transportation Safety Administration (TSA) standards before admission is granted

to the speedway grounds. As patron attendance for race day events such as the Indianapolis 500 routinely exceed several hundred thousand attendees, this requirement for increased security thoroughness has resulted in a significant delay for patrons waiting to access the facility. In turn, this increased wait time has created large backups and gatherings of patrons in parking and staging areas while waiting to gain access, further complicating the traffic flow and security concerns.

1.3 Significance

The significance of improving flow efficiency at the Indianapolis Motor Speedway, while maintaining or even improving security, is critical to not only the local community and the speedway, but to a lesser extent the state of Indiana and the entire country. As the nation reacts to acts of mass violence or terror, the echoes of such acts are routinely manifested in lack of confidence or uneasiness for the masses to enjoy routine activities. This directly impacts social interactions, national confidence, and economic interests. In the post September 11, 2001 world, countries, states, and even local communities are increasingly viewed in terms of capacity, competence, and status by their ability to provide security (Houlihan & Giulianotti, 2012). Successful attacks, when carried out, serve to further embolden those with criminalistic or terrorist desires.

From the micro level, the need to streamline the flow process is clear to anyone who has ever attended an event at the Indianapolis Motor Speedway; the lines are long and the process seemingly horribly inefficient. Patrons also expect to attend an event where they feel safe from threats. The need to produce a “steady-state” flow of patrons from parking and walking routes, all the way to, and through the security lanes, is critical

to the success of the speedway. From the macro level, the need spans both economic and social considerations. The continued infusion of monetary investment into the local region generated from sporting events at the speedway, the confidence of patrons to feel safe and comfortable, and the status and competency that is attributed to local, state, and even national capabilities to provide a secure environment is crucial (Boyle & Haggerty, 2009).

1.4 Statement of Purpose

The purpose of this research was to explore the increased security thoroughness requirements at the Indianapolis Motor Speedway, and their resulting impact on existing flow patterns, patron parking and entry gate procedures. Increased patron security processing times have led to the question “will improved pedestrian flows and patterns resolve the issue while still achieving the desired security and safety goals?” Through the use of AnyLogic, Agent Based Modeling this study also explored how improved flow modeling scenarios could improve conditions while increasing safety and security.

1.5 Research Question

The questions addressed in this research were:

1. Can a better flow pattern be developed that will increase safety and security, while minimizing patron entry wait time from parking through security processing at the Indianapolis Motor Speedway?
2. What is the impact of gate processing and current flow patterns such as patron parking and entry gate restrictions and locations?

1.6 Assumptions

The following assumptions were inherent in the design of this study:

1. There was a need to study the Indianapolis Motor Speedway (using qualitative and quantitative aspects) as a venue within itself pertaining to security and increased challenges associated with pedestrian flow.
2. Subjects observed represented an anonymous sampling of the total patron attendance, thereby preventing subjects from altering performance or performing actions to subvert certain aspects of security.
3. The participants sampled represented a homogeneous sampling group based upon typical patron demographics and was sufficient enough in size to accurately obtain data necessary for the completion of the study, according to the Central Limit Theorem.
4. Observation and data gathering points varied by time and location which allowed for sufficient sampling, representative of the event population.
5. Observing and recording data spanning the course of two years, at two separate Indianapolis Motor Speedway events, specifically the Indianapolis 500 automobile race, was sufficient enough to gather data for this research.
6. The research methods used were adequate to answering the stated research question.

1.7 Limitations

The following limitations were inherent in the design of this study:

1. The study was limited to data collected from the 2012 and 2013 Indianapolis 500 automobile race.

2. This study was limited by the number of graduate student research assistants made available to conduct observations and record data from the Large Event Planning course offered conducted by Purdue University.
3. This study was limited to the cooperation provided by the chairmen of the Indianapolis Motor Speedway and associated security and event staff personnel.
4. This study was limited by the Department of Naval Science, and College of Technology for the allotted time permitted and resources made available to conduct this study.

1.8 Delimitations

The following delimitations were inherent in the design of this study:

1. This study was limited by the resources, facilities, and faculty availability of Purdue University, West Lafayette campus.
2. The study only observed patrons attending the Indianapolis 500 automobile race in 2012 and 2013, and only used data from 2013 for modeling purposes.
3. This study was limited to the period of time spanning the gathering of research and data for this project.
4. The study only observed pedestrian flow challenges from the external premises and entry gates of the Indianapolis Motor Speedway and did not analyze the security staff and management's process beyond entry procedures.

1.9 Definitions of Key Terms

Agent based modeling – “Decentralized modeling, defining behavior at the individual level which allows for bottom up representation of a global behavior, typically applied in areas such as artificial intelligence, complex sciences, and gaming theory” (Borshchev & Filippov, 2004, 7).

Crowd management – “Strategies for sporting matches, large concerts, public demonstrations, etc. that seeks to avoid crowd related disasters and ensure public safety” (Zhan, Monekosso, Remangnino, Valastin, & Qun Xu, 2007, 1).

Heterogeneous pedestrian flow – “How pedestrians with like elements such as age, gender, and purpose that while similar, may cause them to walk differently in the same place and time as a result of different physical conditions and personal reasons” (Campanella, Hoogendoorn, & Daamen, 2009, 148).

Mega-Event – “A high profile, deeply symbolic event, that can simultaneously impact the political, economic, and cultural aspects of a host environment. Their influence serves to not only mediate policy, but develop infrastructure” (Boyle & Haggerty, 2009, 257).

Modeling – “A way of solving problems that occur in the real world when using real systems or prototypes are too costly or not practical” (Borshchev & Filippov, 2004, 1).

NOMAD model – “Microscopic pedestrian flow model that describes pedestrian actions as activities, and models walking behavior of pedestrians while performing activities” (Campanella, Hoogendoorn, & Daamen, 2009, 148).

Pedestrian modeling – “Modeling classified into three categories: Microscopic, Macroscopic, and Mesoscopic modeling. Micro looks at individual pedestrians, Macro observes crowd density, and Meso provides for pedestrian models representing regions” (Bauer, Seer & Brandle, 2007, 1035-1036).

Security paradigm – How previous notions of security, what it consists of, and how and why it is implemented changes (Boyle & Haggerty, 2009).

Simulation modeling – “Modeling considering a set of rules that define how the system being modeled will change in the future, based on its current state” (Borshchev & Filippov, 2004, 1).

Steady-state flow – The ability for pedestrian lines when processing through security to maintain a consistent tempo, within a specified time parameter, thereby allowing security personnel to monitor and assess effectiveness.

1.10 Summary

This chapter discussed the background and scope of study with specific reference to why this study is being conducted and the proposed research question being asked.

The chapter further described the assumptions, limitations, and delimitations, along with certain key terms and definitions that allowed the researcher to establish a baseline of knowledge for the reader. In this capacity, the researcher has established the validity of the proposed research, parameters for the study, and legitimacy of the plan in which it was conducted. The next chapter will cover the review of relevant literature in detail.

CHAPTER 2. REVIEW OF RELEVANT LITERATURE

This chapter provides an analysis of relevant literature. This approach knowingly omitted from review many variables contributing to the topic, and instead focused on a few, key areas that were most applicable to the stated research question. These included areas such as the security requirements themselves, pedestrian flow models, and agent based modeling. In order to aptly study such a topic, a review of literature was therefore focused on select areas that served to further narrow the topic within these categories, and still answer the research question. By further narrowing the field within these select topics to pertain specifically to the research question, the author feels that he qualified his research. This was done because the subject of the case study was under researched relative to the question, therefore requiring him to use literature from studies with enough similarity in size and scope of the proposed study to show relevance. Examples of how this was done can be seen in the security review. Here the author focused on literature mostly related to the post September 11, 2001 terrorist attacks, in order to focus on those issues that have resulted in a paradigm shift concerning security. Doing so provided further clarity to the issue as it related to the field of study, within the field of security itself. Each additional topic was studied in the same manner in order to show how each area has relevance to the stated question.

Admittedly, despite this researcher's best effort, scrutiny will be applied by some for not including a more exhaustive list of literature to the review. Others may question the divergence of topics or topic selection choice. However, as the case study topic is relatively un-researched with regard to the specific research question, the author feels that the parameters used to gather applicable literature was the most effective way to aptly conduct this study and, as the output will show, satisfactorily justified the research questions.

2.1 Approach to Review

In order to effectively answer the stated question, one must first understand the larger picture of why it has become a topic of study and the major factors associated with it. The approach chosen for this study is multi-fold. This review first considers what security changes have occurred as a result of September 11, 2001 as it pertains to the research topic. The chapter also examines pedestrian flow models and research associated with mass groups accessing large events and what impacts their movement. Lastly, this work will examine Agent Based Modeling within modeling scenarios, its capabilities, and applicability for studies such as this. While each of these topics could serve as an area of focus within themselves, the author explores their relationship and applicability to the stated subject matter. These core areas will allow for adequate research of pertinent literature and validate the need for the study, while exposing under researched aspects critical to answering the research question. With regard to the Indianapolis Motor Speedway, little research has been published exclusively focusing on the topic of entry flow models to this event as a result of increased security procedures.

Therefore, analysis of like sized and organized events such as Olympic Games and large sporting events will provide a frame of reference for understanding how each of the stated focus areas has applicability.

The approach taken by the author allows for a larger overview and holistic perspective of the issue, thereby providing clarity for the reader when viewing the security nuances specific to the Indianapolis Motor Speedway. In this regard, the study will answer just one of many specific concerns related to increased security; increased patron wait time. However, it will also serve as a platform from which further studies can be conducted to advance scholarly research on the factors associated with this topic, both at the Indianapolis Motor Speedway, as well as for other large events.

2.2 Search Areas for Literature

Due to the broad nature of topics studied, encompassing both technically focused, quantitative studies, as well as qualitative studies, varied sources were employed in gathering literature for this review. Among the sources employed were Purdue Library Systems, Educational Resource Information Center (ERIC), and various refereed and peer-reviewed journals and publications from World Wide Political Science Abstracts, the Journal of Emergency Management, International Affairs, and Journal of National Science Academy of America, to name a few. Information specific to security considerations was also obtained through access to military sources such as the Naval Post Graduate School and various doctrinal publications.

2.3 Security of Large Events Post September 11th, 2001

In order to understand the security requirements levied on the Indianapolis Motor Speedway, it is important to grasp the larger issue from which these policies stem. When considering increased security, inevitably questions related to the restriction to, or perhaps even loss of, civil liberties and the intrusion on personal rights becomes entangled in this debate. We see this with clarity respective to airport security checks, and increasingly more when examining security procedures at large sporting events. Those responsible for administering security have therefore two roles to play. They not only need to ensure the stated goal of providing security is accomplished, but they must also administer these security procedures in a manner that still respects the individual liberties expected by American citizens. Often times these two areas blend together when, in order to provide security, certain aspects of individual liberty must be surrendered. These increased security requirements then create challenge for both the patrons wanting to safely and speedily access locations, and the security personnel who must ensure they are adequately checked.

Since September 11, 2001 large, Mega-Event scenarios have come under a great deal of scrutiny to provide security. As Boyle and Haggerty (2009) pointed out, a shift in how security is approached has changed; what previously had been discounted as unfeasible or unlikely as a potential security risk has now become a subject that must be given equal consideration and weight. As referenced from Haggerty (2003), Boyle and Haggerty (2009) point out:

The ascendancy of the sentiment of incalculable risk has shifted security thinking towards a form of precautionary governance, a logic that is associated

predominantly with environmental protection but is increasingly expressed in security domains ranging from personal crime prevention, governance of dangerous offenders and the antiterrorism initiatives (p. 260).

In studying large sporting venues such as the Olympic Games over a 20 year period, Boyle and Haggerty (2009) chronicled the monetary expenditure associated with such events. Marked increases are noted post September 11, 2001. Boyle and Haggerty (2009) concluded that this shift is more than a mere temporary position. They posit that the epistemological and ontological perspectives of security have changed due to past acts of terrorism. As such, these previous notions of what security entails have morphed into spectacular dynamics that are institutionalized into the fabric of society. This notion of security, now woven tightly within the concept of society, are longer lasting, and are employed with greater impact than the event for which they were implemented to serve (Boyle & Haggerty, 2009). Table 2.1 depicts the monetary investment associated with Olympic Games from 1984 to 2004, clearly illustrating the significant jump in spending from games post September 11, 2001 as compared to those before.

Additional discussion of Olympic Games and other large scale sporting events post-September 11, 2001 provide further clarity on the enormous increased expenditures and associated security considerations employed as acceptance of this changing security paradigm and its implications are incorporated into the planning and execution of events.

Table 2.1.

Security Expenditures for Olympic Summer Games, 1984–2004

<i>Games</i>	<i>Expenditures (million USD)</i>	<i>Cost per athlete (USD)</i>
Los Angeles (1984)	79.4 million	11,627
Seoul (1988)	111.7 million	13,312
Barcelona (1992)	66.2 million	7,072
Atlanta (1996)	108.2 million	10,486
Sydney (2000)	179.6 million	16,062
Athens (2004)	1.5 billion	142,897

Source. Wall Street Journal, August 22, 2004, cited in Coaffee and Murakami-Wood (2006:513).

Although studies of this scope that pertain directly to the Indianapolis Motor Speedway are not available, the size and scope of the event is comparable to that in which Boyle and Haggerty (2009) have studied through Olympic Games and large sporting events. For this reason, this analysis of their work is not only applicable, but insightful to explain the rationale and impact of increased security at the Indianapolis Motor Speedway. As Bellavita (2007) illustrated, the relationship is an aphorism; despite nuances between the individual events, their location, or even scale, the requisite security applied and underlying need to provide it remains constant. An examination of security measures for Olympic Games and other Mega-Events both domestically and internationally confirm that as a response to, and because of an expectation of security, this security requirement is nested within the political, economic, and social fabric of not only nations, but the cities hosting such events (Boyle & Haggerty, 2009). As Ryan (2002) stated when addressing Olympic Game security as an indicator to the depth and breadth of how this new security paradigm has impacted how security is approached:

A security plan on the Olympic scale is directly related to the national defense of any host country.... But the traditional national defense has been principally to defend against conventional military attack, not necessarily against internal or external terrorist attack. The security operations for the Olympics Games are in fact, exactly designed to do just that, and much more. It simply tests every plan we have for every contingency. The lessons from this for any nation must be preserved and absorbed and developed further. National security now begins on the streets of our cities, the ports and airports, and vulnerable borders which all nations have. (24–25)

Elements of rational thought and traditional aspects of employing risk management have changed as well. Boyle and Haggerty (2009) attributed this change as manifesting itself into two areas: “the operational ‘-nuts and bolts-‘of security provisions and the management of the representational elements of those efforts” (p. 262). As Houlihan and Giulianotti (2012) pointed out, the nature of security today is closely associated with the political power and position of a local, regional, or even national entity. This in turn makes certain locations, and the venues hosted there such as large sporting events, a lucrative target for terrorist acts. From Aradau’s (2010) contribution on the study of materialization, readers gain perspective from the discourse of what constitutes critical infrastructure to include areas that provide cultural, social and materialized considerations. From these examples one can gain insight as to the importance of how protection of Mega-Events such as the Indianapolis Motor Speedway has more value than just the physical aspects of security.

To address this potentially devastating new threat, security that once was more overt and relied on a more linear, militaristic approach now incorporates more technologically driven methods such as close-circuit television devices (Boyle & Haggert, 2009). The notion of risk management has also undergone a transformation in which security planners, under direct pressure from public and political expectations for a “zero-defects” security solution, have set aside previous, rationally focused experience based thinking. This has been replaced by what Boyle and Haggerty (2009) quote from Hinds and Vlachou (2007) as the term, “high consequence aversion” (p.261). Here, the concept of security is void of rational decision making and, as a result, has manifested into the scenario that every *conceivable* threat must be treated as a *viable* threat, thereby resulting in huge expenditures of time, money, and resources that are often times unnecessary and inconvenience patrons.

Fussey and Coaffee (2012) stated that increased threats from terrorism have dwarfed the logistical and financial resources of host environments. A chronicled list of terrorist activity at large scale sporting events and Olympic Games showcase the increased desirability of these locations as lucrative targets due to their symbolism and potentially devastating effect attacks have. Also illustrated, is that as threats increase and the security requirements for addressing them become increasingly expensive and logistically intensive, “band-aid” approaches or short term, temporary security improvements are no longer capable of adequately addressing the threat. As Fussey and Coaffee (2012) stated, “Mega-Events involve a level of organization unmatched outside wartime and planning that requires significant alterations to the governance of the host city or country” (p. 269).

Fussey and Coaffee (2012) equate such expenditures and involvement with the militarization or “hardening” of locations in which Mega-Events will be held. The authors Fussey and Coaffee contend that only permanent, large scale infrastructure improvements are capable of handling this desired tangible and symbolic change. This leads to significant challenges for events such as the Indianapolis Motor Speedway as the symbolism and scope of many of the events held there clearly places it among “Mega-Event” status and, as such, if an attack were to occur, the political, economic, and social impacts would clearly be devastating. Compounding this challenge is the fact existing urban infrastructure has developed around the speedway absent of these security considerations, therefore making change less flexible without significant monetary investment.

Zekulin (2009) attributed the value of a successful attack on large Mega-Events as a primary incentive to terrorist groups. As large scale sporting or Mega-Events increasingly becoming more lucrative targets, their value is difficult to measure because of the associated media coverage and social appeal (Zekulin, 2009). Additionally, a cost benefit ratio must be included into the planning equation at some point. Invariably there will be great expenditures of capital to deter criminal or terroristic acts. The impact however, if such an event were to occur, can be completely devastating and unrecoverable from public perception perspectives.

As Zekulin (2009) pointed out, providing security at Mega-Events is made increasingly difficult as their locations are fixed, such as football stadiums or arenas, or as in the case of Olympic Games, announced years ahead of time, giving those planning attacks ample time to prepare. The expenditure of capital, resources, logistical planning,

and in some cases, infrastructure development to support such events can be overshadowed by a seemingly small, but effectively carried out act of terrorism, or even criminal acts with terroristic tones. The Atlanta Olympic Games in 1996 illustrate this well. Despite having been planned, developed, and prepared for, an act of terrorism occurred that not only resulted in one death and the injury of personnel, but also the loss of confidence in the security process, thereby impacting social and economic factors. Additionally, over 100 copy-cat bombs or bomb threats stemmed from the actual event, which essentially overloaded the law enforcement and investigative capacity available (Zekulin, 2009).

What these studies illustrate is the dynamic effect of well-placed attacks, even if the attacks themselves were less than spectacular. The psychological impacts to a populace from terrorist attacks have proven to be traumatic and long lasting. Mega-Events categorize themselves as highly social, culturally significant venues with a nature of trust and expected peace. Why else would hundreds of thousands of people collect themselves into a confined, central area if such a notion was not expected? As such, the need to be protected from harm, or the perceived level of protection afforded, directly correlates to the willingness to attend such events.

Taylor and Toohey (2006) conducted a study analyzing the 2003 Rugby World Cup Soccer match to assess if the threat of terrorism and resulting safety and security considerations impacted patrons' decisions to attend the event, and if those factors detracted from the overall enjoyment of the event. The study described how different events, with different fan base demographics impacted the desire of fans to attend certain events (Taylor & Toohey, 2006). For security providers this framework can provide two

angles or view-points. The first is that in certain, seminal events with a dedicated fan base, the tolerance for increased security and the associated overt presence of such efforts may be inconsequential. In some regards fans are willing to go to great lengths to patron their sport regardless the inconvenience or risk. The second however, is that the media coverage and public opinion at large is decisive to the matter. Regardless of whether a specific fan approves or objects to certain security impacts, if the event is perceived as unsecure the resulting impressions could still negatively impact the event and therefore security planners are still compelled to provide adequate preparations (Taylor & Toohey, 2006).

The Indianapolis Motor Speedway is not alone in drastically increasing its security in recent years. However, studying the Indianapolis Motor Speedway as an event, or more aptly, a Mega-Event, allowed for the researcher to study other, large-scale, Mega-Event locations and occasions and draw relevant analysis that served to guide data collection and form parameters from which to view the speedway. As of 2013, the National Football League has implemented a much tougher bag check policy to better protect the fans at NFL football games (League, N.F., 2013). The recent 2012 London Olympic Games and other high profile sporting events such as the FIFE World Cup Soccer match are also examples of how increased security expectations, and requirements, have resulted in not only huge expenditures of capital and resources, but also in the inconvenience of patrons from increased security wait times. In this capacity other venues such as Olympic Games or large sporting events have many parallels with security that inference can be drawn from.

Mega-Event locations historically have resorted to enhancing security standards as societal expectations for security have increased in response to attacks and threats of attacks. A longitudinal study of Olympic Games showcases the importance of employing security considerations into the analysis and development of venues to allow for maximum safety and efficiency for security providers, along with maximum ease of effort on the patron. In locations whose development occurred prior to the paradigm shift in security associated with the September 11, 2001 attacks, additional security considerations have resulted in either a need to restructure pedestrian and traffic flow patterns, or significantly alter the planning for hosting events.

Locations hosting such Mega-Event activities are purposely designed and located to facilitate the large number of patrons expected to attend the event. Traffic considerations, both on access to the event, and impact on surrounding areas, are taken into consideration prior to development. Comparison of previous Olympic Games that developed infrastructure specifically to host the event, and those whose infrastructure was largely pre-existing but modified, served as a method of measurement concerning flow patterns and security. Specifically, a close examination of the 1996 Olympic Games in Atlanta, Georgia, and the 2012 London Olympic Games were reviewed along with current practices of the National Football League.

As Konstantaki and Wickens (2010) demonstrated in a survey of London residents during the build up to the 2012 Olympic Games, traffic congestion, security concerns, and overall logistical concerns were consistently among the top concerns by citizens. Fed by the increasingly uncertain capabilities of large cities to protect citizens from terrorist attacks, like the July 7th, 2005 London bombing of the mass transit system,

Olympic organizers were forced to contend with a situation in which security considerations, particularly on traffic flow, was paramount. This was particularly important to the mass transit system (Kassens, 2009). According to Konstantaki and Wickens, (2010) issues confronting planners included:

1. “Limited budget versus infinite demands.
2. Accessibility versus protection.
3. Technology versus timescales.
4. Multi-agency, international approaches versus coordination overheads.
5. Low-profile versus pre-emptive policing” (p. 50-53).

As it pertained directly to the challenge of security analysis and flow patterns, the larger issue for London 2012 was to accurately predict and address where to apply resources. This essentially translates into ushering in a new element of Mega-Event planning; risk management (Jennings & Lodge, 2009; 2011). Planners must now not only anticipate where services are needed, but rationalize which aspects will receive more attention, and funding for security. This in turn impacts all other aspects of security planning and application. Figure 2.1 below illustrates some of the largest threats by category to Olympic Games over a span of nearly 40 years. Security analysis in this capacity requires planners to not only address how to prevent incidents, but perhaps most importantly, how to address issues once they occur.

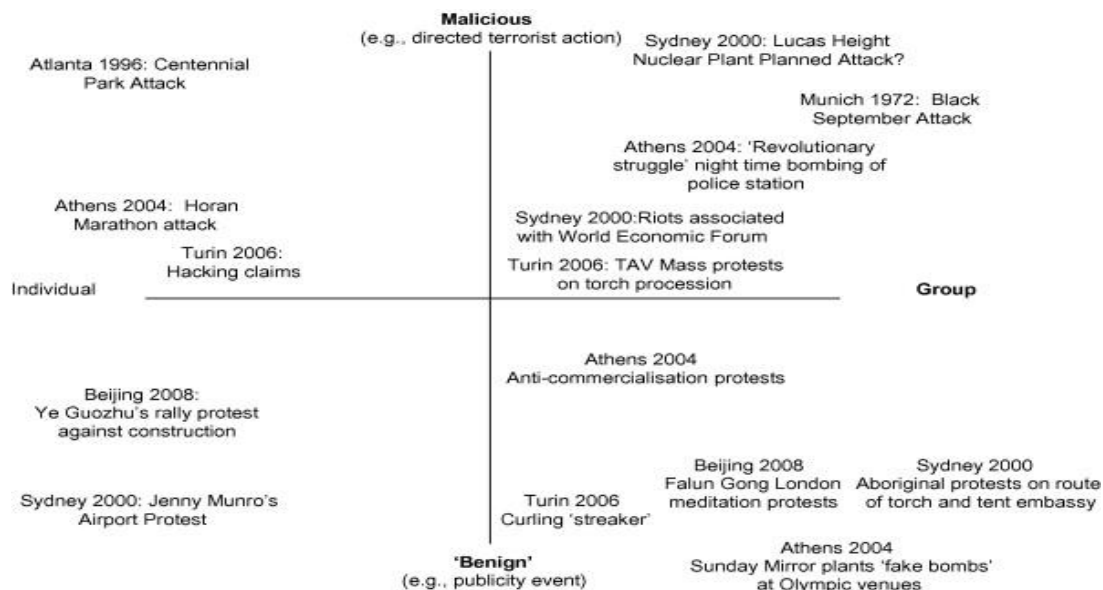


Figure 2.1. Dimensions of Olympic Security

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The London games were arguably better planned and prepared for than previous Olympics, given the significant threat of violence. The Salt Lake City 2001, Athens 2004, and Torino 2006 Winter Games to name a few, served to increasingly develop proficiency in security and traffic analysis. Interestingly enough, the further removed from September 11, 2001, the *greater* the perceived need for increased security and planning existed. By examining the costs associated with Olympic games prior to September 11, 2001, to those after, it is evident that increased security concerns have resulted in often very large, and very permanent projects designed to better manage traffic at these games, and provide for enhanced response capability if something were to go wrong. When comparing these expenditures and modifications against existing fixed-

site locations like the Indianapolis Motor Speedway, whose patron attendance and recognition mirror many Olympic events, the need for increased security technology and planning is apparent.

The 1996 Atlanta Olympics also provided great insight into the planning considerations and importance of traffic pattern analysis involved in security considerations. Although this event occurred prior to the paradigm shift in security from September 11, 2001, forethought and consideration for addressing security concerns were already becoming reality. The Atlanta games hosted over 100,000 contestants from 197 countries, and drew over two million spectators to an area slightly larger than eight square miles. The 1996 Olympic Games drew the largest gathering of any Olympic venue to date (Newman, 1996). Although the United States had hosted Olympic Games previously, the extreme size and complexity of traffic concerns associated with hosting the games in a location such as Atlanta required planners to ultimately redesign much of urban Atlanta with regard to road access. Furthermore, new facilities that were built specifically for the games, such as Centennial Park were designed specifically with pedestrian flow pattern consideration and security in mind.

As it pertains to existing fixed-site locations such as sporting arenas and stadiums, whose infrastructure and design was developed to support large numbers of patrons, the most relevant challenge exists on the processing of patrons and security procedures themselves. Currently, the National Football League is also facing the challenges of increased security requirements and the need to balance patron satisfaction. In 2013, the NFL unanimously voted to implement what they call a “clear-bag policy”. This means that no bag will be allowed into an NFL game that is not clear or larger than a wallet. The

anticipated goal of this program is to increase security and prevent potential threats while still allowing for expedient and proficient security processing. The official guidelines are

- “Bags that are clear plastic, vinyl or PVC and do not exceed 12” x 6” x 12”
(Official NFL team logo clear plastic tote bags are available through club merchandise outlets or at nflshop.com).
- One-gallon clear plastic freezer bag (Ziploc bag or similar).
- Small clutch bags, approximately the size of a hand, with or without a handle or strap can be taken into the stadium with one of the clear plastic bag options.

An exception will be made for medically necessary items after proper inspection at a gate designated for this purpose” (League, N.F., 2013).

What comparison and study of these past sporting and Olympic Games provide is clarity on the importance of pedestrian and traffic flow analysis in security. Each of the examples depicted employed varying degrees of security considerations in the planning and development of the venue. Collection of data pertaining to Mega-Event style venues is not effective without considering the implications of pedestrian flow and traffic pattern analysis and whether or not specific consideration was given to these aspects in the development of the respective venue. As the researcher will point out specifically with the Indianapolis Motor Speedway, a location that develops into Mega-Event status and receives the associated traffic concerns, but did not account for those considerations in its development is left with few options concerning security. Typically, the resulting effect is either poor security and greater traffic flow, or poor traffic flow with enhanced security. A closer examination of pedestrian flow specific to the Indianapolis Motor Speedway described later will further explain this analysis.

In conjunction with the perceived security concerns are the economic impacts mentioned earlier. In this regard, physical security considerations are linked to the perceived need to secure and maintain economic security. Matheson (2004) wrote in a critique of Mondello and Rishe (2004) that the economic derivative of sporting events on much smaller scales than that of typical Mega-Events actually result in higher economic impact. Matheson (2004) attributed this to four core areas: “crowding out, cost of hosting and security, multiplier analysis, and political economy” (p. 3-7). It is within the sub-categories of hosting and security, and political economy that comparison to the Indianapolis Motor Speedway can be best seen, as it could qualify as a smaller event throughout much of the year, and then annually grows to Mega-Event status for a few notable car races, such as the Indianapolis 500. Here then, the economic revenue generated from such a venue is closely linked with physical security as this event does not consistently produce high-value events on the Mega-Event scale, but when it does, the expectation, and spending for security associated with it, are driven by political expectation to extremely high levels. As Matheson (2004) pointed out, all too often these increased security measures are driven from the political economy vested in an event, and overshadow the revenue gain and, in some cases, might actually yield lower profits than smaller events.

This dynamic of increasing security coupled with larger monetary expenditures for mega-events validates much of the literature attesting to the paradigm shift in how security is viewed, and, increasingly become a permanent aspect of locations long after an event is over. This overlap of multiple areas like social, monetary, and political economy have, since the 2001 terrorist attacks, merged together to form a new outlook on

security. As such, literature focusing on this aspect of security that encompasses these contributing factors is relatively new as previous literature focused on these individual parts as separate, core areas of study. Literature regarding the impact of these factors on the Indianapolis Motor Speedway is relatively non-existent, therefore further justifying the need for this study. As we can see from Boyle and Haggerty (2009), Fussey and Coaffee (2012), Zekulin (2009), Bellavita (2007), and Atkinson and Young (2012), the integration of social, cultural, political, and economic aspects when planning for securing Mega-Events post the 2001 terrorist attacks is increasingly becoming more daunting of a task.

Prior to the 2001 terrorist attacks, the notion of securing sporting events or other large scale events was not viewed with as much significance as securing critical infrastructure such as electric, water, sewer, or other services. Increasingly though, host environments are being tasked with, and are expected to provide such security. Anderson (2009) discussed the complex and frustratingly difficult task planners and those responsible for security must contend with when examining security and what he labels as “futuraity.” In this regard, the task of security must provide for not only anticipated reaction to known past events, and events that currently exist, but also forecast and be effective against future unknown events. The planning requirements necessary to aptly prepare for and forecast these events require a great deal of sophistication and access to resources not available to most city level planners. Increasingly then the interoperability of local, state, and federal agencies are brought to bear for events that may only seemingly garner local or regional attention. It is within this context of increased security

requirements resulting in new models of cooperation within multiple agencies that one can examine individual factors of security.

These new security parameters, infused now within the umbrella of the post September 11, 2001 security models, include traffic flow and management of events to enable protection and reaction to situations that may arise. As part of the paradigm shift on security, being able to quickly and effectively respond to crisis is just as critical to the process as attempting to predict and prevent it. As Boyle and Haggerty (2009) have articulated, the notion of rationally predicting threats has been replaced by the compelling need to view all conceivable, and perhaps even unrealistic threats, as equal with regard to attention and planning.

In his discussion on futurity, Anderson (2009) alluded to these considerations and further described the unique challenges associated with them. Frazzano (2010) described the capacity challenges for security providers in the post September 11, 2001 world by examining incidents of terrorism. In his research the notion of limited capacity was presented in which most locations can adequately address a small, singular incident through shared cooperation and existing resources, but multiple incidents occurring at the same time would likely overload even the most robust capabilities. In this regard, this study examined how events such as the Indianapolis Motor Speedway, which requires a great deal of security, planning, and preparation in response to this paradigm shift in security, could benefit from enhanced procedures.

The security processing of patrons accessing the Indianapolis Motor Speedway is a key aspect of this discussion. As overall Mega-Event planning and considerations involve not just the facilities as a potential target for threats, but the masses of patrons

gathered in parking, staging, or processing lines as well, it is critical to ensure “steady-state” flow occurs. This means that for both patrons and security providers, the constant and steady flow of patrons into the Indianapolis Motor Speedway is most advantageous from a security standpoint.

2.4 Pedestrian Flow Models

The effect of implementing increased security has resulted in significant delays of patron processing time. As the Indianapolis Motor Speedway is a privately owned, independently operated business, the infrastructure and planning employed when initially built did not anticipate or account for many of the drastic changes since encountered. Among these was the rapid development of urban growth surrounding the property and increasingly fewer parking and staging areas for patrons. As one of the largest sporting events in the country, the Indianapolis 500 routinely brings several hundred thousand spectators to the Indianapolis Motor Speedway for race week (Gleason, 2013). This incredible strain on local resources to accommodate such a large influx has noticeably increased. Although private in ownership, due to the huge impact the Indianapolis Motor Speedway has on the local infrastructure and economy, great cooperation with local, state, and federal agencies has developed. A primary concern that has not been adequately studied or addressed is how to achieve balance between increased patron attendances, decreased logistical capability, and increased security requirements. This balance needs to be tempered with the goal of ensuring customer satisfaction and, with keeping monetary considerations as a primary concern because the Indianapolis Motor Speedway self-funds the security effort involved for the facility. Furthermore, due to huge numbers

of patrons, the extreme heat of summertime events, and the inability to cater food and beverage service to accommodate this many people accordingly, policies have been established to allow for patrons to bring in their own bags and coolers with refreshments.

In this capacity then, the researcher examined the role of pedestrian flow modeling to address the current issues as they exist. The capabilities of computer generated programs and algorithms available today significantly increase the ability to study phenomena, analyze data, and devise solutions to the problem of pedestrian flow. For this study of the pedestrian flow models of the Indianapolis Motor Speedway, existing literature on crowd analysis and available capabilities are examined.

The importance of studying pedestrian flow and crowd patterns first evolved in the late 19th century when Gustave Le Bon (1896) researched how crowds formed. Fruin (1971) pioneered a systematic approach to researching pedestrian locations. Davis and Braaksma (1988) discussed pedestrian flow planning for large gatherings such as airports, and Goffman (1972) researched individuals as units. These initial studies followed a series of regression modeling according to Helbing, Buzna, Johansson, and Werner (2004). However, these types of studies poorly portrayed the future anticipated movements of people, and therefore largely limit their applicability to the study of pedestrian flow modeling.

Johansson, Batty, Hayashi, Al Bar, Marcozzi, and Memish (2012) researched that it was only as recent as 40 years ago that the use of quantitative data had become common in the study of crowds, and that only during the preceding 20 years have qualitative techniques become more common place due to technological advancements. Many of these advancements have allowed for the study of crowds and pedestrian flows

at increasingly more detailed levels. According to Johansson, Batty, Hayashi, Al Bar, Marcozzi, and Memish (2012), the study of pedestrian flow is challenged by the unique environment itself, “this fundamental paradox in crowd management is one that needs to be resolved in a way which optimum flows are maintained and the crowds react appropriately to the constraints imposed on their location and movement” (p. 152).

Schadschneider, Klingsch, Klupfel, Kretz, Rogsch and Seyfried (2011) contributed much to the debate on utilizing modeling for pedestrian flow when studying evacuation modeling. Although respective to egress from confined areas and mass gatherings, the data and analysis conducted is still applicable for comparison to the study of pedestrian flow. The authors incorporated the known effects of pedestrian flow such as jamming and lane formations, with the use of computer generated modeling systems and determined that pedestrians essentially follow three basic forms of behavior. Schadschneider, Klingsch, Klupfel, Kretz, Rogsch and Seyfried (2011) described these as the strategic, tactical, and operational level. In strategic, pedestrians make a determination of the activities in which they will participate. The tactical level implies short term decisions such as indented walking route or obstacles. The operational level is defined as the associated behavior in response to obstacles or anomalies.

Schadschneider, Klingsch, Klupfel, Kretz, Rogsch and Seyfried (2011) submitted that the use of software in conjunction with known data points could lead to more effective use of available space and contribute to flow management plans that served to streamline pedestrian flows in emergencies. From the perspective of what is known about pedestrian modeling using newer modeling technology, the study of pedestrian

flow modeling for security considerations at the Indianapolis Motor Speedway is relatively untouched and therefore in need of expanded research.

Through the development of increasingly more accurate and advanced software, more complex systems can be employed that provide greater efficacy in modeling pedestrian flows. Johansson, Batty, Hayashi, Al Bar, Marcozzi, and Memish (2012) stated that with the use of agent based models, concepts such as flocking, swarming, and crowd dynamics associated with individual characteristics are better defined and employed in the modeling scenario. These newly adapted modeling techniques stand to provide a great deal of granularity to qualitative based pedestrian flow models such as the present research topic of the Indianapolis Motor Speedway. Additionally, incorporation of these elements into a scenario more closely replicate, and do a more thorough job of predicting crowd behavior. Lane formations as a form of heuristics, oscillations at chokepoints such as door entrances (Helbing, Buzna Johansson, & Werner, 2005), intermittency, where flows are disrupted at stated choke points (Helbing & Johansson, 2006), and stop and go patterns and elements of turbulence (Helbing & Johansson, 2007), particularly in high capacity crowds, are all examples of primary crowd and pedestrian flow attributes that agent based modeling more aptly portrays according to Johansson, Batty, Hayashi, Al Bar, Marcozzi, and Memish (2012).

The study of crowd analysis and pedestrian flow models that can be developed from them have increased in notoriety and capability since 2001. As Zhan, Monekosso, Remagnino, Velastin, and Xu (2008) described, the phenomenon of crowds has sparked great interest and led to a large use of available and emerging technology for multiple

reasons. Crowd management, designing of public spaces, surveillance, and intelligent environment design are all areas that this research can assist with.

Crowd management, according to Zhan, Monekosso, Remangnino, Velastin, and Xu (2008) focuses on large events such as sporting games, or other large, public events. The use of computer generated software can analyze pedestrian flow patterns and recommend various patterns to prevent large crowds at public events. Additionally, the designing of public spaces such as improving the physical layout of event locations, surveillance capabilities, such as autonomous programs designed to hone in on specifically programmed data, and intelligent environments are all relevant applications for studying crowds and flow patterns (Zhan, Monekosso, Remangnino, Velastin, & Xu, 2008).

Crowd density measurement, a function of crowd flow analysis, performs through computer simulation or manual input, an assessment of crowd density levels and pedestrian flow. This is characterized as: “free flow, restricted flow, dense flow, and jammed flow” (Zhan, Monekosso, Remangnino, Velastin, & Xu 2008, p. 347). The authors attributed this method of analysis as a functional way to decipher the rates of crowd patterns, which can then be used to perform various modeling functions. Zhan, Monekosso, Remangnino, Velastin, and Xu (2008) described four main crowd modeling techniques. Physics models, which quantitatively measure aspects of crowds; agent based models using largely qualitative models to describe relationship factors; cellular automation models using cell structure to represent pedestrians; and nature based models are all examples of actively employed models that can be used for crowd and pedestrian modeling. Agent based models are perhaps the most applicable for pedestrian flow

studies in an environment such as the Indianapolis Motor Speedway as, according to Zhan, Monekosso, Remangnino, Velastin, and Xu (2008), they allow for individual representation to move as free agents with individual behaviors while still being representative of the total group being studied.

Building upon research conducted by Akcelik, Felton, and Bennett (2001), Willis, Kukla, Kerridge (2000), and Daamen and Hoogendoorn (2003), much has been gained pertaining to the aspect of pedestrian modeling. What these studies lack however is insightful application, and employment of newer modeling technologies to provide an enhanced modeling capability that aligns existing knowledge of crowd behavior with forecasted, independent agent-based scenarios for large events. In this capacity, the use of previously established individual and crowd behavior patterns can generate greater insight for security applications at events such as the Indianapolis Motor Speedway.

Crowd analysis and pedestrian flow models are typically considered on two levels, macro and micro. The former observes the larger perspectives and movement of crowds as a whole, while the later involves the individual's movements and pattern characteristics that contribute to the whole. Bauer, Seer, and Brandle (2007), in conducting macro flow modeling, contributed to this discussion by studying exit flow patterns for large events using CAD modeling. The identified shortfalls acknowledged were the inability to aptly calibrate the model to real world data, stressors injected on crowd patterns, and the impact of actions that the model cannot control for that in reality would be adjusted and reacted to differently, such as patrons going around a barrier or through a closed door (Bauer, Seer & Brandle, 2007). The benefits to the study conducted by Bauer, Seer, and Brandle (2007) however lie in pattern directional

indications and macro-level considerations for identifying and mitigating challenges associated with pattern disruptions. In this capacity, known pattern challenges can be identified and then incorporated into the decision making matrix when observing scenarios such as the Indianapolis Motor Speedway.

Klupfel (2007a) comes closer to identifying considerations more applicable to the study at the Indianapolis Motor Speedway by observing contributing factors for crowd patterns. In his study, Klupfel (2007a) examined parameters such as why pedestrians are present to begin with, which could serve as an indicator of how the patterns will flow. Examples of pilgrimages where participants are conducting religious rituals provide clarity as these flows will undoubtedly be slower than say a pattern observed from a large sporting event.

Klupfel (2007b) employed empirical data to build a modeling scenario portraying the flow and density of crowds. Data was gathered from observations of two large events, the Haj pilgrimage and World Youth Day. Parameters of age and speed were the primary variables employed, but as Klupfel acknowledges, physiological parameters can and do play critical roles. However, the determination of how and when to implement them created additional challenges and Klupfel (2007a) chose to employ them as calibration parameters.

The results of Klupfel (2007b) indicated that the choice of parameters, such as route selection, make definitive conclusion of his study impossible. The recommendations from Klupfel (2007a) concluded that general pattern flow observations and simulation results, which are universal throughout all large, pedestrian flow events, are possible to gather. These results include general directional flow and speed when

compared against variables such as obstacles and intended direction. However, Klupfel (2007a) indicated that specific recommendations for events can only be derived from, and apply to, the specific event studied. Although much discussion and research has been done considering pedestrian pattern analysis and flow, the applicability to a specific venue such as the Indianapolis Motor Speedway is not complete, and therefore requires the studying of this event singularly.

When studying pedestrian flow patterns at the Indianapolis Motor Speedway, not only do the above mentioned research criteria and considerations apply, but specific aspects of the event need to be researched. As previously stated, little research is available detailing the specific scenarios associated with the Indianapolis Motor Speedway. In fact, when conducting research for this project, no articles concerning pedestrian flow and crowd management at the Indianapolis Motor Speedway were found. While this made the research that much more challenging, it did not however, result in failure to understand and address the issue. Just as Bellavita (2007) described security as an aphorism, pedestrian flows are largely an aphorism too, in that designing and examining pedestrian flows in one location have the same underlying requirements as another event. From this one can establish the baseline of study from which to apply research for the Indianapolis Motor Speedway.

Perhaps in this regard, research conducted by Campanella, Hoogendoorn, and Daamen (2009) regarding the composition of crowds as indicators of pedestrian flows is most applicable. In their research, the above mentioned authors described how crowd heterogeneity had a tremendous impact on pedestrian flow from a micro perspective. As Campanella, Hoogendoorn, and Daamen (2009) stated, the study of empirical data within

pedestrian flow models can account for factors such as age, environment, and event locations. Even determining why personnel are at an event, be it for work or pleasure, and the time of day factors into the equation.

This study of heterogeneity characteristics was studied using NOMAD modeling. By studying demographic changes to the physical makeup of the pedestrian body modeled, Campanella, Hoogendoorn, and Daamen (2009) chose the parameters representing individual size, freedom of movement, and noticed decreases on speed. These factors were studied compared to various performance results of bidirectional flows. The indicators chosen by Campanella, Hoogendoorn, and Daamen (2009) were lane distribution, probability of lane dissolution, and efficiency of flow, which was determined through pedestrian patterns increasing and rate of flow decreasing. Campanella, Hoogendoorn, and Daamen (2009) chose the research questions, “what is the effect of the distribution on the experimental variables on the flows,” and, “what is the effect of the variation of the experimental variables on the flows?”(p. 151). Experimental variables of size of pedestrians, desired speed compared to decrease in free speed, and observed reaction time when encountering decreased maneuverability were utilized (Campanella, Hoogendoorn, & Daamen, 2009).

Campanella, Hoogendoorn, and Daamen (2009) concluded when considering flow breakdown, efficiency, and lane distributions the results proved variations too large to use in a quantitative approach, but did provide great value from a qualitative perspective. The results concluded that for flow breakdown, when variables such as heterogeneous pedestrian samples impacted lane flow, the patterns resulted in slowing of overall flow. This was exacerbated when slower flows reduced pattern speed and created lateral

movements, thereby slowing the pattern even further. The results for lane distribution indicated that the more homogeneous the sample, fewer lane options were created. This streamlining ultimately resulted in greater probability of overall breakdown. Body composition also slowed pattern flows. Since heterogeneous patterns tend to reduce lane options already, when larger patron body compositions were added, the effect greatly reduced overall lane speed. Reaction times also decreased, resulting in breakdowns and further distributions for more heterogeneous patterns (Campanella, Hoogendoorn, & Daamen, 2009).

Conclusions from the study indicate that impacts on the implemented variables were greatly affected by the heterogeneity of a crowd. Overall, Campanella, Hoogendoorn, and Daamen (2009) research results showed non-heterogeneous patterns of speed showed a breakdown of 25% compared to 100% for heterogeneous patterns; body size patterns of non-heterogeneous samples broke down at a rate of 45% compared to their heterogeneous counterparts at 80%; and reaction time breakdowns were 20% for non-heterogeneous compared to 85% for heterogeneous populations.

This research is perhaps the closest in examining relevant variables to the Indianapolis Motor Speedway, but it still did not answer the questions aptly. As security parameters include the introduction of coolers and bags for patrons to the event, these considerations greatly impact the flow patterns, much as the study from Campanella, Hoogendoorn, and Daamen (2009) indicated heterogeneous patterns examples do. From here, research needs to further examine flow rates incorporating existing work on heterogeneous patterns, and modify them to anticipate the impact of not only the typical

patron profile that attends the Indianapolis Motor Speedway, but also to determine how the introduction of large coolers and bags serve to influence pedestrian flow patterns.

2.5 Agent Based Modeling

Agent based modeling allows for the greatest level of flexibility and effectiveness as free agents can be introduced into scenarios and can account for specific parameters respective to a studied event. As this technology has gained in popularity and credibility over the past decade or so, the resulting studies have further contributed to a host of research parameters. For the researcher's purpose, the use of agent based modeling aptly provided the flexibility desired to model the Indianapolis Motor Speedway and incorporate the variables needed to observe, detect, and adjust to identified restrictions prohibiting steady-state flow of pedestrians arriving to, and processing through security, in order to gain entry to the facility.

Modeling systems capable of addressing the research question really come down to four main options: system dynamics (SD), dynamical systems (DS), discrete event (DE), and agent based (AB). Each respective model has varying strengths and applicability to scenarios. Borshchev and Filippov (2004) provided insightful analysis of varying modeling types and accepted use. They also focused on the recent emergence and use of agent based modeling for specific scenarios and scale. Borshchev and Filippov contend that until the early 2000's, the use of agent based modeling was not widely accepted due to being relatively new and not as thoroughly tested as the others.

Systems dynamics, according to Borshchev and Filippov (2004), was developed in the 1950s as a mechanism to develop feedback on industrial activity and characteristics.

Its founder, Jay W. Forrester, employed the system to depict how structure and various variables in the form of policy and time interact and equate to impact an organization (Forrester, 1958, 1961). The typical application for system dynamics is use in urban categories where the user has to accurately describe the behavior of a system as a corresponding number (Borshchev & Filippov (2004). The important factor here is that the model only works on a macro scale, meaning the results would be representative of a group of people, and not an individual in a modeling scenario involving humans.

By contrast dynamical system modeling was developed for use in the engineering fields, such as chemical, industrial, and electrical. This system uses modeling as part of the design process (Borshchev & Filippov, 2004). In this capacity, models input data in the form of numerical variables and mathematical differential equations whereby the results then obtain a direct, tactile meaning. As one would imagine, the application of such modeling is best suited for the above mentioned specialties given this parameter.

Borshchev and Filippov (2004) further described discrete event and agent based modeling. Described as a “global entity processing algorithm” (p. 5), discrete event modeling is commonly applied in business settings where the concept of representing passive data or objects as blocks allow for the processing and creation of flow (Borshchev & Filippov, 2004). Alternatively, the use of agent based modeling has matured in the recent past for application in areas of science such as artificial intelligence or gaming theory (Phelan, 2001 & Axelrod, 1997). However, it should be noted that as Borshchev and Filippov (2004) pointed out, the definition of what exactly agent based is, is still largely unresolved, and as such, there is still much controversy over what constitutes agents, and how to define them.

Agent based modeling though can be identified through its usage. The modeling of individual behaviors as free agents allow for the model to show more decentralized results. This in turn allows for greater accuracy in modeling scenarios that desire to show how interaction of multiple variables impacts the greater sum. As Borshchev and Filippov (2004) stated:

Agent Based approach is more general and powerful because it enables to capture more complex structures and dynamics,” it also “provides for construction of models in the absence of knowledge about global interdependencies: you may know nothing or very little about how things affect each other at the aggregate level, or what is the global sequence of operations, etc., but if you have some perception of how individual participants of the process behave, you can construct the AB model and obtain the global behavior (p. 6).

Within these modeling styles lie varying capacities or tools. According to Borshchev and Filippov (2004) there are only four application tools for system dynamics modeling and just around 10 for discrete event modeling. Agent based modeling has been advanced through the use of AnyLogic, which was designed to utilize the changing technologies associated with software engineering. Therefore, the use of AnyLogic for conducting agent based modeling is believed to best capture more real life phenomena (Borshchev & Filippov, 2004).

Agent based modeling, according to Bonabeau (2002), is considered more of a mindset rather than a specific technology, and therefore has widely proven itself as a more efficient and capable modeling method when dealing with abstract studies. This is due to three main functions: “flexibility, ability to provide a natural description of a

system, and ability to capture emergent phenomenon” (p.2). According to Bonabeau (2002), the use of agent based modeling provides for not only greater flexibility, but serves to re-define an approach to social phenomena that traditional modeling methods cannot replicate.

Bonabeau (2002) described this process as the ability for agent based modeling to hone in on certain “soft” factors that ordinarily are difficult to quantify, calibrate, or verify. This in turn makes some more skeptical in applying agent based modeling and has led to it being questionably accepted in the academic world. However, Bonabeau (2002) discounts this perspective through the study of agent based modeling across four spectrums when considering emergent phenomena: flows, markets, organizations, and diffusion.

In spectrum one, Bonabeau (2002) described the use of agent based modeling for flows. In this research the events of traffic, evacuations, and customer flow management are observed. Examples were used depicting how individual behavior, reflected by compounding fear or self-interest, manifests into emergent phenomenon that can be modeled to show how crowds react to fire in confined spaces. In spectrum two, stock market simulations are illustrated and the use of injected market reductions are employed to show how system dynamics and differential equations would not be capable of producing meaningful insight and analysis of behavioral changes associated to the change in the market. Spectrum three of Bonabeau’s study illustrated through examples of the banking industry, how agent based modeling can provide accurate modeling scenarios to account for banking industry losses due to mistakes, malicious activity, or interests being compromised. Spectrum four concluded with business examples of diffusion. In this

example the “soft” variables are described in regard to a business’s impact through local clustering as seen through inhomogeneous populations. Here, a product is modeled and customer demand is modeled through agent based modeling where differential equation modeling is not as effective in determining desired results (Bonabeau, 2002).

All four spectrums and their associated vignettes show the broad range of capacity that agent based modeling provides. Bonabeau (2002) summarized that use of agent based modeling for complex, non-linear, discrete, or discontinuous agent modeling is the best application. It is within the flow example that provides the greatest applicability to the proposed study as agent based modeling can provide for both quantitative and qualitative analysis and account for multiple variables interacting within the model.

Exploring agent based modeling within the context of pure mathematical computations may seem evidentiary based on the rational employed for the use of modeling, (Axelrod, 1997; Epstein & Axtell, 1996). However, as the literature chosen discussed, the rational for employing agent based modeling over other versions still exudes controversy, (Bonabeau, 2002; Borshchev & Filippov, 2004; Franklin & Graesser, 1997; Schieritz & Milling, 2003). Troitzsch (1997) claimed that the use of computer modeling for predictive capacities can be employed to show both qualitative and quantitative results; the latter is described by time and space and the former as behavior.

Schieritz and Milling (2003) posit that system dynamics and agent based modeling are actually more alike that some would recognize on the surface. For computer simulation, two main schools of thought exist for quantitative oriented results and qualitative behavioral predicting; system dynamics and agent based. The differences, according to Schieritz and Milling (2003), result from modelers defining problems

differently and employing different methodology than a true paradigm rift between the two.

Schieritz and Milling (2003) concluded that as system dynamics were primarily developed by one person, there is a homogeneous view to the fundamental approach that plagues it. Meadows and Robbins (1985) and Saleh (2000) both agreed with this assessment and claimed that the concept of system dynamics was focused on pragmatic application. According to Schieritz and Milling (2003) system dynamics infers that it is the knowledge of material that flows between “blocks” of systems that is dynamic, thereby nullifying that possibility that a single event or injection of matter is responsible for a systems behavior, and instead it is the entire structure itself that results in the behavior.

Agent based modeling by contrast uses more ambiguity to define the “agent” involved in setting the parameters for the variable. Edmonds (2000) described these agents as humans, animals, or institutions. Schieritz and Milling (2003) referenced Jennings et al. (1998) when describing agent based modeling as having four characteristics:

- “Each agent has incomplete information, or capabilities for solving...[a given] problem, thus each agent has a limited viewpoint;
- There is no global system control;
- Data is centralized; and
- Computation is asynchronous” (p. 17).

This use of obtaining agent level behavior information from larger, macro observation is what makes agent based modeling unique, according to Schieritz and Milling (2003). Within this understanding therefore lies the ability to envision employing agent based modeling for scenarios such as studying pedestrian flow at the Indianapolis Motor Speedway. From this literature agent based modeling can be categorized as having the following trends as depicted in table 2.2:

Table 2.2.

Agent Based Modeling Trends

<u>Function</u>	<u>Output</u>
Modeling level	Micro and Macro
Analysis	Rules
View point	Bottom-up
Time	Discrete
Study capabilities	Qualitative and Quantitative

Schieritz and Milling (2003) categorized the relationship between systems dynamic and agent based modeling as having similarities in that they both apply themselves to social systems with decentralization decision making, and they both serve to understand the dynamics of complex systems. Where they differ then is modeling for systems dynamics examines the impact of multiple variables on the whole process or model, where agent based examines individual variables and the impacts of other variables upon them. This is where focus on specific platforms such as pedestrian flows for security consideration have more merit when studied with agent based modeling compared to other forms. The use of individual variables to be studied independently and

their impact on the aggregate provide for greater predictive ability of certain phenomena (Muhdi 2006; Ren, Yang & Jin 2009).

2.6 Summary

This literature review, while certainly not exhaustive, clearly articulated the three main sections applicable to establishing a legal defense for this study. The history and explanation of the paradigm shift in security explained why the phenomenon exists and the relevant applicability to the study. The author has demonstrated that while the Indianapolis Motor Speedway may host local events, the scope of many activities held there such as the Indianapolis 500 race and their impact on the political, social, and economic level, specifically with regard to security, qualify the Indianapolis Motor Speedway as a Mega-Event location. With this status, expected levels of security are attributed to the location and the ramification of negative events would resonate all the way through the national level. Therefore, one can clearly establish that increased security at the Indianapolis Motor Speedway is linked of the changing paradigm in security. Furthermore one can definitively state that this change is permanent, and as such, requires adjustments to all other factors impacted by this change, such as pedestrian flows.

Next, the researcher examined how this increased security resulted in challenges to the pedestrian flow for patrons entering the speedway. He established these increases were derived not only from increased patron attendance and decreased infrastructure flexibility stemming from urban planning and development, but specifically due to the existing structure not being able to compensate for the delay in entry of such large

quantities of patrons when they become backed up at the security check points. This pedestrian flow problem was identified and observed from the position of both general flow modeling and knowledge from like-sized events, as well as speculating that while research on the matter does exist, no such research was found that specifically addressed flow pattern analysis for situations mirroring the nuances of the Indianapolis Motor Speedway where cooler and bag challenges significantly contribute to the problem.

Lastly, the researcher described the concept of agent based modeling as the primary and preferred method to be employed for a study such as this. He briefly chronicled the history of modeling and outlined the major types of modeling available, and their typically associated uses. He then identified the unique capabilities of agent based modeling and provided examples of how the construct and parameters of the model enable the user to better study emerging phenomenon. The conclusion was then drawn that for this particular study, given the nature of variables and need to assess the situation with a bottom-up approach, the use of agent based modeling would best capture the dynamics of pedestrian flow at the Indianapolis Motor Speedway, and can be used to describe anticipated flow patterns in relation to imposed security variables.

Overall, the review of literature on all three stated topics did not discount the level of knowledge or research done respective to them individually. Rather, it did qualify for the purposes of this study that gaps have been identified pertaining to these topics in answering the researchers question relative to the case study. In that capacity, the research question and study will help fill in this gap. The next chapter will discuss in depth the method for the study and further explain how agent based modeling was used.

CHAPTER 3. FRAMEWORK AND METHODOLOGY

The intent behind this study was to determine if a better flow pattern could be developed, which would reduce pedestrian wait times, while still maintaining, if not improving, security at the Indianapolis Motor Speedway. The research studied the Indianapolis Motor Speedway's current layout of pedestrian flow and analyzed data from two previous Indianapolis 500 automobile races that cataloged patron attendance, wait times, and security processing times. This information was then used to create a modeling scenario in which AnyLogic modeling was employed to create new flow models comparing new modeling scenarios against current conditions.

In order to aptly conduct this topic, the majority of this research was conducted using a qualitative approach. Limited quantitative data, such as previous year's patron attendance, security wait times, and processing information was used to establish a baseline of data for the modeling scenarios to be created and compared against. This chapter discusses the framework, population studied, measurements, variables, instrumentation used, data collection methods and analysis.

3.1 Framework

As noted in the literature review, there have been multiple studies on the impact of security, pedestrian flow, and use of agent based modeling as both independent topics, and to a lesser extent, certain large scale events. Combining all three aspects into a single

study for the Indianapolis Motor Speedway has yet to be conducted. The need to perform a study of this type is critical as the nature of the changing security paradigm imparts not only significant challenges to the actual process and function of security at the Indianapolis Motor Speedway, but also in the concept and definition of security itself. As research has shown, the new mandate of security no longer accepts a status quo approach or reasonable risk, but instead all but requires a zero defects approach due to the economic and political involvement in today's environment.

As such, the imperative now is not only to accept this change as reality, but to examine the entire security process. This however, can entail multiple efforts, and in order to aptly be studied should be broken down into its basic components to achieve a truly effective understanding. Here then this study chose not to study the complete security process itself, that being the overarching security plan for the entire event, but rather the impact of entry lane processing and the associated organizational security structure that accounted for patrons flowing into the facility. Here the researcher remained objective from the security process at large, and subjectively assessed and interpreted the flow process, thereby answering the question, "can a better flow pattern be developed?"

3.2 Researcher Bias

Inherent in every qualitative or mixed study is researcher bias. In this study I make no claim to the contrary. While I personally have no vested interest or motive in studying the Indianapolis Motor Speedway, I do possess certain biases about security. I, for this study, approached the research with understanding and agreement with the

position that greater security requirements are necessary as a result of the increased terrorist threat encountered today. This need, coupled with an increased reliance by most modern societies for security to be provided by local, state, or federal governments, fostered an environment that necessitates the sometimes overreaching arm of government to interact on their behalf.

I approached this study with the acceptance of the changing security paradigm in mind and purposively avoided examining the security procedures beyond entry processing, in order to remain as objective as possible. To this end my focus was on researching the physical changes associated with increased security thoroughness and attempting to find ways to remedy or improve the situation by measuring the effects of security. Although *who* and *how* security is provided is critical, this, as stated earlier, would likely be a crucial area for another researcher to study and examine in more depth.

3.3 Methodology

So how does one examine changing security impacts without expressly studying the security changes themselves? I examined the resulting effects of security on both the external environment and observed wait times. While certain elements of this study entailed a large amount of quantitative data to establish average wait times and patron attendance, this data was used primarily to establish credibility and justify the position that security changes had in fact occurred. The use of agent based modeling for scenario modeling allowed for a qualitative approach to determine if better flow patterns could be developed. In this particular case study, I qualitatively assessed if the current restrictions and impediments placed upon the Indianapolis Motor Speedway due to increased security

thoroughness could be mitigated or improved, thereby answering the question “can better pedestrian flow patterns that facilitated pedestrian movement from staging and parking areas around the event, all the way up to the actual security processing point be achieved?”

3.4 Study Environment

The following section will detail the location of the study, the participants of the study, and how the study was conducted.

3.4.1 Location of Study

The study location was the Indianapolis Motor Speedway in Indianapolis, Indiana. The speedway was originally constructed in 1909 on the outskirts of the city of Indianapolis. Entrepreneur Carl G. Fisher and his three partners desired a location capable of testing new automobiles whose performance quickly began to outpace the capabilities of the standard dirt roads (IMS, 2013). At the time, Indianapolis ranked second nationally in automobile production and Mr. Fisher believed that this testing facility would greatly aid in improving automobile efficiency. The current site sits where the original was built, with only minor limited improvements to the grandstands. The 2.5 mile race track remains today in size and shape as it did when the facility opened in 1909.

Throughout the course of the 20th century the rise in popularity of auto sports resulted in an increased use of the track for sporting purposes instead of use as a testing facility. Today racing venues such as NASCAR, Stock Car, Formula One, Grand Prix, and event Motor Cross, motorcycle racing all host premier events at the facility. Most notably however is the Indianapolis 500 race that annually calls the Indianapolis Motor

Speedway home. The event calls crowds of several hundred thousand spectators and is dubbed as the largest spectator sporting event in North America (IMS, 2013).

Throughout its 100 plus year history, only three families have owned and operated the course. Today the Hulman family, with daughter Mari Hulman George as chairman operates the facility. The city of Indianapolis has grown immensely in size since 1909 when the track was originally built, growing to its current size of 361.5 square miles with a population of 834,852 as of 2012 (City data, 2013). This huge surge in urban growth coupled with an increase in attendance at the location for various events has begun creating serious challenges for the speedway. Couple this with the changing security paradigm in response to terrorist acts and it's easy to understand why the event in its current form is quickly outstripping its capacity to function smoothly.

3.4.2 Participants

Participants for the study were the patrons attending the 2012 and 2013 Indianapolis 500 automobile race at the Indianapolis Motor Speedway. During these races, students from the Department of Homeland Security, Purdue University under the study of Dr. James E. Dietz conducted observation of security procedures at the events. Prepared observation checklists were issued to student observers to record time and data entry. This data was collected at varying times during the morning of the race from various entry gates. By studying wait times for security processing over the course of two successive years, accurate estimations of patron wait times and flow challenges was effectively determined.

3.5 Permissions

Permission for the study was granted by the chairman of the board for the Indianapolis Motor Speedway. Coordination with the personnel in charge of overall security resulted in cooperation for access to, and observation of the entire event from multiple vantage points at all requested times.

3.5.1 IRB Approval

Institutional Review Board approval was not necessary for this study as personal interviews or discussions with subjects were not required. All data collected was anonymous statistical data depicting patron number and wait times.

3.6 Data Collection

Data was collected over the course of two years at two, separate Indianapolis 500 automobile races. All data was collected on scene using standardized templates and checklists. Power analysis projections determined the requisite sample size based on a 95 percent confidence level and five percent margin of error. A total of 646 sample sets were collected for analysis in this study.

3.6.1 Observations and Data Entry

Students participating in the gathering of data were issued prepared security checklists for data collection that observed and recorded both time and quality of process. The checklist incorporated a qualitative rating that assessed the security processor's thoroughness and effectiveness at checking individual patron's coolers and bags in

accordance with pre-established security parameters set forth by the Indianapolis Motor Speedway's security section. It also consisted of a quantitative assessment recording the overall average wait times at varying gate locations for patrons from when they entered the security lines until they gained admission into the facility, and specific security check timelines for patrons to process through each of the three individual checking stations; coolers, bags, and ticket stubbing. Visual observations and photographic recordings of wait lines and pedestrian flow patterns of patrons waiting to gain entry were also collected at various times. Additional data in the form of ticket sales to measure total attendance and parking lot capacities were also used to determine total attendance and pedestrian concentration.

3.7 Analysis

Analysis of data was conducted by compiling checklists and data from over 20 separate data gatherers who gathered no less than four data packets consisting of 30 sets of data each, at varying times. Each group of data from specific times, but separate gate locations were then collated to show average wait times at the entire facility, with specific representation of each location during that time. This allowed for a graphical representation of where larger waits existed during the same timeframes indicating areas that experienced greater pedestrian flow challenges. This was done for each of the four observed timeframes per race, on each of the two races.

3.7.1 Interpreting Data

Interpreting the data was done by way of raw data analysis, that being the quantitative assessment of time required for patron processing at a given location and by way of analyzing those results compared to the physical terrain. In this capacity, a correlation to intelligence analysis to what in the military is called Intelligence Preparation of the Battlefield (IPB) within the planning process was conducted. This allowed for the researcher to identify by way of quantitative data where problems in patron processing existed based of the recorded times, and then compare those subjectively with the physical surroundings of the immediate and adjacent areas. This allowed for the researcher to employ many of the same techniques used in the military to determine likely avenues of travel for pedestrians, choke points, or other contributing factors that disrupted the flow patterns and led to increased patron backlogs at any given area. By comparing the data against this process, it was possible to identify new scenarios to be input into the model to compare against the current, existing scenario.

3.7.2 Use of Intelligence Analysis and Planning Processes

Intelligence analysis, as related to Intelligence Preparation of the Battlefield, is an element contained within the planning process. It can be defined as a systematic, analytical process that assesses threats in a given time and space (FM-34-130, 1994). Marine Corps Doctrinal Publication, 5-1, (MCDP 5-1) defines planning as “planning involves projecting our thoughts forward in time and space to influence events before they occur rather than merely responding to events as they occur. This means contemplating and evaluating potential decisions and actions in advance” (p 4).

Moreover, Marine Corps Doctrinal Publication 5-1 states that the basic tenets of planning facilitate:

- Direct and coordinate actions
- Develop a shared situational awareness
- Generate expectations about how actions will evolve and how they will affect the desired outcome
- Support the exercise of initiative
- Shape the thinking of planners (p 7).

Together, this allows for military commanders to take elements of terrain and finite timeframes, along with known tactical considerations and apply them against hypothesis of anticipated enemy activity in relationship to one's own capabilities. In this sense, it allows for planning on the tactical scale, operations that account for the enemy, environment, and known capabilities to determine which course of action would best be employed to reach a successful, victorious outcome.

Some of the fundamental aspects of employing Intelligence Preparation of the Battlefield are to understand the terrain or environment in which one operates. In relationship to the study of the Indianapolis Motor Speedway, the terrain is the facility and adjacent spaces used for parking and patron staging, and the environment is the Indianapolis 500 race with its patrons and security requirements. Comparisons to the planning process are further derived from associating the known obstacles or terrain in the form of roads, entry gates, parking lots, imposed traffic patterns, and physical capabilities, both in the form of patron's profiles and whether or not they carried coolers

and bags, and physical capabilities such as sidewalks or movement areas as aspects to consider when assessing the impact of pedestrian flow. By analyzing the existing scenario from an Intelligence Preparation of the Battlefield perspective, and incorporating it loosely into the planning process, it enabled the researcher to more aptly apply courses of action, or in this case, modeling scenarios, that took into considerations the constraints and restraints of the environment, patrons, and situation. This then allowed the researcher to observe the conditions associated with increased wait times, analyze the environment as it existed on race day, and project feasible courses of action, or modeling scenarios that could be assessed against the existing standard to answer the stated research question.

3.8 Credibility

Credibility of a study is paramount to every researcher and the resulting product. In this study, credibility for data was obtained via a longitudinal study spanning two years at the Indianapolis Motor Speedway. Data collectors were trained during the Large Event Planning, Department of Homeland Security class taught at Purdue University. Prepared checklists were issued to each observer and data collecting rehearsals were conducted during the week preceding the actual observed race. Additionally, coordination with event security staff and management facilitated a common operational picture of the event and allowed for effective data collection.

3.8.1 Credibility of Researcher

The researcher has been an active duty United States Marine Corps officer who has served for the past 20 years and has had extensive exposure to security assessments, understanding physical layouts and terrain associated to security, and observation skills employing Intelligence Preparation of the Battlefield and the planning process.

Additionally, the researcher has had extensive exposure to large event planning requiring security and the establishment of pedestrian flow configurations stemming from decades of application at large events revolving around military and civilian populations. The researcher possesses the ability to analyze a situation with regard to environment, terrain, and populace from a perspective of developing operational plans with greater efficacy than an average researcher. This allowed for greater effectiveness when creating modeling scenarios which had to keep efficiency and security in mind.

3.8.2 Data Triangulation

Conducting qualitative studies requires triangulation to establish credibility and verify results of a given study. Guion, Diehl, and McDonald (2011) pointed out there are five methods of establishing triangulation:

1. Data triangulation
2. Investigator triangulation
3. Theory triangulation
4. Methodological triangulation
5. Environmental triangulation (p 2).

Data triangulation employs data collection from different sources. Investigator triangulation implies various researchers examine the process. Theory triangulation entails data being analyzed from different points of view. Methodological triangulation would entail the use of both quantitative and qualitative perspectives to verify data. Environmental triangulation observes different locations, settings, or other factors to determine the impact on information gathering. This brief summary according to Guion, Diehl, and McDonald (2011) described how these five methods are used. In this study the researcher employed triangulation in the form of multiple data collectors from various locations spanning the course of two events, and methodological triangulation where research and comparison of other like, independent studies, and existing phenomenon comparable to the researcher's case study not only served to verify the data, but established credibility of the findings as well.

Data triangulation from multiple sources was critical to ensure researcher bias did not occur with regard to establishing the validity of the claim that increased wait times were a result of increased security thoroughness. As Guion, Diehl, and McDonald, (2011) stated when referencing Patton (2002):

It is a common misconception that the goal of triangulation is to arrive at consistency across data sources or approaches; in fact, such inconsistencies may be likely given the relative strengths of different approaches. In Patton's view, these inconsistencies should not be seen as weakening the evidence, but should be viewed as an opportunity to uncover deeper meaning in the data (p 2).

In this capacity, the use of multiple triangulation methods to arrive at consistency not only served to legitimize the data collected, but the inconsistencies noted during data

collection also served to provide a platform for interpretation and comparison against the intelligence collection and analysis. This allowed for the researcher to aptly devise modeling scenarios using agent based modeling that provided valid options for pedestrian flow changes and recommendations, thereby qualifying that a better flow pattern could indeed be developed.

3.9 Summary

This chapter examined the framework and methods used in conducting the study. The next chapter will describe and report the results of data collection. Chapter four will also convey through the lens of the researcher how intelligence preparation perspectives and the planning processes were used to compare and analyze the data compared against the environment and terrain.

CHAPTER 4. PRESENTATION AND ANALYSIS OF DATA

This chapter provides an overview of data collected for this research topic. It is intended to provide the reader with information concerning the method of data collection and presentation of that data. It serves to answer the research question, “will improved pedestrian flows and patterns resolve the issue while still achieving the desired security and safety goals?” Central to this research are the questions (1) can a better flow pattern be developed that will increase safety and security, while minimizing patron entry wait time through security processing at the Indianapolis Motor Speedway; and (2) what is the impact of gate processing and current flow patterns such as entry gate restrictions and locations? This chapter will conclude with a summary outlining the main points of the chapter.

Perhaps the most critical task associated with dissertation research is accurate, relevant data collection. In an effort to ensure accurate data was collected, the researcher had to thoroughly understand the desired effect of the data collected and narrow the collection effort to those aspects that qualified the data and ensured validity. Disparity between quantitative and qualitative studies further exacerbated the issue of data collection as the spectrum of subjective interpretation increases greatly as one shifts between the quantitative and qualitative realm (Creswell, 2013).

This author’s case study on Large Event Security Planning at the Indianapolis Motor Speedway resulted in data collection from both internal locations, which employed

privately administered security, as well as from outside locations, which utilized publicly provide security services. Additionally, data in the form of both qualitative and quantitative measurements was necessary to understand the phenomenon. As with most Mega-Events, external security provided by local, state, and federal law enforcement works in conjunction with the private elements to ensure efficient, safe operations (Boyle & Haggerty, 2009). This distinction between two independent aspects of employing security, with varying methods, required careful examination to ensure that data collected and intelligence gained from observing one entity, was representative of the other. To avoid a close examination of this specific point would have discredited the researcher's work and cast doubts as to the overall efficacy and rigor of the project.

Data collection was driven from the premise that an overall problem was noted in the flow of pedestrians into the Indianapolis Motor Speedway due to increased security thoroughness requirements (Bellavita, 2007). In this regard, the function of who provided the security itself largely remained irrelevant. Regardless of internal security practices, external security controls, or combinations of the two, the impact on pedestrian flow still existed. Therefore the compelling focus on data collection pertained less to which data sets were collected, internal or external, but rather more on the *effect* of those data sets in establishing theory that pedestrian flow challenges exist.

The researcher rendered the data collection highly effective at accomplishing the stated objective with limited bias by ensuring academic rigor was established in controlled data collection packet development, uniformity in collection practices, triangulation from multiple aspects, and objective analysis. This chapter discusses the data collection methodology, results of data collected, initial analysis of that data and

outlines how that data was refined for further analysis by conducting AnyLogic computer modeling. Chapter five will discuss the modeling scenarios built from the data collection and how the resulting data expressed as themes across the effectiveness of the security process can be interpreted.

4.1 Data Collection Packet Development

Data collection at the Indianapolis Motor Speedway used in model development was conducted at the Indianapolis 500 automobile race in 2013. As this race is the largest event hosted at the venue, the best data collection, observation of procedures, and analysis of data was possible during this time. Paramount to the research was identifying what metrics for observation and recording were to be used in order to provide adequate, reliable data for the study.

The premise of the research was to first validate that there was indeed a pedestrian flow challenge associated with the Indianapolis Motor Speedway, and secondly, that increased security procedures were a leading cause of the increased flow problems. Time to process patrons into the facility was therefore chosen as a dependent variable with location, gate procedures, and patron description, i.e. those with or without baggage or coolers, as the independent variables. Observation of key locations at various times, by separate data collectors was employed to gain the most balanced and representative data samples.

When considering time, the aggregate of “total wait” time was used. Total wait time consisted of when patrons entered the threshold between public and private property and transitioned from external entry lines to internal, individual access lines that moved

the patron from bag and cooler checking, through ticket stubbing, and into general unrestricted access to the facility. Time was observed from when a patron entered the line and ended when they had completely passed through the checking procedures. Additional time metrics were gathered for supporting evidence on how large the external lines became and how long it took an individual patron to move from the external forming lines, to the actual entry line.

In this capacity it was possible to validate the length of time required to enter the facility as numbers of patrons increased, thereby creating pressure on the lines to adequately keep a steady-state flow of individuals entering the facility. When this flow was disrupted, the result was unorganized masses of patrons randomly navigating the external perimeter of the facility trying to determine which internal entry line they should attempt to join and process through. Lack of instruction for patrons beyond the entry gates themselves by security staff exacerbated this problem as external security provided by federal, state, and local agencies focused solely on safety and security and not crowd management. By analyzing time data, the first element of the study was validated and allowed for continued data collection analysis respective to individual entry gate location and processing challenges.

4.1.1 Data Collection Packets

Collection packets consisted of quantitative and qualitative aspects where observers and recorders evaluated the overall process and specific details. Data sheets entailed five observable categories that scored efficiencies on both bag and cooler checks, four categories that scored customer service, and one section dedicated to observing the

ticket-stubbing process. Each category was given a numerical value based upon the data collector's assessment of completeness and efficiency with the given category. Scoring recorded as zero was assessed as the worst possible, and five was assessed as the best possible. Patrons observed who did not bring a bag or cooler, or have that portion of the evaluated categories applied to their security process were indicated by leaving that category blank. Total processing time was also recorded. Figure 4.1 illustrates the data collection sheet employed for the study. Appendix A illustrates the entire collection criteria and methodology.

BAG CHECK (maximum score of 5 points)

- Did they take control of the bag for inspection?
- Was the bag checked visually for irregularities?
- Was the bag opened?
- Were the contents physically inspected?
- Did they inspect the bag with a dowel?

COOLER CHECK (maximum score of 5 points)

- Did they take physical control of the cooler for inspection?
- Did they evaluate the cooler for acceptable size?
- Was there a visual check of the inside of the cooler?
- Was a dowel used to inspect the contents?
- Was the cooler inspected to the bottom?

TICKET STUBBING (maximum score of 1 point)

- Did they remove the ticket stub?

CUSTOMER SERVICE (maximum score of 4 points)

- Did they greet the customer?
- Did they interact in a positive manner with the customer?
- Did they provide a closing to the customer?
- Did the customer appear satisfied with the interaction?

TOTAL SCORE _____

Figure 4.1. Categories of Observation for Security Procedures from Data Collection Sheets, Indianapolis 500, 2013

4.2 Gate Security Data Collection

Research assistants each collected a minimum of four packets, which in turn each consisted of 30 data collection sheets. Power analysis projection planning was used to verify that the amount of data collected resulted in representative sample numbers (Sekaran & Bougie, 2013). The packets further detailed the process of security providers and overall time. This allowed for the researcher to compare data from varying locations

and entry points at various times in order to validate findings. The effect of gathering data from both outside the entry lines, as well as from the entry lines themselves allowed the researcher to evaluate both private security providers as well as local, state, and federal agencies.

4.2.1 Individual Gate Security Data

A rubric by the researcher was employed that ensured the entire Indianapolis Motor Speedway had observation and data collection completed at each of the major entry locations throughout the morning of race day. Each data collector participated in mock data collection drills to ensure uniformity was established in determining which criteria was to be observed and recorded for data collection purposes. Additionally, each data collector worked with a partner to ensure redundancy in effort in order to avoid errors in timekeeping and recording. A centralized location was established inside the Indianapolis Motor Speedway from which the researcher could gather the entire collection team prior to the beginning of the event, and again at varied times throughout the day to monitor progress and supervise collection methods to ensure uniformity and consistency were being applied.

4.2.1.1 Gate 5 Security Data

Data collection for gate five began at 7:10am and extended through 11:10am. A total of 20 patrons were observed during each of the observed three periods, for a total of 60 data sets collected observing the security thoroughness as described in figure 4.1. The

graphs below represent the numerical total of each category, for each observed patron, during each of the three observation times.

Table 4.1.

Gate 5, First Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
7:10 AM	1	4	2	4	1
	2	3	3	4	1
	3	1	1	4	1
	4	3	2	4	1
	5	3	3	4	1
	6	5	4	4	1
	7		3	4	1
	8	2	3	4	1
	9	1	2	4	1
	10	3	4	4	1
	11	2		4	1
	12	4	3	4	1
	13	3	3	4	1
	14	4	3	4	1
	15	3	3	4	1
	16	5	2	4	1
	17	4	4	4	1
	18	2	4	4	1
	19	3	4	4	1
8:36 AM	20	4	4	4	1

In observe one's data set, the mean score for baggage check was 3.1, the mean score for cooler checks was 3.0. Observation of customer service and ticket stubbing remains consistent.

Table 4.2.

Gate 5, Second Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
9:08 AM	1	5	2	4	1
	2	2	2	4	1
	3	2	3	4	1
	4	1	1	4	1
	5	1	2	4	1
	6	2	2	4	1
	7	1	1	4	1
	8	0	1	4	1
	9	2	1	4	1
	10	0	1	4	1
	11	2	1	4	1
	12	2	5	4	1
	13	2	2	4	1
	14	3	1	4	1
	15	5	4	4	1
	16	0	1	4	1
	17	1	1	4	1
	18	2	2	4	1
	19	1	2	4	1
10:15 AM	20		1	3	1

The second observed set of data for gate five shows a mean bag check of 1.7 and cooler check of 1.8. Also observed is a slight reduction in customer service to .95. This downward trend correlates with increased pedestrian wait times depicted. Analysis of this data reveals that as pedestrian flow increased, the effectiveness of security operations decreased.

Table 4.3.

Gate 5, Third Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
10:25 AM	1	0	0	3	1
	2	1	2	4	1
	3	1	2	4	1
	4	1	3	3	1
	5	2	2	3	1
	6	2	2	4	1
	7	1	2	4	1
	8	1	2	3	1
	9	1	2	4	1
	10	2	2	4	1
	11	3	2	3	1
	12	2	2	4	1
	13	1	2	3	1
	14	2	3	4	1
	15	1	2	4	1
	16	1	1	3	1
	17	1	1	4	1
	18	1	2	4	1
	19	1	2	4	1
11:10 AM	20	1	1	4	1

A further reduction of mean baggage checks to 1.3 and cooler checks to 1.7 is noted with observer three's data. Also, a significant reduction in observed customer service is noted with a mean of 3.6 and a slight reduction in ticket stubbing. This data further substantiates the reduction of security effectiveness and efficiency as increased pedestrian flow overwhelms workers.

4.2.1.2 Gate 6 Security Data

Data collection for gate six began at 7:00am and extended through 12:11pm. A total of 20 patrons were observed during each of the observed four periods, for a total of 80 data sets collected observing the security thoroughness at described in figure 4.1. The graphs below represent the numerical total of each category, for each observed patron, during each of the four observation times.

Table 4.4.

Gate 6, First Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
7:00 AM	1	5		4	1
	2	4		4	1
	3	2	5	4	1
	4	4	3	4	1
	5	3	3	4	1
	6	4	4	4	1
	7	0	4	4	1
	8	5		4	1
	9	3		4	1
	10	5	4	4	1
	11		5	4	1
	12		5	4	1
	13	4	4	4	1
	14	4	4	4	1
	15	3	4	4	0
	16	5		4	1
	17	4	4	4	1
	18	3	4	4	1
	19	4		4	1
7:52 AM	20	3	5	4	1

Review of data from gate six, observer one, depicts an initial mean baggage and cooler check of 3.6 and 4.1.

Table 4.5.

Gate 6, Second Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
8:20 AM	1	4	5	4	1
	2		2	4	1
	3		5	4	1
	4	4		4	1
	5		4	4	1
	6	3		4	1
	7		5	4	1
	8		2	4	1
	9	4	5	4	1
	10	2		4	1
	11	4		4	0
	12	4	2	4	1
	13	4	5	4	1
	14		4	4	1
	15	2	3	4	1
	16		2	4	0
	17	5		4	1
	18	4		4	1
	19		5	4	1
9:15 AM	20	3		4	1

Continued declining mean scores of baggage and cooler check scores are observed with gate six's second data collection score where the mean scores were 3.5 and 3.7. This decline is consistent across both gates and five and six commensurate with observation times.

Table 4.6.

Gate 6, Third Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
9:50 AM	1	4		4	1
	2	4		4	1
	3	4	4	4	1
	4	5	4	4	1
	5	4	3	4	1
	6	2	4	4	1
	7	3		4	1
	8	3	3	4	1
	9		3	4	1
	10	3		4	1
	11	3	3	4	1
	12	3	3	4	1
	13	3		4	1
	14		3	4	1
	15		3	4	1
	16	3	3	4	1
	17	3	3	4	1
	18		5	4	0
	19	3	3	4	1
11:00 AM	20		4	4	1

Further reductions in mean baggage and cooler check scores are observed with a reduction in baggage means from 3.5 during the second observation to 3.3 during the third. Cooler scores also see a reduction from a mean score of 3.7 during the second observation to 3.4 during the third.

Table 4.7.

Gate 6, Fourth Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
11:48 AM	1	1	1	4	0
	2	3	2	4	1
	3	3	3	4	1
	4	2	3	4	1
	5		3	4	0
	6		2	4	0
	7	3		4	1
	8	3	2	4	1
	9	3	2	4	1
	10		3	4	1
	11	3	2	4	1
	12	2	1	4	0
	13	1	1	4	1
	14	2		4	1
	15		1	4	1
	16	2	3	4	1
	17	2	2	4	1
	18		1	4	0
	19	2	2	4	0
12:11 PM	20		1	4	0

Final data collection from gate six during the fourth observation period from 11:48am to 12:11pm confirms a continued reduction in overall security effectiveness as mean baggage and cooler scores are reduced to 2.2 and 1.9. Of note is also the reduction of mean ticket stubbing to .65. As ticket stubbing was only scored as “completed” or “not completed”, this indicates that 35 percent of patrons observed during this timeframe were allowed entrance into the facility without having to provide proof of ticket for entry.

4.2.1.3 Gate 7 Security Data

Data collection for gate seven began at 7:00am and extended through 11:06am. A maximum of 20 patrons were observed during each of the observed four periods, for a total of 73 data sets collected observing the security thoroughness at described in figure 4.1. The graphs below represent the numerical total of each category, for each observed patron, during each of the four observation times.

Table 4.8.

Gate 7, First Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
7:00 AM	1	4		3	1
	2	4		2	1
	3	0		4	1
	4		4	3	1
	5	4	4	3	1
	6	5	4	4	1
	7			3	1
	8		4	3	0
	9	3	4	4	1
	10	3	4	3	1
	11		4	2	1
	12	2		3	1
	13	5		3	1
	14	4		3	1
	15	5	4	3	1
	16	4	4	2	1
	17		3	2	1
	18	2	2	1	1
	19	4		4	1
7:49 AM	20		4	3	1

Table 4.9.

Gate 7, Second Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
8:07 AM	1	3	4	4	1
	2			4	1
	3		3	4	1
	4	3	3	2	1
	5	5	4	4	1
	6	5		4	1
	7	5	5	4	1
	8	4	4	4	1
	9	2		4	1
	10	3		4	1
	11	3		4	
	12	2		4	
	13	4	4	4	1
	14	4	4	4	1
	15	5		3	
	16	4		4	1
	17	4		4	1
8:49 AM	18	5		4	1

Gate seven data between observation periods one and two illustrate the impact of security managers and corrective training. Initial observations indicated mean baggage, cooler and customer service scores of 3.5, 3.7, and 2.9. However, as observer notes indicate, here managers intervened and provided guidance to lane workers, resulted in *increased* baggage mean scores of 3.8 and *increased* perceived customer service mean scores of 3.8. Cooler check scores actually further declined to 3.2, indicating inconsistent remedial training standards.

Table 4.10.

Gate 7, Third Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
9:33 AM	1	3	4	3	1
	2	4	2	3	1
	3			3	1
	4	2		3	1
	5	2		4	1
	6	2		3	1
	7	2	2	3	1
	8		3	4	1
	9		2	1	1
	10	2		0	1
	11	3	2	3	1
	12	3	2	4	1
	13		0	4	1
	14		2	4	1
	15	3		4	1
	16		1	4	1
10:04 AM	17	3		3	1

As noted in data set three for gate seven, once security management personnel departed and mounting patron attendance was noted, the gains were reversed and the mean baggage score dropped to 2.6, the mean cooler score dropped to 2.1, and the mean customer service score was reduced to 3.2

Table 4.11.

Gate 7, Fourth Observer Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
10:32 AM	1	3		4	1
	2	2		2	1
	3	0	3	2	1
	4	2	2	1	1
	5	1		2	1
	6	5		4	1
	7	0	3	3	1
	8	2	3	2	1
	9	3		4	1
	10	3	2	4	1
	11		2	4	1
	12		2	4	1
	13	4	3	3	1
	14	1		3	1
	15	2		1	1
	16		3	3	1
	17	2		4	1
11:06 AM	18	3	3	3	1

Final data sets for gate seven showed a further reduction of mean baggage scores to 1.9, a slight increase in cooler check scores to 2.6, and a continued reduction in customer service to 3.0.

4.2.1.4 Gate 9 Security Data

Data collection for gate nine began at 7:10am and extended through 11:33am. Due to the size of gate nine and patron congestion, two research observers collected data from the gate. A total of 20 patrons were observed during each of the observed eight periods, for a total of 160 data sets collected observing the security thoroughness at

described in figure 4.1. The graphs below represent the numerical total of each category, for each observed patron, during each of the eight observation times.

Table 4.12.

Gate 9, First Observer, First Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
7:11 AM	1	4		4	1
	2		5	4	1
	3	2		3	1
	4	4	3	4	1
	5	4	3	4	1
	6		2	4	1
	7	5	5	4	1
	8	3	5	4	1
	9	4	2	4	1
	10	3		4	1
	11	3	4	4	1
	12	4		4	1
	13	3		4	1
	14	4	4	4	1
	15	3	3	4	1
	16		3	4	1
	17	5	3	4	1
	18		4	4	1
	19	4	3	4	1
8:00 AM	20	4	4	4	1

Table 4.13.

Gate 9, First Observer, Second Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
8:42 AM	1	4	3	4	1
	2	3		4	1
	3	4	4	4	1
	4	4	4	4	1
	5	2	3	4	1
	6	4	4	4	1
	7		4	4	1
	8	3	3	4	1
	9	1		4	1
	10		3	4	1
	11	4	4	3	1
	12	4	4	4	1
	13	3		4	1
	14	4	3	4	1
	15	4	4	4	1
	16	2	3	4	1
	17	3	3	4	1
	18	5	4	4	1
	19		4	4	1
9:22 AM	20	2	3	4	1

Similar to the results of gate seven, the first observer, first and second data sets from gate nine showed an initial mean baggage, cooler, and customer service scores of 3.6, 3.5, and 3.9. Second observation data sets were recorded at 3.2, 3.5, and 3.9. As with gate seven, security management personnel were dispatched and provided remedial training to lane workers. However, due to the size of gate nine (38 lanes), security managers focused mainly on the northern most set of lanes (lanes 18-38) where observer

one was posted. As the data will show, observer two, who was monitoring lanes 1-18 had limited security management interaction to provide corrective training. Subsequently, the ensuing data for observer two showed a only a small improvement between data sets one and two, and a much larger continued decline in observed sets three and four.

Table 4.14.

Gate 9, First Observer, Third Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check	
9:52 AM	1	3	3	4	1	
	2		5	4	1	
	3	4	3	4	1	
	4	4	4	4	1	
	5		4	4	1	
	6	3	3	4	1	
	7	4	2	4	1	
	8	4		4	1	
	9	3	3	4	1	
	10	4	3	4	1	
	11	4		4	1	
	12			4	4	1
	13	4	3	4	4	1
	14			5	4	1
	15	5	3	4	4	1
	16			5	4	1
	17	3	4	4	4	1
	18	3		4	4	1
	19	4	4	4	4	1
10:45 AM	20		3	4	1	

Gate nine, observer one, data set three shows improved mean scores of 3.7, 3.5, and 4.0 for baggage, cooler and customer service after security management addresses deficiencies.

Table 4.15.

Gate 9, First Observer, Fourth Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
10:50 AM	1	3		4	1
	2	5	0	4	1
	3	3	3	4	1
	4	0	5	4	1
	5	5	3	4	1
	6	3	4	4	1
	7	3	4	4	1
	8	4	3	4	1
	9	4	0	4	1
	10		5	4	1
	11	4	5	4	1
	12	3		4	1
	13	3	3	4	1
	14		3	4	1
	15	3		4	1
	16	0	4	4	1
	17	5	4	4	1
	18	3		4	1
	19		3	4	1
11:22 AM	20	4	3	4	1

Final data collection for observer one, data set four on gate nine shows a reversal in gains and subsequent decline of mean scores as management depart and lines increase with patrons. Means scores resulted in 3.2 and 3.2 for both baggage and cooler checks.

Table 4.16.

Gate 9, Second Observer, First Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
7:10 AM	1	0	2	4	1
	2	0	2	4	1
	3	0	1	4	1
	4	0	2	4	1
	5	3	2	4	1
	6	3		0	1
	7	1	2	4	1
	8	0	1	4	1
	9	3	0	4	1
	10	3	0	3	1
	11	2		4	1
	12	0	2	4	1
	13	4	2	1	1
	14	1	1	4	1
	15	3	3	4	1
	16	2	2	4	1
	17		3	4	1
	18	2	3	3	1
	19	2	2	4	1
8:11 AM	20	3		4	1

Initial data sets for second observer, gate nine, set one indicate a mean baggage score of 1.6, a mean cooler score of 1.7, and a mean customer service score of 3.5. As with gates seven and nine, security management personnel made an attempt to correct deficiencies, however, due to gate nine's size, most of the effort was placed on the northern most set of lanes (18-38), thereby leaving most of the lane workers in lanes 1-18 without the remedial training.

Table 4.17.

Gate 9, Second Observer, Second Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
8:39 AM	1	2	2	4	1
	2	2		0	1
	3	2	1	1	1
	4		1	0	1
	5		1	1	1
	6	2	4	2	1
	7	1		0	1
	8	2	1	3	1
	9	2	1	4	1
	10	2		2	1
	11		3	4	1
	12	2	4	3	1
	13		1	4	1
	14	1		4	1
	15	2		0	1
	16	2	2	2	1
	17		1	0	1
	18	2	1	1	1
	19	5	4	4	1
9:03 AM	20	5	3	4	1

A brief increase in mean scores from observer two, data set two as compared to observer two, data set one is noted with mean baggage, cooler and customer service scores of 2.2, and 2.0. Unlike previous examples however, customer service continued to decline with a mean score of 2.1. This is likely due to gate nine being the largest entry point of the speedway in both lane size and patron usage. An estimated 61,000 patrons used gate nine during the race.

Table 4.18.

Gate 9, Second Observer, Third Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check
9:52 AM	1	3	4	4	1
	2	0	1	2	1
	3		1	0	1
	4	0	3	4	1
	5	4	1	2	1
	6	3		4	1
	7	2		2	1
	8		4	4	1
	9		1	0	1
	10	2	4	1	1
	11		4	0	1
	12	2		4	1
	13	1		0	1
	14		1	2	1
	15	2	1	3	1
	16	0	4	3	1
	17	2	1	0	1
	18	2	1	0	1
	19	1		2	1
10:55 AM	20	5		4	1

The third observation set for gate nine, observer two indicated a mean baggage score of 1.9, cooler score of 2.2 (slightly higher than the higher 1.7 in the previous set), and customer service score of 2.0.

Table 4.19.

Gate 9, Second Observer, Fourth Security and Service Data

Time	Entries	Bag Check	Cooler Check	Overall Customer Service	Ticket Stub Check	
11:02 AM	1	2	2	4	1	
	2	2		1	1	
	3	1		1	1	
	4	0	1	0	1	
	5	1		4	1	
	6			1	4	1
	7			1	4	1
	8	1	1	1	0	1
	9	1	1	1	4	1
	10	2			1	1
	11	0		1	4	1
	12	0		4	1	1
	13			1	1	1
	14			1	3	1
	15	2			2	1
	16			1	4	1
	17	1		0	4	1
	18	1			2	1
	19	3			4	1
11:33 AM	20	4		4	1	

The fourth and final data set for observer two showed a significant decline in baggage and cooler mean scores to 1.4 and 1.2. Of note however is the slight *increase* in customer service to a mean score of 2.6. Observer notes indicate that this timeframe correlates with observed processing time standards showing that when overwhelmed, security processors essentially stopped checking and screening patrons. This abrupt ceasing of security checks allowed for patrons who had been stopped and waiting in line to quickly begin moving through the lines. This elastic effect on the lines, where patrons

who had been stalled but now are moving rapidly, likely attributed to the improved perception of service.

4.2.1.5 All Gate Security Data Totals

Security data from each of the observed periods at each gate was consolidated into the below graphically depicted charts illustrating the total numerical value of security, as expressed in a format of zero to six, over the course of observed data collection. As the charts below illustrate, security effectiveness continued to decrease over time at each of the gates observed until security processing either ceased or was reduced in effectiveness.

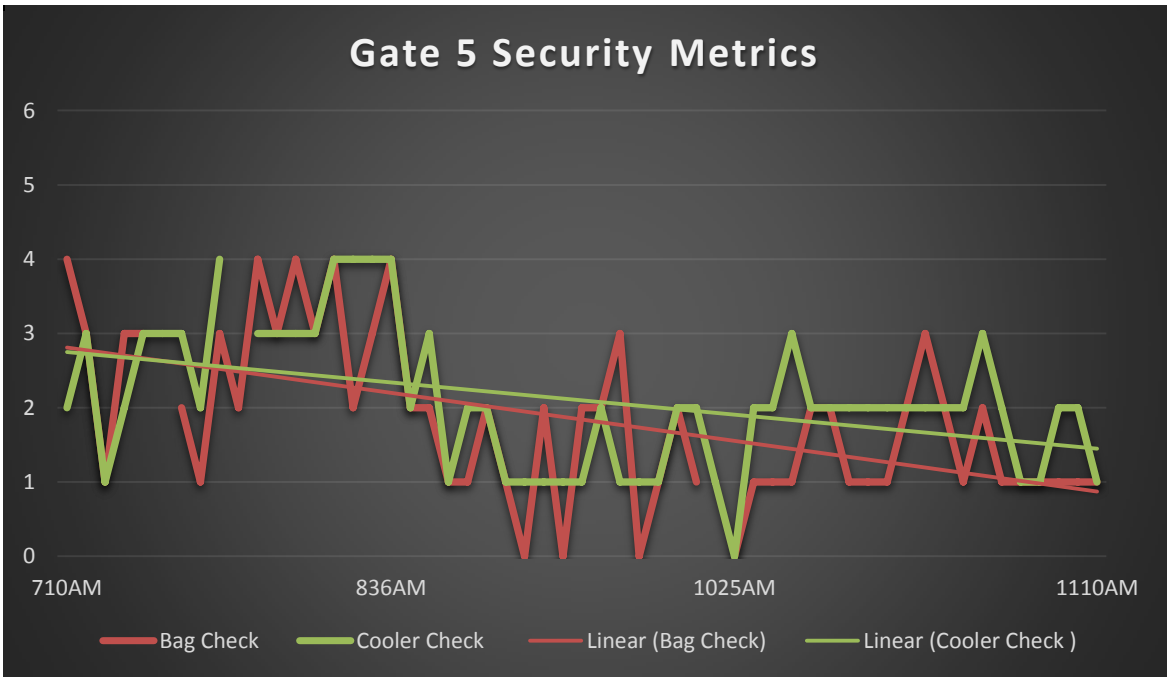


Figure 4.2. Gate 5, Total Security Data

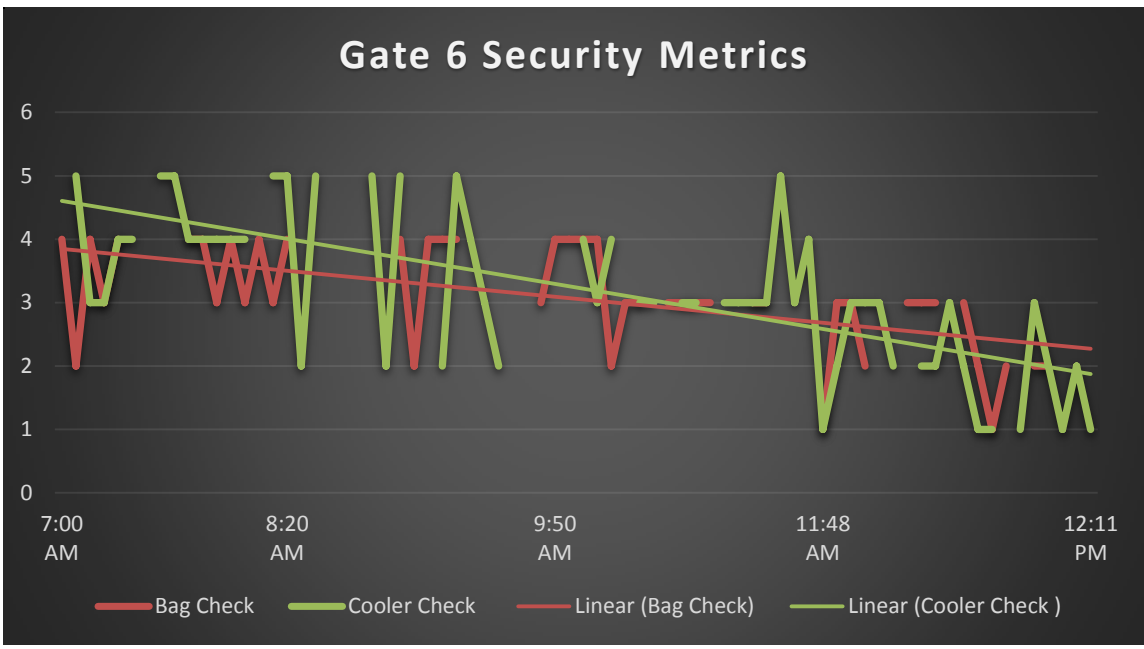


Figure 4.3. Gate 6, Total Security Data

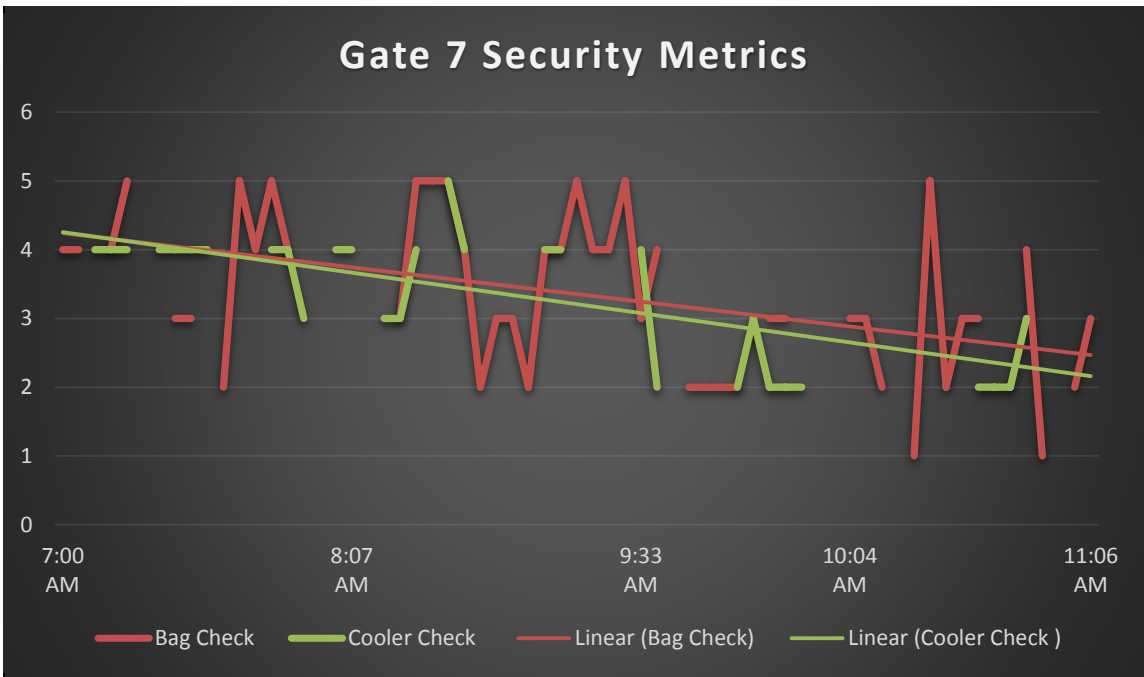


Figure 4.4. Gate 7, Total Security Data

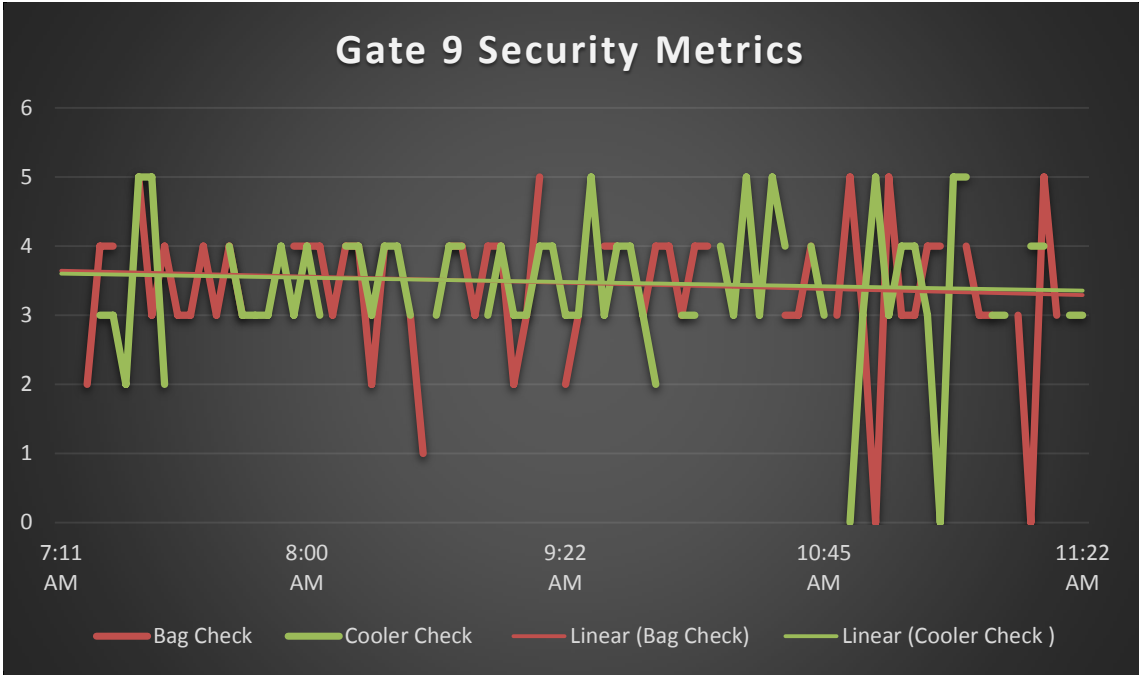


Figure 4.5. Gate 9, total Security Data

As the combined security metric graphs from gates five through nine show, a marked decline in security performance as measured from the mean scores of baggage and cooler checks is observed across all gates as the event progressed.

4.3 Gate Time Data Collection

A rubric by the researcher was employed that ensured the Indianapolis Motor Speedway had observation and data collection completed at each of the major entry locations throughout the morning of race day. Each data collector participated in mock data collection drills to ensure uniformity was established. Additionally, each data

collector worked with a partner to ensure redundancy in effort in order to avoid errors in timekeeping and recording. A centralized location was established inside the Indianapolis Motor Speedway from which the researcher could gather the entire collection team prior to the beginning of the event, and again at varied times throughout the day to monitor progress and supervise collection methods to ensure uniformity and consistency were being applied.

4.3.1 Individual Gate Time Data

Time data collection was derived from data collection packet analysis observing a given security checkpoint and recording the time elapsed from when a patron entered the security processing lane until they processed through ticket stubbing. For the purposes of this study, the beginning of the security processing line consisted of where a single file lane formed at the beginning of the security processing lane and when first verbal contact and instructions were given to the patron. The security zone consisted of the bag and cooler check area, the buffer area, and the ticket stubbing location at the far end of the security zone. Time was recorded from when a patron first entered the security line, when he or she started the bag or cooler check area, when they entered the buffer zone, and when they completed the ticket stubbing. Metrics observing total security processing as well as specific steps such as bag or cooler checks were recorded and made discernable by the process. The entire security processing zone was further defined as the control area which was controlled by uniformed security personnel and had a discernable entry point and exit point. Time data recorded only observed this aspect of actual security processing. All other time leading up to entering the security processing

lane or zone was not evaluated. Total time required for a patron to enter the security processing lane and exit was defined as total security zone wait time.

4.3.1.1 Gate 5 Time Data

Data collection for gate five began at 7:10am and extended through 10:15am. A total of sixteen patrons were observed; eleven in the first and five in the second observed period. The graphs below represent the numerical value, expressed in hour, minute, second format, for each observed category, for each observed patron, during each of the observation times. Bag and cooler check area was that area where a security member took physical custody of the patron's item to conduct the search. The buffer area was the space between leaving the bag and cooler check area and the ticket stubbing area. The ticket stubbing location was where a security member physically took control of the patron's ticket for stubbing.

Table 4.20.

Gate 5, First Observer Time Data

Time	Entries	Bag/Cooler Check	Buffer Zone	Ticket Stubbing	Complete
7:10 AM	1	0:00:02	0:00:08	0:00:08	0:00:10
	2	0:00:01	0:00:30	0:00:30	0:00:32
	3	0:00:01	0:00:16	0:00:16	0:00:22
	4	0:00:04	0:00:30	0:00:30	0:00:45
	5	0:00:07	0:00:32	0:00:32	0:00:41
	6	0:00:10	0:00:24	0:00:24	0:00:27
	7	0:00:21	0:00:42	0:00:42	0:00:48
	8	0:00:09	0:00:32	0:00:32	0:00:42
	9	0:00:25	0:00:39	0:00:39	0:00:43
	10	0:00:23	0:00:30	0:00:30	0:00:35
8:36 AM	11	0:01:05	0:01:25	0:01:55	0:02:07

*Entry 11 occurred after staff adjusted entry lane and buffer serpentine

The data depicts processing time of patrons from line entry until completely processed through security. Processing time for each station in the process was noted. The data for gate five, first observer recorded a mean completion time of 00:50 seconds.

Table 4.21.

Gate 5, Second Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
9:08 AM	1	0:02:09	0:02:17	0:02:34	0:02:43
	2	0:02:57	0:02:57	0:03:06	0:03:11
	3	0:03:50	0:03:51	0:04:08	0:04:12
	4	0:02:07	0:02:08	0:02:24	0:02:27
10:15 AM	5	0:03:01	0:03:05	0:03:25	0:03:34

*Entry six began at 10:00am and was still in line at 11:10am. No further time data was collected

The data for gate five, second observer recorded a mean completion time of 0:03:05. This drastic increase underscores to correlation between processing time and increased patron attendance. In this example, extenuating line circumstances prohibited further data collection from this gate after the last observed data point at 10:15am as this is when security at gate five ceased and unrestricted access was opened to the public.

4.3.1.2 Gate 6 Time Data

Data collection for gate six began at 7:00am and extended through 12:11am. A total of ten patrons were observed during each of the observed four periods, for a total of 40 total data sets. The graphs below represent the numerical value, expressed in hour, minute, second format, for each observed category, for each observed patron, during each of the observation times.

Table 4.22.

Gate 6, First Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
7:00 AM	1	0:00:04	0:00:28	0:00:30	0:00:32
	2	0:00:03	0:00:27	0:00:28	0:00:34
	3	0:00:03	0:00:35	0:00:40	0:00:45
	4	0:00:05	0:00:38	0:00:40	0:00:45
	5	0:00:04	0:00:44	0:00:53	0:00:56
	6	0:00:04	0:00:44	0:00:48	0:00:50
	7	0:00:04	0:00:33	0:00:42	0:00:44
	8	0:00:04	0:00:54	0:00:56	0:00:58
	9	0:00:04	0:00:30	0:00:32	0:00:35
7:52 AM	10	0:00:03	0:00:47	0:00:54	0:00:57

The data for gate six, first observer recorded a mean completion time of 0:00:45 seconds.

Table 4.23.

Gate 6, Second Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
8:20 AM	1	0:01:31	0:01:45	0:01:50	0:01:55
	2	0:01:05	0:01:29	0:01:47	0:01:54
	3	0:02:10	0:02:45	0:02:50	0:02:55
	4	0:00:55	0:01:07	0:01:47	0:01:50
	5	0:00:29	0:01:00	0:01:14	0:01:22
	6	0:00:18	0:01:00	0:01:24	0:01:45
	7	0:00:40	0:00:57	0:01:30	0:01:35
	8	0:01:11	0:01:25	0:01:37	0:01:41
	9	0:01:10	0:01:37	0:01:46	0:01:48
9:15 AM	10	0:01:17	0:02:20	0:02:35	0:02:40

The data for gate six, second observer had a mean completion time of 0:02:04 minutes.

Table 4.24.

Gate 6, Third Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
9:50 AM	1	0:04:17	0:04:38	0:04:57	0:05:00
	2	0:04:13	0:04:23	0:04:45	0:04:48
	3	0:03:55	0:04:10	0:04:17	0:04:20
	4	0:04:40	0:05:05	0:05:25	0:05:30
	5	0:04:43	0:04:56	0:05:40	0:05:45
	6	0:04:00	0:04:30	0:04:40	0:04:45
	7	0:01:40	0:01:50	0:02:00	0:02:05
	8	0:02:20	0:02:55	0:03:20	0:03:25
	9	0:01:56	0:02:15	0:02:35	0:02:40
11:00 AM	10	0:02:35	0:02:42	0:02:50	0:02:53

The data for gate six, third observer recorded a mean completion time of 0:04:31 minutes.

The increase of two minutes, twenty seven seconds over the previous observation time of two minutes, four seconds, indicated inconsistent processing standards were employed.

Table 4.25.

Gate 6, Fourth Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
11:48 AM	1	0:00:30	0:00:38	0:00:45	0:00:50
	2	0:01:05	0:01:20	0:01:30	0:01:35
	3	0:01:05	0:01:13	0:01:24	0:01:27
	4	0:00:45	0:00:55	0:01:05	0:01:08
	5	0:00:50	0:00:57	0:01:04	0:01:07
	6	0:00:35	0:00:40	0:00:55	0:01:00
	7	0:00:40	0:00:50	0:00:55	0:00:58
	8	0:00:38	0:00:50	0:00:56	0:01:01
	9	0:00:42	0:00:49	0:00:55	0:00:58
12:11 PM	10	0:00:48	0:00:56	0:01:08	0:01:12

The data for gate six, fourth observer recorded a mean completion time of 0:01:35 minutes. This drastic increase in processing time, then decrease at peak patron time illustrated and correlated to the observed security metrics noted previously. When lines lengthened and processing times could not maintain steady-state flows, the security posture collapsed and became ineffective.

4.3.1.3 Gate 7 Time Data

Data collection for gate seven began at 7:00am and extended through 11:16am. A total of eleven patrons were observed during the first two observed periods, eight and two patrons were observed during the last two, for a total of 40 total data sets. The graphs below represent the numerical value, expressed in hour, minute, second format, for each observed category, for each observed patron, during each of the observation times.

Table 4.26.

Gate 7, First Observer Time Data

Time	Entries	Bag/Cooler Check	Buffer Zone	Ticket Stubbing	Complete
7:00 AM	1	0:00:08		0:00:02	0:00:15
	2	0:00:22		0:00:01	0:00:31
	3	0:00:16		0:00:02	0:00:30
	4	0:00:03		0:00:01	0:01:02
	5	0:00:01		0:00:05	0:00:08
	6	0:00:02		0:00:21	0:00:40
	7			0:00:04	0:00:15
	8	0:00:09		0:00:02	0:00:31
	9	0:00:00		0:00:01	0:00:09
	10	0:00:21		0:00:01	0:00:51
7:49 AM	11	0:00:04		0:00:01	0:00:39

The data for gate seven, first observer had a mean completion time of 0:00:34 seconds.

Table 4.27.

Gate 7, Second Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
8:07 AM	1	0:00:01	0:00:27	0:00:49	0:01:01
	2	0:00:19	0:01:01	0:01:17	0:01:19
	3	0:00:10	0:01:18	0:01:20	0:01:46
	4	0:00:16	0:01:54	0:01:33	0:01:36
	5	0:00:08	0:00:16	0:00:20	0:00:31
	6	0:00:41	0:01:11	0:01:24	0:01:27
	7	0:01:12	0:01:26	0:02:12	0:02:15
	8		0:00:24	0:00:54	0:00:59
	9	0:00:06	0:00:30	0:00:33	0:00:49
	10	0:00:08	0:00:47	0:00:52	0:01:11
8:49 AM	11	0:00:07	0:00:42	0:00:57	0:01:02

The data for gate seven, second observer had a mean completion time of 0:01:08 minutes.

Table 4.28.

Gate 7, Third Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
9:33 AM	1	0:00:57	0:01:22	0:01:26	0:01:29
	2	0:01:08	0:01:18	0:01:23	0:01:25
	3	0:01:17	0:01:28	0:01:50	0:01:53
	4	0:02:18	0:02:30	0:02:46	0:03:02
	5	0:03:02	0:03:09	0:03:34	0:03:37
	6	0:02:59	0:03:10	0:03:20	0:03:27
	7	0:06:03	0:06:07	0:06:46	0:06:53
10:04 AM	8	0:09:10	0:09:41	0:09:50	0:09:53

The data for gate seven, third observer recorded a mean completion time of 0:04:12

minutes. As with previous gate examples, when patron lines increased, inefficiencies in lane security processing was noted and resulted in excessive wait times.

Table 4.29.

Gate 7, Fourth Observer Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
10:32 AM	1	0:07:34	0:07:46	0:07:49	0:07:57
11:16 AM	2	0:21:12	0:21:28	0:21:35	0:21:40

*After entry 2, security gates ceased screening and opened to general, unchecked admission

The data for gate seven, fourth observer recorded a mean completion time of 0:14:48 minutes. As with previous gate examples, extenuating line circumstances prohibited further data collection from this gate after the last observed data point at 11:16am when security at gate seven ceased and unrestricted access was opened to the public.

4.3.1.4 Gate 9 Time Data

Data collection for gate six began at 7:10am and extended through 11:33am. Due to the size of gate nine and patron congestion, two research observers collected data from the gate. A maximum total of 11 patrons were observed during each of the observed eight periods, for a total of 85 total data sets. The graphs below represent the numerical value, expressed in hour, minute, second format, for each observed category, for each observed patron, during each of the observation times.

Table 4.30.

Gate 9, First Observer, First Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete

7:11 AM	1	0:00:05	0:00:09	0:00:11	0:00:13
	2	0:00:04	0:00:10	0:00:13	0:00:15
	3	0:00:09	0:00:35	0:00:52	0:00:55
	4	0:00:17	0:00:21	0:01:09	0:01:12
	5	0:00:09	0:00:19	0:00:30	0:00:33
	6	0:00:10	0:00:18	0:00:32	0:00:35
	7	0:00:23	0:00:47	0:00:57	0:01:04
	8	0:00:06	0:00:24	0:00:36	0:00:41
	9	0:00:25	0:00:36	0:01:03	0:01:09
	10	0:00:25	0:00:36	0:01:03	0:01:07
8:00 AM	11	0:00:07	0:00:39	0:00:56	0:00:59

The data for gate nine, first observer had a mean completion time of 0:01:02 minutes.

Table 4.31.

Gate 9, First Observer, Second Time Data

Time	Entries	Bag/Cooler			
		Check	Buffer Zone	Ticket Stubbing	Complete
8:42 AM	1	0:00:12	0:00:50	0:01:03	0:01:09
	2	0:00:21	0:00:25	0:01:05	0:01:21
	3	0:00:07	0:00:17	0:00:31	0:00:38
	4	0:00:09	0:00:10	0:00:21	0:00:25
	5	0:00:12	0:00:17	0:00:52	0:00:57
	6	0:00:17	0:01:05	0:01:43	0:01:52
	7	0:00:35	0:00:37	0:01:29	0:01:45
	8	0:00:40	0:00:45	0:01:13	0:01:29
	9	0:00:43	0:00:46	0:02:00	0:02:02
9:22 AM	10	0:00:17	0:01:42	0:01:59	0:02:05

The data for gate nine, second observer had a mean completion time of 0:01:18 minutes.

Table 4.32.

Gate 9, First Observer, Third Time Data

Time	Entries	Bag/Cooler		Ticket Stubbing	Complete
		Check	Buffer Zone		
9:52 AM	1	0:00:25	0:00:26		0:01:29
	2	0:01:13	0:01:52		0:02:16
	3	0:00:42	0:00:45		0:01:25
	4	0:00:30	0:01:00		0:01:43
	5	0:01:16	0:01:27		0:02:08
	6	0:01:05	0:01:09		0:03:22
	7	0:01:09	0:01:30		0:02:33
	8	0:00:48	0:01:13		0:01:36
	9	0:01:23	0:01:24		0:02:43
	10	0:00:36	0:00:48		0:02:04
10:55 AM	11	0:01:07	0:01:11		0:03:00

The data for gate nine, third observer had a mean completion time of 0:02:05 minutes.

Table 4.33.

Gate 9, First Observer, Fourth Time Data

Time	Entries	Bag/Cooler		Ticket Stubbing	Complete
		Check	Buffer Zone		
10:50 AM	1	0:00:56	0:01:19	0:03:37	0:03:54
	2	0:01:14	0:01:24	0:03:42	0:03:58
	3	0:00:57	0:01:20	0:03:53	0:04:18
	4	0:02:15	0:02:40	0:04:57	0:05:30
	5	0:01:53	0:02:12	0:04:35	0:04:40
	6	0:00:37	0:01:35	0:02:51	0:02:53
	7	0:00:51	0:01:11	0:02:43	0:02:57
	8	0:01:23	0:01:40	0:02:10	0:02:53
	9	0:00:40	0:00:48	0:02:10	0:02:17
11:22 AM	10	0:00:58	0:01:27	0:02:25	0:02:30

The data for gate nine, fourth observer had a mean completion time of 0:03:31 minutes.

Table 4.34.

Gate 9, Second Observer, First Time Data

Time	Entries	Bag/Cooler			Complete
		Check	Buffer Zone	Ticket Stubbing	
7:10 AM	1	0:00:18	0:00:36		0:00:42
	2	0:00:04	0:00:10		0:00:27
	3	0:00:31	0:00:32		0:00:59
	4	0:00:07	0:00:40		0:01:18
	5	0:00:06	0:00:26		0:00:48
	6	0:00:20	0:00:24		0:01:18
	7	0:00:28	0:00:33		0:01:10
	8	0:00:06	0:00:34		0:01:07
	9	0:00:35	0:00:59		0:01:22
	10	0:00:09	0:00:19		0:00:47
8:11 AM	11	0:00:07	0:01:10		0:02:01

Gate nine, second observe, first data set had a mean completion time of 0:01:31 minutes.

Table 4.35.

Gate 9, Second Observer, Second Time Data

Time	Entries	Bag/Cooler			Complete
		Check	Buffer Zone	Ticket Stubbing	
8:39 AM	1	0:00:28	0:00:40		0:01:14
	2	0:00:21	0:00:52		0:01:17
	3	0:00:05	0:00:17		0:00:32
	4	0:00:57	0:01:07		0:01:57
	5	0:00:10	0:00:20		0:00:48
	6	0:00:05	0:00:29		0:00:58
	7	0:00:22	0:00:35		0:00:53
	8	0:00:15	0:00:42		0:00:58
	9	0:00:05	0:00:11		0:00:39
	10	0:00:18	0:00:59		0:01:55
9:03 AM	11	0:00:22	0:00:35		0:01:18

Gate nine, second observe, second data set's mean completion time was 0:01:26 minutes.

Table 4.36.

Gate 9, Second Observer, Third Time Data

Time	Entries	Bag/Cooler		Ticket Stubbing	Complete
		Check	Buffer Zone		
9:52 AM	1	0:00:40	0:01:23	0:04:05	0:04:15
	2	0:01:30	0:01:44	0:03:15	0:03:29
	3	0:00:45	0:01:10	0:03:09	0:03:23
	4	0:01:22	0:01:32	0:03:05	0:03:46
	5	0:01:32	0:01:49	0:03:37	0:03:50
	6	0:01:41	0:01:52	0:04:07	0:04:15
	7	0:01:06	0:01:20	0:03:02	0:03:50
	8	0:00:59	0:01:13	0:03:47	0:03:56
	9	0:01:23	0:01:45	0:02:55	0:03:01
10:45 AM	10	0:00:59	0:01:17	0:03:21	0:03:34

Gate nine, second observe, third data set's mean completion time was 0:03:52 minutes.

Table 4.37.

Gate 9, Second Observer, Fourth Time Data

Time	Entries	Bag/Cooler		Ticket Stubbing	Complete
		Check	Buffer Zone		
11:02 AM	1	0:01:12	0:01:19		0:01:59
	2	0:01:13	0:01:26		0:03:41
	3	0:00:25	0:00:40		0:02:45
	4	0:00:57	0:01:30		0:02:03
	5	0:00:39	0:00:40		0:01:46
	6	0:01:41	0:02:09		0:04:20
	7	0:01:08	0:01:22		0:02:43
	8	0:01:28	0:01:33		0:02:04
	9	0:00:42	0:00:43		0:01:23
	10	0:00:42	0:01:05		0:02:12
11:33 AM	11	0:01:36	0:01:43		0:03:30

Gate nine, second observe, fourth data set's mean completion time was 0:02:39 minutes.

As with previous gate examples, gate nine's data illustrated an increased pedestrian

processing time until security personnel refrained from adherence to processing standards. This is clearly seen in gate nine when increased wait times peaked at four minutes, twenty seconds for patron number six on second observer, data set four. After which time, the drastic reduction in time corresponded to the decreased application of security screening.

4.3.1.5 All Gate Time Data Totals

Time data from each of the observed periods at each gate were consolidated into the below graphically depicted time charts illustrating the total wait time in hour, minute and second format over the course of observed data collection. As the charts below illustrate, wait times continued to increase at each of the gates observed until security processing either ceased or was reduced in effectiveness.

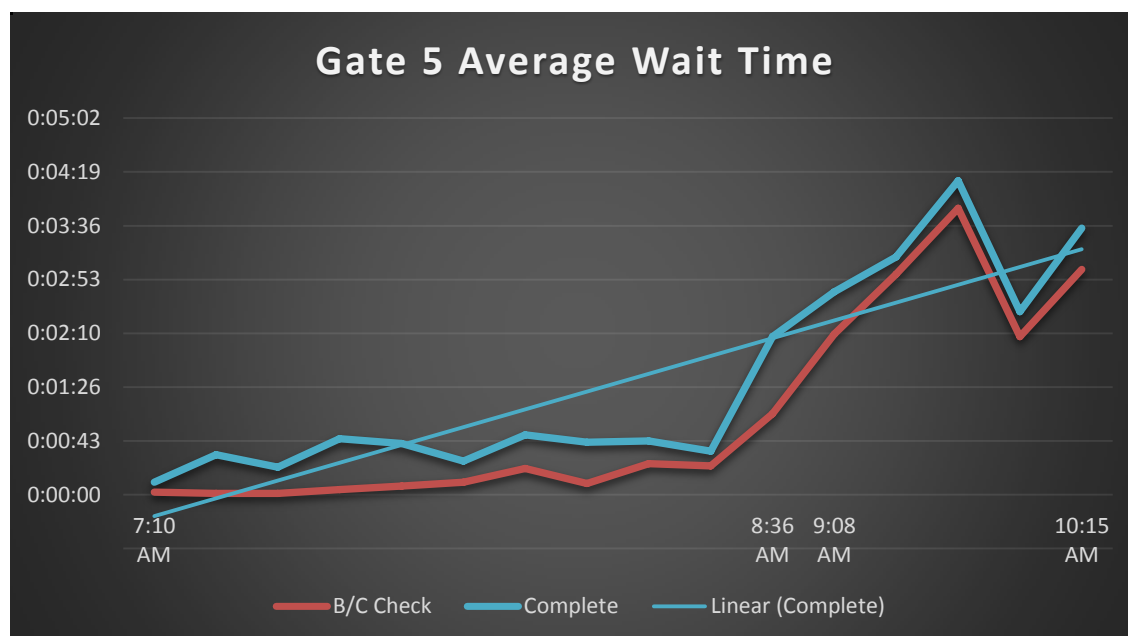


Figure 4.6. Gate 5, Total Time Data

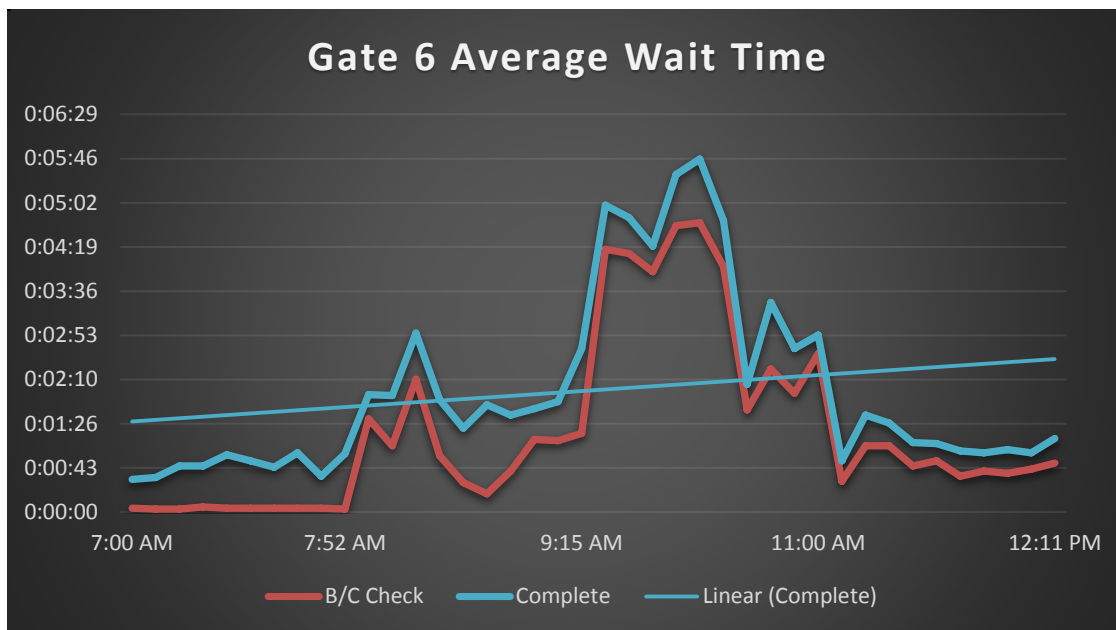


Figure 4.7. Gate 6, Total Time Data

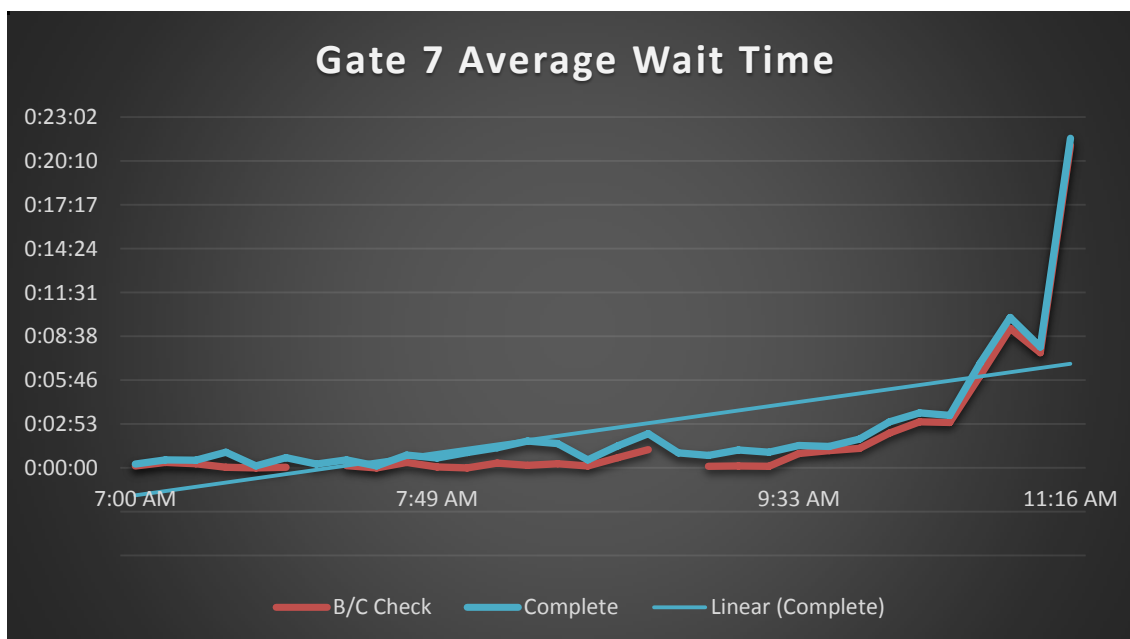


Figure 4.8. Gate 7, Total Time Data

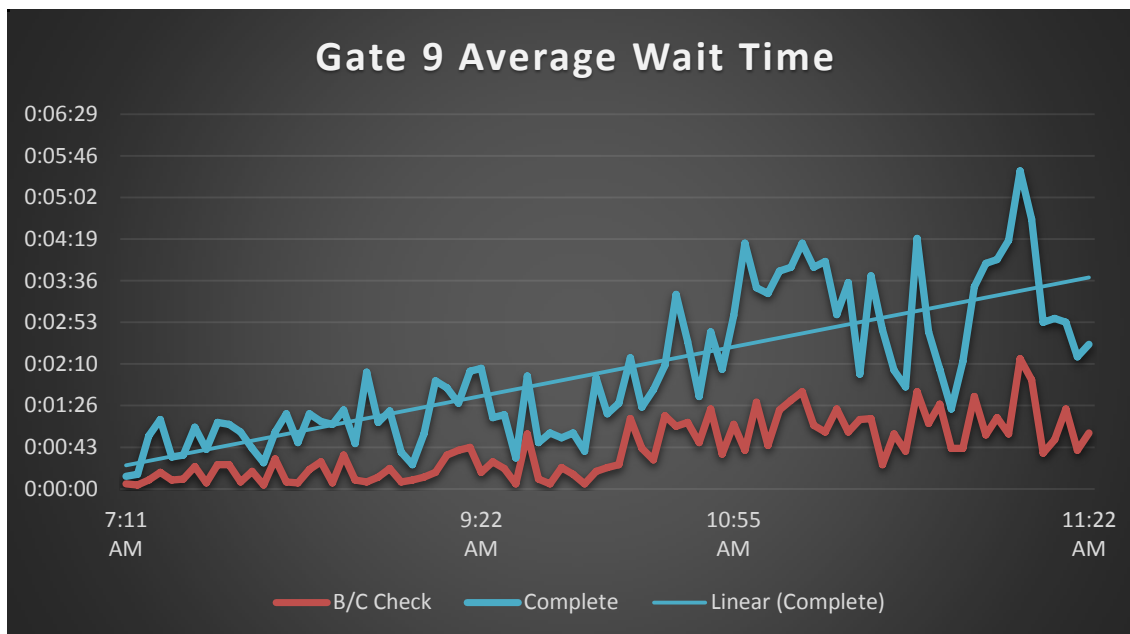


Figure 4.9. Gate 9, Total Time Data

4.4 Initial Analysis and Refinement of Data

Initial data collection on security and processing time illustrated that insufficient security processing resulted when patron wait times grew to an unsustainable level, whereby lines began merging between gates and loss of control occurred for security organizers. Figures 4.2 through 4.5 show the decrease in security effectiveness from the first observable data sets through the ending of security observations. Figures 4.6 to 4.9 depict the relationship of wait times from the first data sets collected until the ceasing of security operations prior to the start of the race. Comparing this data indicates that as lines became longer and the security processing time lengthened, the effectiveness of that security was drastically reduced. Of the observed data and recorded times, the aspect of

baggage and cooler checks remained the most inconsistent, prompting further attention to this category.



Figure 4.10. Picture of Gate 6, 08:30AM

Figure 4.10 depicts gate six at 0830AM and the relative ease for security personnel to process patrons when lines were low. The stark contrast in pedestrian flow as noted in figure 4.11 denotes the inconsistent processing standards across gates, further illustrating why pedestrian flow became a challenge for security personnel.



Figure 4.11. Photograph of Gate 6, 10:30AM

As comparison between figures 4.10 and 4.11 clearly illustrate, lack of adequate security procedures resulted in mass, unorganized lines of patrons attempting to negotiate the security lanes at each gate.

The mean processing time for bag and cooler checks from gates five through nine during the observed data collection period averaged 37.14 seconds, and ticket stubbing averaged 11.51 seconds. Total processing lane wait time averaged 0:05:06 minutes for a single patron to completely process the security lanes. Processing times across all gates reached a maximum of 0:14:00 minutes per patron until data collection ceased due to individual gates stopping security checks and opening for all patrons to enter unchecked.

4.5 Conclusion of Data

Security requirements for patron attendance for the Indianapolis 500 automobile race resulted in overloading the existing security procedures and infrastructure capabilities in their current form. Lane processing time requirements and limitations resulted in a situation in which patron attendance exceeded the capability of the security staff to effectively screen and process. Further analysis of data collected from gates five through nine resulted in the conclusion that modeling scenarios would be needed to further refine the data. Due to the size of patron attendance and current computer processing limitations, modeling the entire speedway was not possible. A modeling scenario was therefore developed and ran that focused specifically on data collected from gate nine in order to further deduct meaningful analysis of the data.

Approximately 61,000 patrons used gate nine for entry into the Indianapolis Motor Speedway, making it the singularly largest entry point of the facility. Data collected revealed that approximately 33% of those patrons had either a cooler or bag. Computer modeling was conducting running scenarios that tested the max throughput capability of gate nine, which was 38 security lanes, based off of known processing times and patron attendance compared against the time available from the gate opening until the race began. Multiple scenarios were ran that tested the number of lanes in use with various levels of security, expressed in time, to determine if existing security applications and infrastructure were adequate to address the numbers of patrons attending the event, and if an optimal processing time and lane configuration could be identified. The next chapter contains the modeling scenario conducted based of data collected from gate nine. Complete data sets used in completing the model can be found in appendix (B).

CHAPTER 5. GATE 9 MODELING

*This chapter was used by the researcher as a separate publication

This chapter illustrates the use of the data collected through modeling scenarios created using AnyLogic. The following analysis recaps the significance of the study, methodology, and data collection employed in constructing the scenario. It details the process of modeling and answers the question, “will improved pedestrian flows and patterns resolve the issue while still achieving the desired security and safety goals?”, by quantifying through modeling the answers to (1) can a better flow pattern be developed that will increase safety and security, while minimizing patron entry wait time from parking through security processing at the Indianapolis Motor Speedway; and (2) what is the impact of gate processing and current flow patterns such as patron parking and entry gate restrictions and locations?

While chapter four described the data collected that was employed to determine the processing times and security effectiveness at the Indianapolis Motor Speedway, Indianapolis 500, 2013 automobile race, chapter five further refines this data to specifically focus modeling efforts at a single entrance gate; gate nine. This gate was chosen due to location, volume of pedestrian usage, and extensive data collection efforts.

5.1 Gate 9 Modeling Methodology

Significant shifts in how public events are conducted with regard to security have occurred since the terrorist attacks on the United States on September 11, 2001. Subsequent terror and mass casualty producing events, both within the United States and abroad, have ushered in a new lexicon on the dialog of security (Rasmussen, 2002). The tragic events of the Boston Marathon bombing in 2013 further solidified the need for, and defined the enhanced security challenges of, all large public and private events (Klontz & Jain, 2013, and Biddinger et al, 2013).

This changing approach to security is borne from not only the immediate necessity to provide raw physical security, but also from the need of venues and local communities hosting such events to be perceived as capable of providing a secure event. In essence, the latent effect of physical security translates into psychological security, which often times serves as a longer lasting and more important factor for patrons and communities. These changes to enhancing security have broached nearly all facets of public outings and events, with increased individual security screening for sporting venues as perhaps the most readily apparent (Bellavita, 2007). An examination of the Indianapolis Motor Speedway illustrates this point.

The Indianapolis Motor Speedway was originally constructed in 1909 as a test track for the automobile industry. Entrepreneur C.G. Fisher built the track as a location to evaluate and test the ever increasingly popular personally owned automobile that had emerged in the past decade. At the time however, the quality of public roads made testing vehicles at speed impossible. To remedy this Fisher designed and developed a 2.5 mile dirt race track far from what was then the city of Indianapolis, Indiana.

This would prove critical for the Indianapolis Motor Speedway over time as encroachment of urban development slowly began to squeeze closer to the track location. By the late 1960s, with the role of automobile racing fully entrenched as a uniquely American spectator sport, the Indianapolis Motor Speedway became a staple of racing activity (Indianapolis Motor Speedway, nd). Today, the Indianapolis Motor Speedway is fully encircled by the ever growing city of Indianapolis which currently hosts a population of nearly 900,000 (City-Data, 2012). Unfortunately however, the initial planning for the location and development of the track did not account for the large numbers of patrons and urban growth, making an outing to the track for a large event today an often agonizingly painful process due to congestion and traffic. Compounding this challenge is the current policy that allows for the introduction of coolers and bags by patrons to the event, thereby creating an additional challenge for security.

According to Hiller (2000), “Mega-Events are short-term high-profile events like Olympics and World Fairs that always have a significant urban impact. They re-prioritize urban agendas, create post-event usage debates, often stimulate urban redevelopment, and are instruments of boosterist ideologies promoting economic growth” (Hiller, 2000). However these events are not limited to those the size and scope of Olympics or World Fairs specifically. Super Bowl, World Cup soccer, and automobile races are among those events that qualify for the status “Mega”. The true defining feature is the social, economic, and political impact associated with the event (Boyle & Haggerty, 2009).

Although relatively minor in facility size compared to some other sporting venues, the rapid build-up of patrons for events like the Indianapolis 500 qualifies the Indianapolis Motor Speedway during race times as a Mega-Event. Hundreds of

thousands of spectators attend the iconic race each year, with processions and festivities spanning over a week prior to and after the races. This massive influx of people into the area which is flanked by residential neighborhoods and small business districts creates huge disturbances to the daily life and security concerns of the city. Enormous expenditures of capital are devoted to the resourcing of security and planning for the largest of events held there each year. As Malfas, Houlihan, and Theodoraki (2004) pointed out, the initial capital required to host a Mega-Event is dwarfed by the potential ensuing expenditures incurred when something goes wrong, due to the political influence and public relations associated with the event.

Studying the Indianapolis Motor Speedway for security procedures and pedestrian flow entails careful analysis of multiple, relevant aspects. The two phenomena are not mutually exclusive, but rather are linked and continue to fuel each other; that is, enhanced security creates flow challenges and increased flow creates security challenges. Additionally, the premise for analysis begins with a look at why both security and flow challenges exist. Aptly conducting a study of this nature required the researcher to previously examine each of the preceding catalysts for increased pedestrian flow challenges, in order to create a modeling scenario using AnyLogic software to examine flow models that would incorporate and accept the aforementioned changes while working to reduce their impact.

Three issues remain paramount in studying pedestrian flow at the Indianapolis Motor Speedway. First, is that the track and location was not originally developed to host large-spectator events and encroaching urban growth has severely impacted access over the years. Secondly, increasingly larger crowds of patrons are attending events at

the venue, with the Indianapolis 500 being the largest single day sporting event venue in the United States with several hundred thousand spectators attending in a single day. Lastly, increased security requirements which require the physical inspection of every patron and their belongings have created increasingly longer lines and wait times to gain entry. This last issue when studying the Indianapolis Motor Speedway emerges as perhaps the most perplexing as it remains the most visible and obvious result of these changes, specifically given the policy of allowing patrons to bring coolers and bags into the venue. Traditionally, patrons had carte blanche entrance capabilities with only rudimentary security checks designed to prohibit the introduction of glass bottles or containers, not weapons or bombs. Increasingly however, the need to ensure maximum security has restricted this flexibility and instead resulted in decreased freedom of movement for patrons, and greater challenges for security providers.

Any research endeavor invariably entails the need for the researcher to narrow down the scope of his field of study and data collection to that which is most relevant. Additionally, the task of a researcher is to rule out spurious influences so that internal and external reliability and validity is accomplished. The study of the Indianapolis Motor Speedway employed a hierarchal set of nested processes that proved through regression analysis to be the most effective measures in the construction of modeling scenarios. Modeling scenarios focusing on gate location and processing lanes, and data collection from these locations identified and confirmed the need for further study and analysis. Comparison of gate locations and percentage of patron use compared with heuristics and flow patterns allowed for a further narrowing of the scope to focus on gate nine specifically for the construction of modeling scenarios.

Traditional studies of this nature were done nearly extensively with quantitative data. Researchers like Gustave Le Bon (1896), Fruin (1971), Davis and Brassksma (1988), and Goffman (1972) pioneered much of the work on crowd formation and pedestrian flow. However, as Johansson, Batty, Hayashi, Al Bar, Marcozzi, and Memish (2012) pointed out, it has only been in the past 20 or so years that technology has allowed for more subjective input on modeling pedestrian flow. This has allowed the researcher to dig deeper into the concept of pedestrian flow modeling and examine various forms of behavior and aspects of crowd formation that previously were not possible (Goffman, 1972). The injection of real world stressors such as location and reaction to barriers, closed doors, funnels, etc... Into a modeling scenario that is now possible with AnyLogic software result in far greater accuracy of modeling results that more closely resemble real world situations.

Specifically, the Indianapolis Motor Speedway can be viewed in terms of the entrance locations in relation to the facility. Further study of the pedestrian flow and gate usage by pedestrians is critical. Identified obstacles such as traffic congestion, heuristics, chokepoints and the like are, as Helbing, Buzna Johansson, & Werner (2005) stated, areas of intermittency, where flows are disrupted at stated choke points.

Analyzing and integrating the flow pattern data when devising the security plan for the Indianapolis Motor Speedway is increasingly becoming an issue that must be given mutual consideration and attention. Increasingly host communities and citizens living around the Indianapolis Motor Speedway grow concerned for the safety and traffic implications associated with the venue (Higham, 1999 and Fredline, & Faulkner, 2001). The previous ability for Indianapolis Motor Speedway to focus specifically on internal

security and abdicate the external aspects is no longer viable due to the security restraints and size of the venue. Likewise, the external security and traffic considerations cannot be viewed by themselves; a comprehensive plan must be sought with a goal of devising a more thorough traffic and pedestrian flow plan that facilitates patron access across the full spectrum of inflow, parking and staging, through to the processing of the security access points. The use of AnyLogic computer based modeling allows for the design and testing of such changes in order to develop and implement a more efficient and effective process of patron security processing.

The interpretation and collection of data used by this researcher entailed a mix of quantitative and qualitative data, along with injection of subjective principles for the development of modeling scenarios. The purpose of this process was to compare known raw data sets against geographic and physical terrain, specifically gate location and usage data, thereby providing the researcher increased validity in analyzing data sets while developing modeling scenarios that best supported the objective. The researcher rendered the data collection highly effective at accomplishing the stated objective with limited bias by ensuring academic rigor was established in controlled data collection packet development, uniformity in collection practices, triangulation from multiple aspects, and objective analysis.

The model was constructed illustrating gate nine due to the size of the venue and modeling limitations. Creating computer generated modeling to replicate the exact size of the speedway was not possible given processing restraints and limitations. Therefore, modeling gate nine with the given data, as compared to data collected from other gates, provided a representative sample and accurate depiction of the phenomena.

5.2 Agent Based Model

An Agent-based modeling system “is modeled as a collection of autonomous decision-making entities called agents. Agents may execute various behaviors appropriate for the system they represent” (Borshchev, Karpov, & Kharitonov, 2004). In recent history, agent-based modeling has become increasingly popular. Borshchev, Karpov, and Kharitonov are three experts in modeling software called AnyLogic. They claim that AnyLogic is one of the best pieces of agent-based modeling software in the world. It provides many capabilities that other pieces of modeling software do not. In addition to agent-based modeling, it also allows for the creation of discrete event and system dynamics models or even combinations of two or all three types (2004).

The pedestrian flow model created in this research used an agent-based approach. Agent-based modeling in AnyLogic “captures emergent phenomena”, “provides a natural description of a system”, and “is flexible” (Bonabeau, 2002). Human systems are best modeled using an agent-based approach because it allows for complex interactions between individuals, allows the population to be modeled in a heterogeneous way, allows the interactions between people to be extremely complex, and allows each individual agent to execute complex behavior that the other two modeling techniques do not. These five attributes are all very important for the proper execution of a pedestrian flow model like the one used in this research.

Real-world data is required to accurately populate an agent-based model. Ensuring that the data is as accurate as possible allows the model to be more accurate. Model limitations stem from a person represented in the model only being able to perform the predefined actions that the user creates. A human in the real world possesses free will (Muhdi, 2007). In order to accurately recreate real-world data, a high level of accuracy is required. The model used in this research used real-world data collected from Indianapolis Motor Speedway. This real-world data, collected from actual race day conditions allowed for the researcher to ensure the highest degree of accuracy possible by ensuring that the model was created replicating actual conditions. This enabled the modeling simulations and ensuing results to possess greater validity as they were compared against actual race day conditions.

When the model is launched, the user is prompted with the model setup screen, shown in Figure 5.1.

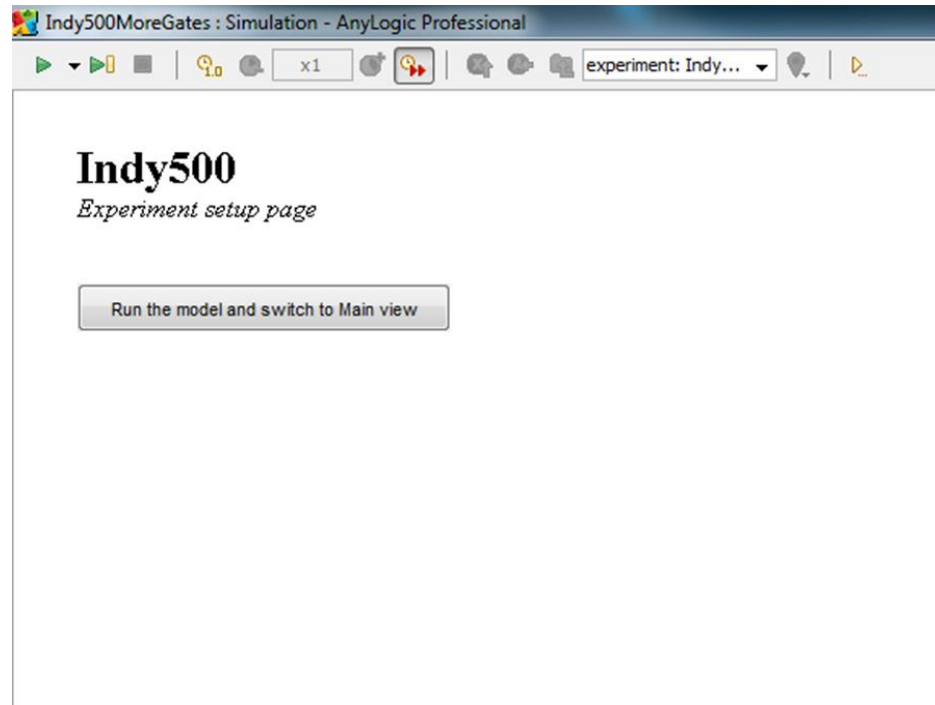


Figure 5.1. Model Setup Screen

This screen allows the user to run the model. The user can click the button labeled “Run the model and switch to Main view.” This will take the user to the Main view of the model and start the simulation. Once the button is pressed, the Main view shows a graphical representation of gate nine at Indianapolis Motor Speedway. The Main view is shown in Figure 5.2. The walls have been traced with polylines using AnyLogic’s presentation pallet. This served as the environment for the agents to exist within.

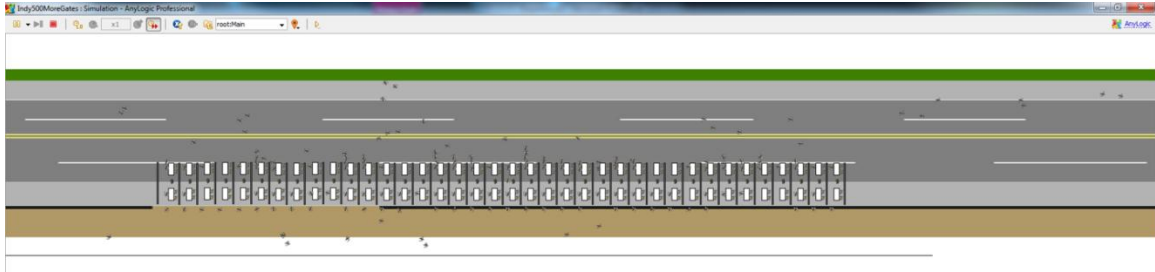


Figure 5.2. Main View Representation of Gate 9

The Main view shows Georgetown Road and the 38 entry lanes of gate nine, each containing a bag check station, a cooler check station, and a ticket stub station. Patrons can enter the model from the left side of the road, the right side of the road, or across the street where they move to the entry lanes. Each person shown in the model represented a group of 10 people.



Figure 5.3. Actual Corner of Georgetown Road and Gate 9 Entry Point

Five variables were used as inputs for the model that can be changed each time the model was ran to examine how the results could vary based upon input. The five variables were cooler check time, bag check time, ticket stubbing time, the probability that any given individual will have a cooler, and the probability that any given individual will have a bag. Those five variables were treated as Parameters in AnyLogic, meaning they could be changed dynamically as the model ran and could be varied by the user each time. Figure 5.4 shows the parameters.

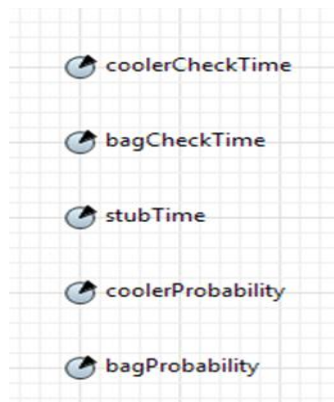


Figure 5.4. Modeling Input Parameters

Figure 5.6 shows the model logic. The process works as a flowchart from left to right. Pedestrians enter from one of three sources (the left or right side of the model on Georgetown road or across the street). They then choose their destination randomly between the 38 different lanes. This process is taken care of probabilistically through the branches before the circles. Pedestrians wait in their respective line until the bag check area is clear. Then, they move to the bag check and begin the process. Once they are finished, they move forward to the cooler check line. Once they are to the front of the line

and the cooler check process is empty, they begin the process. The same logic exists for the third process of ticket stubbing. Once they are finished with all three processes, they move to the Sink. A Sink is a terminating point for model logic. In this case, it represented pedestrians walking into the facility after finishing with the security check process. The parameters discussed in Figure 5.4 were inputs for the logic in Figure 5.6. Each of the processes had a specified time that it took. Bag and cooler checks had a probability of being needed, and everyone went through the ticket stubbing process.



Figure 5.5. Actual Gate 9 Security Lane, 07:30AM

Figure 5.5 depicts the screening process of a random lane for gate nine. From far end is entrance to lane with security table for baggage and cooler checks, interim space is defined as the buffer zone, near end is ticket stubbing personnel and exit of lane.

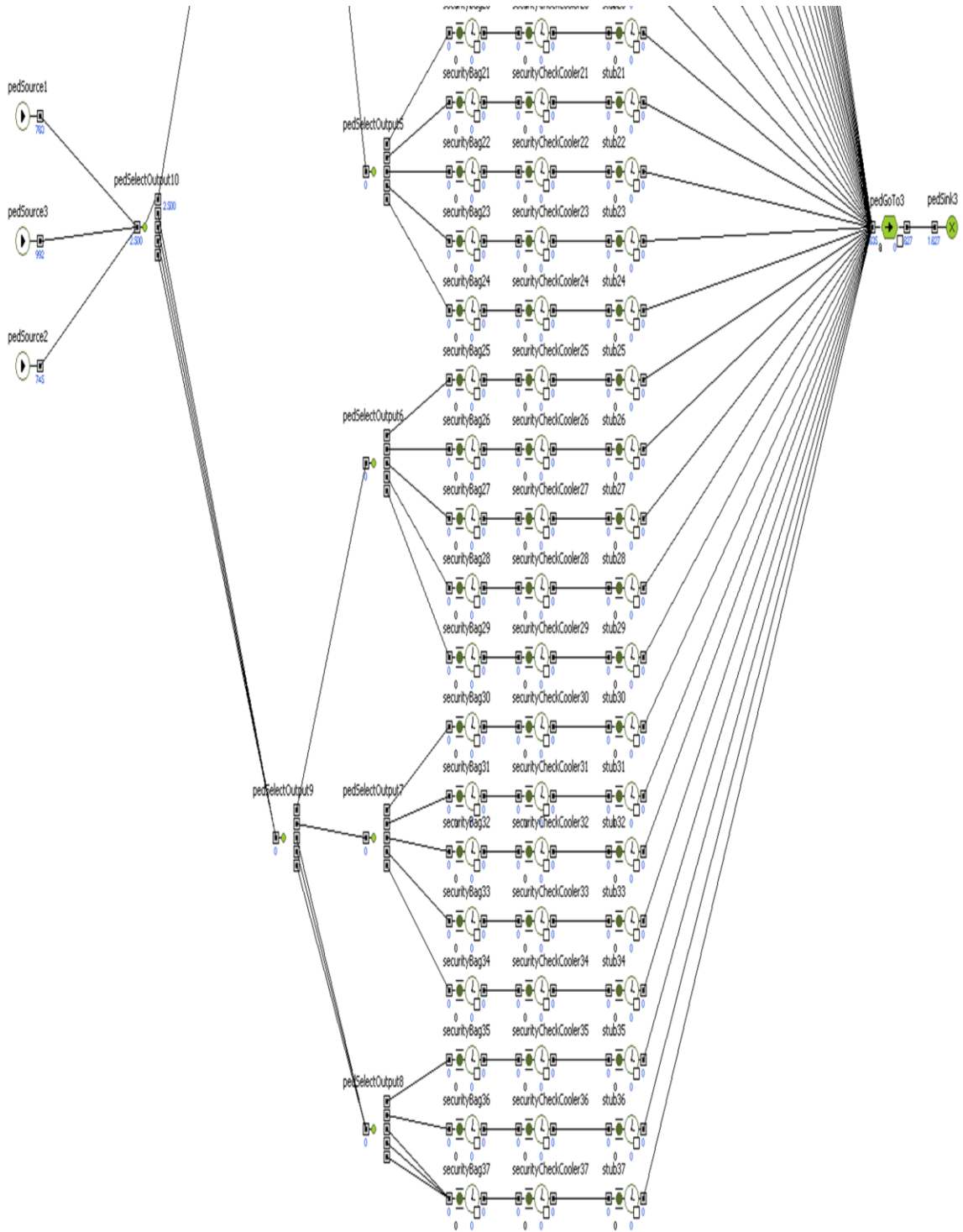


Figure 5.6. Model Logic Graphic Depicting Source Through Sink

The model results were exported from AnyLogic into a Microsoft Excel spreadsheet. The spreadsheet contained two columns. The left column represented the time, in minutes, that a group of 10 people finished the security process after 7:00 AM. 0 represented 7:00 AM; 60 represented 8:00 AM; 120 represented 9:00 AM; and so on. The right column represented the amount of time, in minutes, that it took for that group of 10 patrons to complete the security process. Figure 5.7 shows an example from the 36 lane data collected for this research.

	A	B
1		
2		
3	57.68	6.605694
4	59.061	8.366954
5	59.9225	8.610115
6	59.924	8.022681
7	61.1855	8.531456
8	61.298	9.541814
9	62.953	10.3933
10	63.1605	8.603994
11	63.3565	6.923302
12	63.8285	8.422787
13	64.893	6.879237
14	65.081	9.164781
15	65.2305	8.090848
16	65.2525	8.248158
17	65.38	7.732257
18	65.4245	8.301717
19	65.453	10.96826
20	65.9905	6.696726
21	66.5855	9.526368
22	66.6435	6.813347
23	66.948	8.009855
24	66.969	8.690368
25	66.988	8.332804

Figure 5.7. Example Excel Output

As noted in Figure 5.7, the excel output measured actual time in column A, and total processing time in column B. As zero represented 07:00AM, and 60 represented 08:00AM we can use the highlighted row number eight as an example. Column A indicated an actual time of 61.298. Since 60 represented 08:00 am, we can therefore interpret this time as 08:01AM and 29 seconds. Column B for row eight indicated a wait time of 9.541814. We can therefore interpret this result as an actual process time of nine minutes and 54 seconds.

5.3 Results

Figure 5.8 shows the average and maximum wait times for a group of 10 patrons from the time they get to the line until they finished with the full security process. The model results shown in the following figures represent the relationship between thorough security and time. Thorough security was defined as the execution of bag or cooler checks and ticket stubbing per established security standards. The security line processing averages for bag and cooler checks resulted in a per patron wait time of 37.14 seconds, which was converted into a 1:10 ratio for the model due to processing limitations. This 1:10 ratio resulted in a wait time of 371.49 seconds per ten-patron group. The ticket stubbing per patron wait time averaged 11.51 seconds; the 1:10 ratio average was 115.1 seconds.

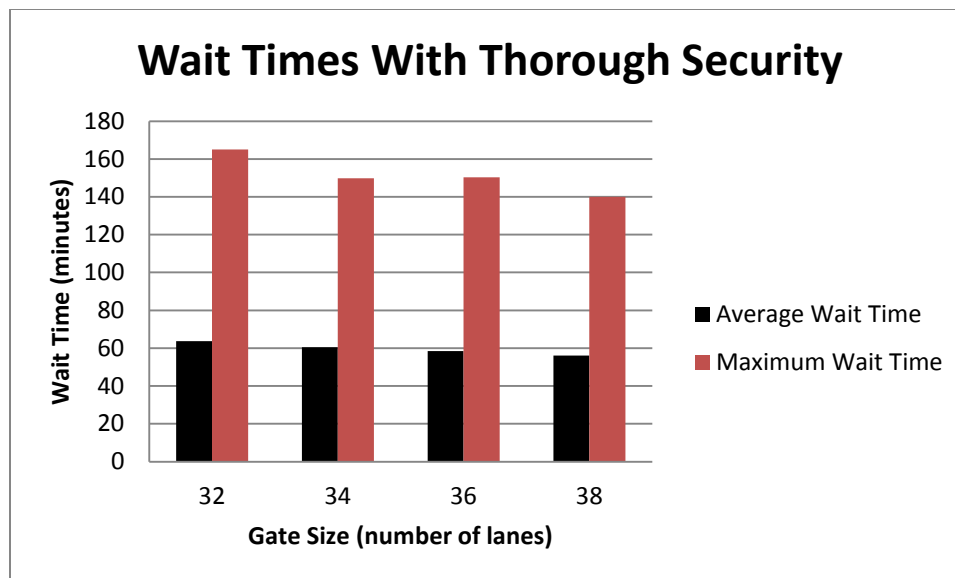


Figure 5.8. Wait Times with Thorough Security

Figure 5.9 shows the number of patrons awaiting security processing at 12:00 PM when thorough security standards are used.

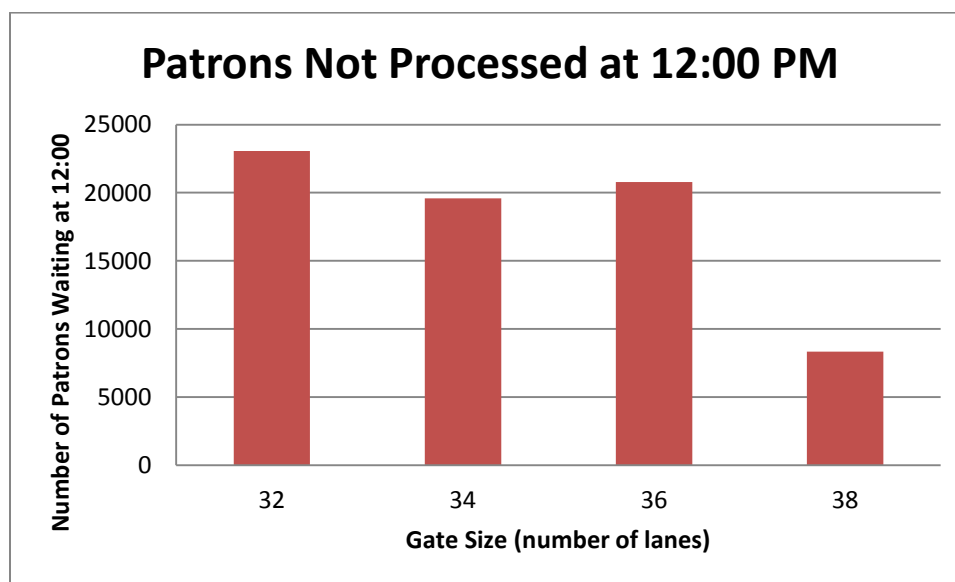


Figure 5.9. Patrons Awaiting Security Processing at 12:00 PM

Figure 5.10 shows the number of patrons still waiting in line at 2:00 PM. Since the race starts at 12:00 PM, this graph shows how many people were still waiting in line two hours after the race had already started.

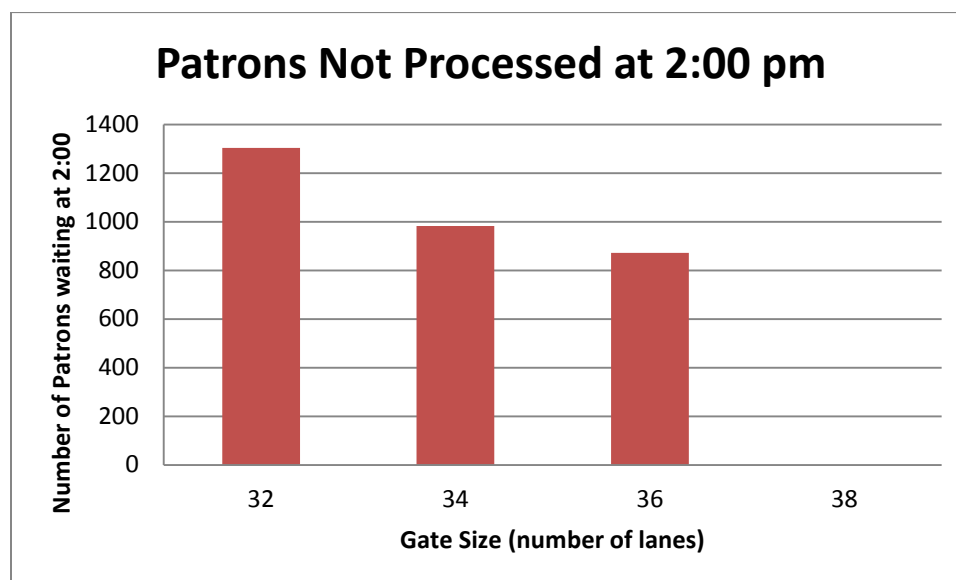


Figure 5.10. Patrons Awaiting Security Processing at 2:00 PM

As a comparative study, the researcher decided it would be beneficial to see what the results would be if the security took half as long but the number of lines was reduced from 38 to 18. In this instance the model was run with maximum noted processing times reduced and security reduced by 50 percent. The result indicated that even if security lane processing was manipulated, meaning even with a reduction in lane access to 50 percent (or 18 lanes), the effect or thoroughness of security would also have to be reduced in order to obtain the time processing standard required. The results are shown in figures 5.11. and 5.12.

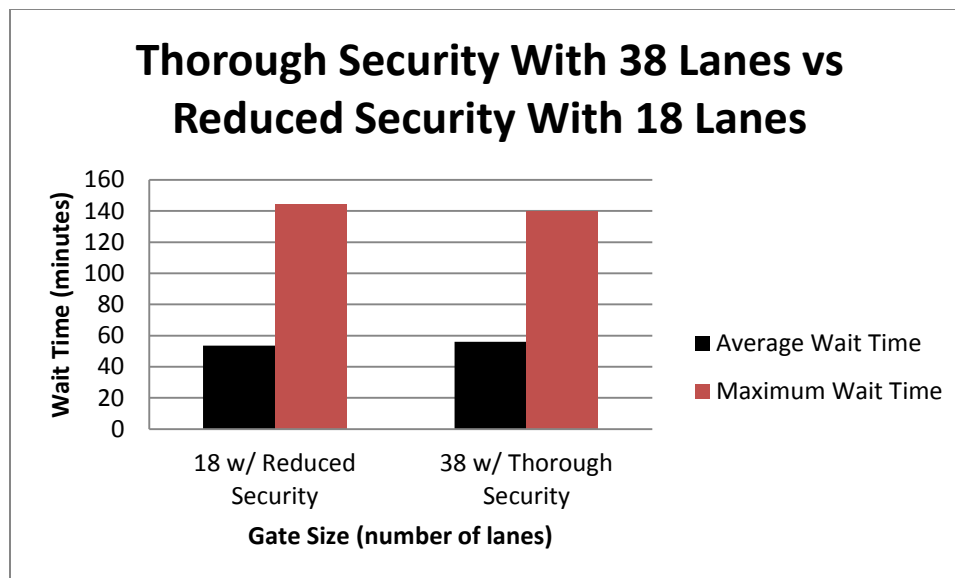


Figure 5.11. Thorough Security with 38 Lines vs Reduced Security with 18 Lines

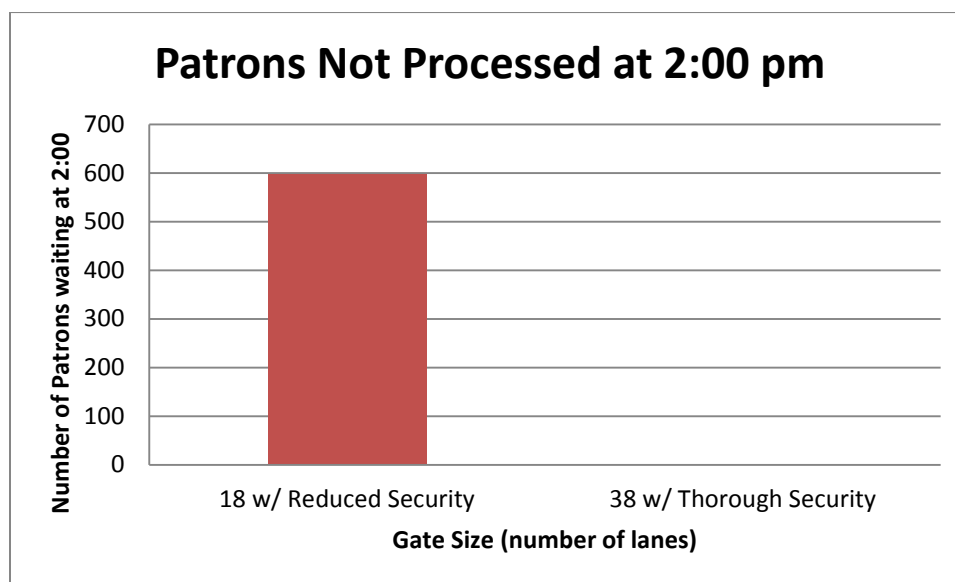


Figure 5.12. Patrons Awaiting Security Processing at 2:00 PM with 38-Line Thorough Security vs 18-Line Reduced Security

5.4 Summary

This study analyzed data collected from the 2013 Indianapolis 500 race on security processing and wait times in an attempt to identify the optimal processing time and lane configuration required to adequately address the security requirements and patron attendance at the Indianapolis 500. A specific focus was placed on gate nine due to location and patron throughput. An estimated 61,000 patrons used gate nine alone, making it the largest patron entrance point at the Indianapolis Motor Speedway. Computer modeling replicated gate nine in its physical construction and data gathered from the 2013 race day was used to run modeling scenarios based off of patron throughput and security processing times. Variability existed in the modeling to account for the number of lanes opened and security processing times based off recorded data from race day and were manipulated as independent variables.

5.5 Modeling Data Results Interpretation and Conclusion

Current security standards at Indianapolis Motor Speedway resulted in substandard or insufficient security application as evidenced through the data collected and modeling scenarios based off of that data. Statistical results showed that all patrons were not able to enter the facility by the start of the race at current standard security processing levels. Data collection observed that security processing had ceased in effectiveness at all gates, and in many instances, security lines were closed and patrons were allowed full, unrestricted access from approximately 11:00am through the start of the race. Even with this lapse in security there was still an estimated 100,000 patrons waiting to access the facility that had missed the start of the race (see figures 5.9-5.12).

Had existing security standards been continued throughout the processing time until all patrons had been admitted, even if applied to perfect form, the modeling data estimates that thousands of patrons would have missed the race entirely.

The data showed that approximately 61,000 patrons entered through gate nine. Of that number approximately 33% had either a bag or a cooler, requiring roughly 20,130 individual checks to be conducted, or 530 checks per lane. Gate nine possessed a maximum operational capacity of 38 lanes.

Actual data collected from 38 lanes running, or the maximum capacity of gate nine, showed that processing time averaged over 37 seconds per bag or cooler, and an average total wait time of roughly 5.6 minutes to process one patron and a maximum wait time of 14.0 minutes per patron to process entirely through security before the security collapsed and general admission was opened.

Given the observed data, bag checks would have to have been conducted in an average of 30 seconds or less to allow for the patron load to complete security screening between 7am and noon, or for each lane to process 486 bag checks between 07:00am and noon. If the number of security lanes were reduced to 12, each lane would have to process 1,678 bags with a total security processing time of 17 hours and 15 minutes! This ineffective processing time therefore resulted in the inability for existing security procedures to adequately handle the current load capacity and attendance of patrons during race day, thereby resulting in increased flow and security challenges stemming from the entrance, and extending throughout staging, access, and into parking locations.

The next chapter will offer a final summary and conclusion of this research and offer recommendations that this researcher believes should serve as a basis for additional

research to explore how the better training of security personnel, additional line management and pedestrian flow modifications, and general traffic pattern layout could be addressed to help mitigate the effects noted in the research.

CHAPTER 6. SUMMARY, INTERPRETATION OF RESULTS, AND RECOMMENDATIONS

This study examined the Indianapolis Motor Speedway during Mega-Event status events, with specific focus on the 2013, Indianapolis 500 automobile race. The objective was to study the phenomenon of pedestrian flow as it related to entry gate procedures and resulting impacts. The questions addressed in this study attempted to further examine the event by placing into context the current challenges impacting the phenomenon in hopes of bringing understanding and awareness of not just what those challenges consisted of, but how to address them, while learning better methods and procedures that might serve to offer a more effective and efficient process to adopt for future use. In conclusion of this dissertation, this chapter will offer a summary of the study; stated questions, the purpose, significance, methodology, data collection and AnyLogic modeling results. It will culminate with a few potential recommended changes that may serve to address the challenge, along with recommendations for future study.

6.1 Summary of Study

The existence of the Indianapolis Motor Speedway in its current capacity, coupled with the associated financial costs and physical security requirements levied as a result of its status as a Mega Event facility, necessitates immediate attention in order to ensure continued safe and effective operation of the facility is provided for patrons attending events like the Indianapolis 500. A detailed analysis of the track was conducted over

the summers of 2012 and 2013, observing and collecting data at Indianapolis 500 automobile races. Consistent data collection and themes allowed the researcher to focus efforts on the largest and most recent event for which data was collected; the 2013, Indianapolis 500 race. The extensive literature review and supporting data establishing the basis for the study are briefly summarized below.

Undeniable shifts in how public events are conducted with regard to security have occurred since the terrorist attacks on the United States on September 11, 2001. Subsequent terror and mass casualty producing events, both within the United States and abroad, have ushered in a new lexicon on the dialog of security. Increased security requirements are a product of the paradigm shift in security for Mega-Event locations. These increased requirements had recently resulted in significant increased patron wait times for entrance into the Indianapolis Motor Speedway and decreased overall effectiveness of security screening during the 2013 Indianapolis 500 automobile race. Increased wait time and reduced overall security are likely to continue into the future unless resolved.

Three issues remain paramount in studying pedestrian flow at the Indianapolis Motor Speedway. First, is that the track and location was not originally developed to host large-spectator events and encroaching urban growth has severely impacted access over the years. Secondly, increasingly larger crowds of patrons are attending events at the venue, with the Indianapolis 500 being the largest single-day sporting event venue in the United States. Lastly, increased security thoroughness and new requirements which require the physical inspection of every patron and their belongings have created

increasingly longer lines and wait times to gain entry. This last issue when studying the Indianapolis Motor Speedway emerges as perhaps the most perplexing as it remains the most visible and obvious result of these changes as it also resulted in decreased freedom of movement for patrons, and greater challenges for security providers.

While the example of security and pedestrian flow at large events is not unique in itself, what is unique is the application of the researcher's objective of constructing a better pedestrian flow model specific to this particular venue. Aptly conducting a study of this nature required the researcher to carefully examine each of the preceding three catalysts for increased pedestrian flow challenges, and to create a modeling scenario using AnyLogic software to devise new flow models that would incorporate and accept the aforementioned changes while working to reduce their impact.

This research indicated that alternative measures need to be explored in order for the Indianapolis Motor Speedway to meet security processing standards given the average crowd size during the Indianapolis 500 automobile race. Of the three paramount issues impacting pedestrian flow at the Indianapolis Motor Speedway: the track location and originally developed intent, increasingly larger crowds of patrons are attending events at the venue, and increased security requirements which require the physical inspection of every patron and their belongings; the focus of security processing and associated impacts are the most readily impacted as large scale urban redevelopment or reduction in patron attendance is neither likely or sought. From this position, the researcher used modeling data results to optimize a situation in which pedestrian flow

and traffic can be managed more efficiently while still providing the desired security requirements.

6.1.1 Research Questions

1. Can a better flow pattern be developed that will increase safety and security, while minimizing patron entry wait time from parking through security processing at the Indianapolis Motor Speedway?
2. What is the impact of gate processing and current flow patterns such as patron parking and entry gate restrictions and locations?

6.1.2 Purpose of the Study

The stated purpose of the study was to examine how increased security requirements have resulted in increased patron wait times to access the event and an overall decrease in security by answering the question, “will improved pedestrian flows and patterns resolve the issue while still achieving the desired security and safety goals?”

6.1.3 Significance of This Study

Upon conducting the literature review and examination of challenges impacting the Indianapolis Motor Speedway, I discovered the significance of improving pedestrian flow efficiency, while maintaining or even improving security, is found both in the tangible and intangible realm, both of which are critical to not only the local community and the speedway, but to the state of Indiana and the entire country. Intangibly, as Houlihan & Giulianotti, 2012 mentioned, acts of mass violence or terror, and the echoes

of such acts routinely result in lack of confidence or uneasiness for the masses to enjoy routine activities. This directly impacts social interactions, national confidence, and economic interests. In the post September 11, 2001 world, countries, states, and even local communities are increasingly viewed in terms of capacity, competency, and status by their ability to provide security. Successful attacks, when carried out, serve to further embolden those with criminalistic or terroristic desires (Houlihan & Giulianotti, 2012).

Tangibly, the significance can be viewed on the micro and macro level. From the micro level, the need to address the processing inefficiencies are readily apparent from the outcome of the 2013, Indianapolis 500 race: the race started and an estimated 100,000 patrons still had not cleared the security screening lanes and remained in the streets, thereby missing the start of the race. The need to produce a “steady-state” flow of patrons from parking and walking routes, all the way to, and through the security lanes, is critical to the success of the Indianapolis Motor Speedway. From the macro level, the need spans both economic and social considerations. The continued infusion of monetary investment into the local region generated from sporting events at the Indianapolis Motor Speedway, the confidence of patrons to feel safe and comfortable, and the status and competency that is attributed to local, state, and even national capabilities to provide a secure environment is crucial (Boyle & Haggerty, 2009).

6.1.4 Methodology Review

The use of agent based modeling for scenario modeling was used to determine if a better flow pattern could be developed by using data collected on crowd size, patron wait time, and associate security challenges from the 2013 Indianapolis 500 automobile race.

In this particular case study, the researcher assessed if the current restrictions and impediments placed upon the Indianapolis Motor Speedway due to increased security thoroughness requirements could be mitigated or improved upon, thereby answering the question “can better pedestrian flow patterns that facilitated pedestrian movement from staging and parking areas around the event, all the way up to the actual security processing point be achieved?”

6.1.5 Data and AnyLogic Modeling Review

Data collected depicting security effectiveness over time in conjunction with patron attendance and overall wait times was used as quantitative data to establish the correlation between increased security requirements and patron wait times. Data collection sheets incorporated a qualitative rating that assessed the security processor’s thoroughness and effectiveness at checking individual patron’s coolers and bags in accordance with pre-established security parameters set forth by the Indianapolis Motor Speedway’s security section. It also consisted of a quantitative assessment recording the overall average wait times at varying gate locations for patrons from when they entered the security lines until they gained admission into the facility, and specific security check timelines for patrons to process through each of the three individual checking stations; coolers, bags, and ticket stubbing. Visual observations and photographic recordings of wait lines and pedestrian flow patterns of patrons waiting to gain entry were also collected at various times. Additional data in the form of ticket sales to measure total attendance and parking lot capacities were also used to determine total attendance and pedestrian concentration.

This data was then used to compile modeling scenarios employing AnyLogic computer software that allowed for free-agent, variable play. The model constructed modeled gate nine, using raw data collected from the race to replicate the conditions of the security processing regarding time and maximum throughput. The modeling scenario achieved the goal of replicating the race day conditions whereby extenuating wait times and patron backlogs were noted. Manipulation of agent variables in the form of processing times, lane availability at the gate, and bag and cooler percentages allowed for the researcher to determine the optimal throughput of gate nine under maximum load conditions. This data was therefore used to identify the processing time standard required in order for security personnel to adequately conduct security checks, and ensure that excessive wait times were eliminated so all patrons visiting the event could gain entry to the facility by the start of the race. Multiple modeling runs were recorded annotating results from various level of security standard and gate lane availability.

6.2 Recommendations

The data suggests that given a mean processing time of 37.14 seconds per bag or cooler and 11.51 seconds per ticket stubbing, the overall security process exceeded lane and staffing capacity. The data showed that approximately 61,000 patrons entered through gate nine. Of that number approximately 33% had either a bag or a cooler, requiring roughly 20,130 individual checks to be conducted, or 530 checks per lane at maximum operational capacity of 38 lanes. With an average observed wait time of 5.6 minutes to process one person and a maximum observed wait time of 14.0 minutes per person to process entirely through security before the security collapsed and general

admission was opened, bag and cooler checks would have to have been conducted in an average of 30 seconds or less to allow for the patron load to complete security screening between 07:00am and noon, or for each lane to process 486 bag checks between 07:00am and noon, well short of the 530 observed on race day. When patrons entering the processing lines amass faster than the lines can process them, the resulting effect is large groups of unorganized patrons growing frustrated with the process and spilling out to non-controlled areas. The effects of this study illustrate the deficiencies of the security processing employed at the Indianapolis Motor Speedway.

This researcher, based on data collected and knowledge gained throughout the extensive research employed in this study offers but a few possible recommendations. These recommendations are in keeping with the assumption that of the main problems noted; the track location and originally developed intent, increasingly larger crowds of patrons attending events at the venue, and increased security requirements which require the physical inspection of every patron and their belongings; the focus of security processing and associated impacts are the most feasible and realistic to address as large scale urban redevelopment, or reduction in patron attendance is neither cost effective, practical, or desired.

6.2.1 Use of Technology For Flow Management

In this context, steady-state flow is achieved when maximum line capacity is kept below the maximum processing threshold to ensure that the line moves continuously with pre-determined acceptable wait limits. Envision a trip to Walt Disney World or other such styled amusement park where each line posts the anticipated wait times. These wait

times are calculated using a very simple mathematical equation that determines, based on one's place in line and distance to the entrance along with how long the existing ride is, how long it will take to work through the line and get an opportunity to ride. Security managers can employ a similar concept to assign a maximum line capacity limit, typically in minutes of acceptable wait time, whereby when the limit is reached, it serves as an indicator for security personnel to either close off that particular entry point or usher patrons to another entry point elsewhere in the facility that is not experiencing the same level of wait. This is possible knowing the optimal processing time the computer modeling suggests combined with entry gate and lane capacity and projected patron attendance, which can be accurately refined through technologies such as Bluetooth tracking. Bluetooth technology entails the ability for external tracking of communication devices such as cellular phones, MP3 players, and other electronic devices by monitoring individually unique identifying signals sent from the device (Wasson, Sturdevant, & Bullock, 2008).

Existing studies using Bluetooth enabled technologies have previously been conducted that studied vehicular traffic and congestion along the main thoroughfares and highways leading up to the primary exists to the Indianapolis Motor Speedway and at major airports (Hainen, Remias, & Bullock, 2013). These studies provided anonymous, quantitative volumetric crowd source data sets that could in turn be used for myriad purposes supporting the goal of increased pedestrian flow patterns and security improvement (Bullock, Haseman, Wasson & Spitler, 2010).

Examination of the Indianapolis Motor Speedway determined the maximum number of entry point locations and corresponding lanes. Computing processing times,

as illustrated in Chapter four, allows for security managers to assess what the maximum throughput, staffing requirements, and associated challenges would be with each lane. Using Bluetooth enabled technology at strategically placed locations based on heuristics, anchor points, and anticipated areas of challenged flow according to the principles outlined in Intelligence Preparation described in Chapter three (and implemented by trained personnel) allows for the security manager to essentially provide depth and early warning indicators of advancing levels of patrons, direction of travel, and status of entry points. This would allow for a security manager to re-allocate resources, open, close, or modify entry lane capacity, and assign security personnel accordingly. As noted in Hainen, Remias, and Bullock, (2014); Zorgas and Madas, (2006) clearly acknowledged that current technologies may quickly become obsolete, but the methodology employed behind using them enables the substitution of newer, and arguably more efficient, technologies using the same methodology.

The following is example of how Bluetooth enabled technology to augment and support better pedestrian flow and security is a projection of possible mitigating procedures based off of quantitative data proven through the previous AnyLogic computer based modeling to determine maximum and optimal throughput. In this case study, given the sample of gate nine, estimated patron throughput of 61,000 patrons, and noted lane processing times, it was deduced that in order to maintain a steady-state flow of patrons through the security line a maximum bag and cooler check time of 30 seconds is desired using all 38 lanes. Security management can therefore assign an arbitrary wait variable, perhaps 15 or 20 minutes, which in turn can then be used to quantify how many patrons can be put into a given entry point at a time, based on lane capacity, to determine

at what point beyond that capacity, additional patrons should be ushered to other entry points.

Figure 6.1 below illustrates this point and further expounds on the benefits of volumetric data obtained through Bluetooth, or similarly enabled technology. Strategically placed monitoring devices would enable real time volumetric data to be obtained from major parking, staging, and bus drop off points. This initial stage monitoring helps build situational awareness among the security personnel and serves to provide a stand-off element of time in order to prepare staffing and resources for the expected numbers of patrons.



Figure 6.1. Far Bluetooth monitor at major parking, staging, drop-off areas

Additional monitoring devices located outside the perimeter can further “map” this pedestrian flow and anticipate which entry gate locations would likely receive the largest number of patrons as noted in Figure 6.2. In this second stage of monitoring, security managers can use this methodology to track and predict where the largest volume of initially identified patrons are moving in relationship to entry gate locations. Anticipating this movement therefore allows for further direction and allocation of resources as needed.



Figure 6.2. Intermediate monitoring to map pedestrian flow

Lastly, the final monitoring stage places devices at each entry lane to indicate when maximum gate capacities have been met in order to allow security management to further manage each gate. As Figure 6.3 illustrates in this third and final stage, security personnel will have been able to identify, track, and anticipate the bulk flow of pedestrian traffic. Individual gate analysis based on lane capacity and inputting allowable wait time serves to indicate how many patrons can be in line at any given lane and time, thereby indicating when steady-state flow will be broken. This allows security personnel to adjust resources accordingly. Once the desired number of patrons per gate is identified, crowd management formulas assess how much physical space is required to support that number of patrons in a given space. Trigger or indicator lines are then visually employed at each gate location marking where the maximum line length should extend to before optimal processing times are exceeded. For example, at gate nine if a maximum patron wait time of 15 minutes is desired, given an average of 33% of patrons possessing a cooler or bag using all 38 lanes fully staffed, each lane would have to process approximately 24 patrons every 15 minutes (maximum capacity of 38 lanes with 33% bag or cooler under observed conditions requires each lane to process 486 bags or coolers) over the course of the five hour processing time (gates open from 07:00AM, the race begins at 12:00PM) in order to maintain steady-state flows. A quick analysis of the serpentine or barrier plan then allows for security personnel to devise a flow plan that extends far enough away from the security lanes to hold the desired number (minimum 24 cooler or bag patrons). Monitoring devices should be placed outside this ring to indicate when maximum desirable numbers have been met, indicating to the security personnel they either need to adjust their processing standards, time, open or close lanes,

or re-direct patrons outside the serpentine zone to additional gates with shorter wait times. Additionally, this methodology is scalable for the other entry gates after accounting for their lane capacity.

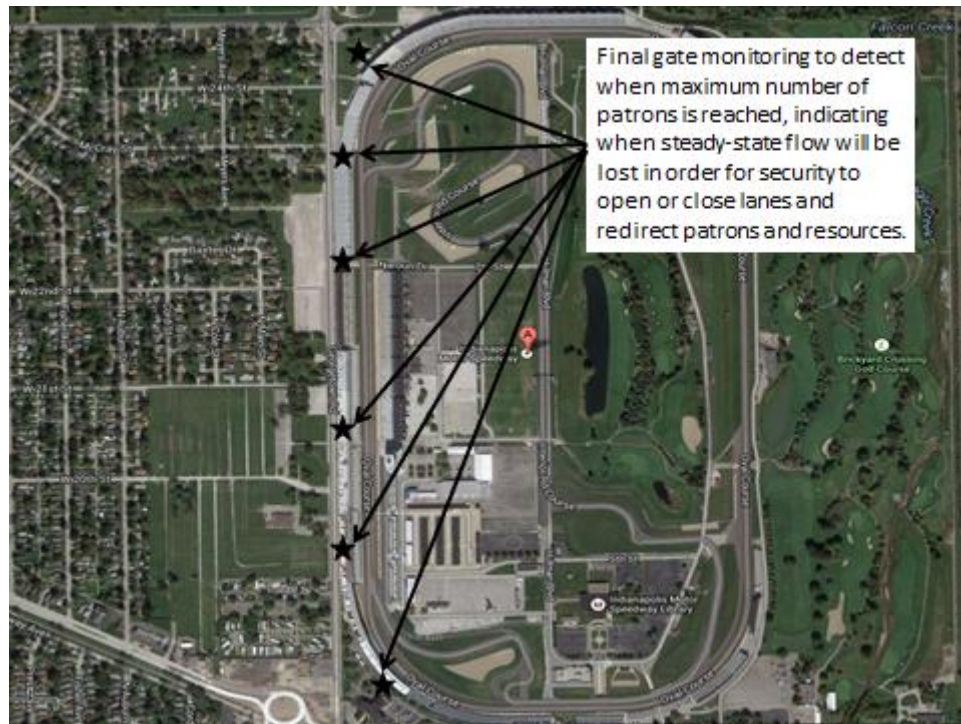


Figure 6.3. Proximal gate monitoring for opening, closing, re-allocating resources

While use of crowd sourcing data alone will not satisfactorily answer the pedestrian flow challenge, it can serve as a method to collect, analyze, and predict volumetric data that in turn can be used to support decision making for resource allocation, training, and reaction to pedestrian flow volume. As figure 6.4 illustrates this layered, or nested concept of identifying pedestrian flow buildup furthest away from the speedway, the continued tracking of pedestrians as they get closer to the speedway and

begin committing to one of several entry gate options, and finally, the monitoring of the gate loads themselves serve to assist the security manager in addressing the pedestrian flow issue while maintaining the standards of security and expectation of process times.



Figure 6.4. Layered Bluetooth monitoring of far, intermediate, and proximal monitoring stations

6.2.2 Better Training of Security Personnel

Use of available technology in itself will likely not solve the problem, specifically given the current processing rates. Additional attention needs to be provided to the training and staffing of security personnel. Current security practices at the Indianapolis Motor Speedway employ contract laborers, or non-skilled workers to provide the security.

Minimal training and guidance is given prior to the execution of race week. Additional training provided, specifically to the security personnel who will be conducting the bag and cooler checks along with ticket stubbing would greatly aid in achieving the desired 30 seconds or less processing time and steady-state flow goals.

Current Department of Homeland Security training aids and video instruction provides a sample training session instructing security personnel and proper bag and cooler check procedures. However, the videos do not emphasize or instruct how to accomplish the stated goal within a given time limit. Therefore it is recommended that an aspect of Just In Time (JIT) training be implemented into the preparation phase of new hire training. Just in Time training describes a concept whereby managers and security administrators can provide adequate training to subordinates with limited instructional time, then assess and evaluate effectiveness during practical application. Sample video and real time demonstrations illustrating the proper bag and cooler checks coupled with hands on application would serve to mitigate the shortfall.

If we refer back to the time and security data from Chapter four, universally all gates had minimal traffic or security challenges during the first hour of operation, as security processing time was not a factor given the lack of patrons waiting in line. This timeframe therefore, when patron traffic is extremely low, is suggested as the practical application period for security personnel to be allowed supervised periods of instruction where managing supervisors can ensure that all members expected to perform the security requirements to standard throughout the day are prepared. As this timeframe is less congested, there would be time for corrective action and remedial training for selected individuals who fail to meet the standard. This would ensure that when peak

congestion occurs, all security providers would have a greater chance of performing to desired time and efficiency standards. This timeframe is also within the pre-planned working hours, thereby also alleviating the need to provide additional, dedicated paid training for workers.

6.2.3 Modification to Admission Policy

The examination of the Indianapolis Motor Speedway and the associated challenges of pedestrian flow and security would not be complete without also addressing the issue of admission criteria. Currently, patrons are allowed entrance with bags and coolers that do not exceed 14 inches in height. This aspect corresponds to the notion of Just In Time training as data collection and observation noted consistently that application of the 14 inch standard was not enforced with consistency across the gates, and universally overlooked once the peak periods of congestion were experienced.

While it is not likely or feasible to restrict the admission of patrons with coolers or bags due to multiple factors, i.e., given the number of patrons attending events, vending beverages to the extent required to ensure every patron had access to at a minimum water, is simple not possible, and the fact that typical weather for race season (memorial day weekend) is extremely warm, the cost benefit ratio considering risk of dehydration or serious illness or injury, specifically to the very young or old, precludes this option. Also, as the race experience is largely held as a family oriented event, historically the ability for patrons to bring refreshments and personally desired items for comfort during the race is considered an endearing aspect of the experience held in high regard by both ownership and patrons. However, stricter adherence the prescribed

standard, or modification to the entrance policy could serve to mitigate some of the challenges currently experienced. Further modeling scenarios and analysis of data from manipulating variables such as entry of patrons with coolers to specific gates, locations, or times might also provide valuable information in addressing the issue.

6.3 Summary

When I started this research my intent was to simply examine why gaining entry to the Indianapolis Motor Speedway took as long as it did. Through continued research and analysis I determined that multiple factors combined have contributed to the current phenomenon; examination of one variable without consideration of the others would not adequately address the issue. The results of this research indicate there are three main reasons for increased pedestrian flow challenges; original scope and design of the track impacted by increased urban growth, larger numbers of patrons continually supporting events, and the impact of more thorough physical security requirements resulting from the security paradigm shift and the designation of the track as a Mega-Event location during races.

The study also provided suitable, feasible, and realistic options for further examination in order to address the issue. Aside from the provided recommendations, the data can also serve to provide crucial information to the Speedway management and security personnel to quantify the number of security personnel required to adequately staff and process patrons at a sustainable rate, by now knowing the optimal target processing standards required to achieve steady-state flow. This data can then be used in planning and allocating resources; determining how many employees are required and

therefore how much funding is required to be budgeted, and establishing target metrics to measure and evaluate effectiveness of training standards.

Table 6.1 summarizes the model output metrics that can be manipulated to impact the pedestrian flow challenges.

Table 6.1.

Modeling Metrics

<u>Patron Size</u> (volumetric data)	<u>Gate and Lane Capacity</u> (maximum throughput)	<u>Steady-State Flow</u> (capacity and desired rate)
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From these metrics, further manipulation and adjustment of variables can allow the security managers to adequately achieve the desired outcome commensurate with the resources and staff needed. Table 6.2 illustrates an example of this potential.

Table 6.2.

Capabilities Through Modeling

<u>Desired Output</u>	<u>Required Input</u>	<u>Manipulated Variable</u>
Increased Flow	Processing time at desired rate	Gate/lane modification; performance standards of workers
Decreased Wait Time	Volumetric data of crowd size	Lane capacity at desired flow rate; use of alternate entry points
Effective Security	Volumetric data; Performance capability of workers; Gate/lane capability	Desired flow; desired wait time; assessed effectiveness

Indeed, this case study was made exceedingly interesting considering the unique aspects such as the track being privately owned that impact the allocation, training, and funding of internal security, coupled with federal, state, and local agencies working to provide external security. The tremendous capabilities of AnyLogic modeling software not only enabled this researcher to provide relevant, accurate modeling data based off of raw data collected from the race, but also did so with tremendous savings of time, manpower, and resources. To have undertaken a study of this magnitude without the aid of computer based modeling would simply not have been possible. Indeed a significant, if not co-equal effect of this research was substantiating the use and effectiveness of AnyLogic modeling for further research projects with wide ranging subject matter.

The resulting conclusions indicate that given the circumstances surrounding the Indianapolis Motor Speedway, financial and logistical constraints, and anticipated challenges expected if left un-checked, the current pedestrian flow is suboptimal and in need of immediate attention. Further analysis deducted of the challenges notes, examination of security processing standards was the most feasible and cost effective to impact. As this study validates through research and subsequent modeling results, the originally stated purpose of, “will improved pedestrian flows and patterns resolve the issue while still achieving the desired security and safety goals” has been answered. Furthermore, it has been answered with confidence that improved security effectiveness, better pedestrian flow models, and reduced patron wait times can be achieved employing the results of the model constructed for this study.

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APPENDICES

Appendix A: Indianapolis Motor Speedway Data Collection Packet



Indianapolis Motor Speedway Data Collection Packet



Research Team:

Gate #:

Time of Day:

Weather Conditions:

External Factors:

Employee Shift Schedule:

Data Collection START TIME:

GENERAL GATE INFORMATION:

<input type="radio"/>	Size of Gate:	Small	Medium	Large
<input type="radio"/>	Number of Personnel:	Bag Checkers:	Cooler Checkers	Stub Takers:
<input type="radio"/>	Number of Equipment:	Tents/Canopies:	Tables:	Bike Racks:
<input type="radio"/>	Buffer Zone:	Yes	No	Approx. Size:
<input type="radio"/>	Line Formation:	Short (0-4 min)	Medium (5-10 min)	High (+10 min)
<input type="radio"/>	Police Presence:	Yes	No	How Many?
<input type="radio"/>	Trash Cans:	Yes	No	Sufficient?
<input type="radio"/>	Trash Emptied:	Yes	No	Sufficient?
<input type="radio"/>	Network Connectivity:	Yes	No	Password Required?
<input type="radio"/>	Motor Traffic affecting Foot Traffic:	Yes	No	N/A

GATE SKETCH: General Layout of the Gate, Camera Position and Possible Positions, Signage, Personnel Positions, Proximity of Objects, Personnel Body Language, Line Contingency

BAG CHECKING

Did they take control of the bag for inspection?	<input type="radio"/>
Was the bag checked visually for irregularities?	<input type="radio"/>
Was the bag opened?	<input type="radio"/>
Were the contents physically inspected?	<input type="radio"/>
Did they inspect the bag with a dowel?	<input type="radio"/>

COOLER CHECKING

Did they take physical control of the cooler for inspection?	<input type="radio"/>
Did they evaluate the cooler for acceptable size?	<input type="radio"/>
Was there a visual check of the inside of the cooler?	<input type="radio"/>
Was a dowel used to inspect the contents?	<input type="radio"/>
Was the cooler inspected to the bottom?	<input type="radio"/>

CUSTOMER SERVICE

Did they greet the customer?	<input type="radio"/>
Did they interact in a positive manner with the customer?	<input type="radio"/>
Did they provide a closing to the customer?	<input type="radio"/>
Did the customer appear satisfied with the interaction?	<input type="radio"/>

TICKET STUB CHECKING

Did they remove the ticket stub?	<input type="radio"/>
----------------------------------	-----------------------

COMMENTS:

Bag Check	Cooler Check	Customer Service

Data Collection END TIME:

RANKING AT THE END OF DATA COLLECTION PERIOD:

	1 - low	2	3	4	5 - high	N/A
Overall Gate Appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uniformed Operations Between Lines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Yellow Shirt Appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perceived Stress Levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integration of Contractors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordination of Operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Incident Handling Perception	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

COMMENTS - include any incidents, medical situations, etc.:

Appendix B: Modeling Output Data, Gate 9

18 Lanes		32 Lanes		34 Lanes		36 Lanes		38 Lanes	
<u>Mean</u>	<u>Max</u>	<u>Mean</u>	<u>Max</u>	<u>Mean</u>	<u>Max</u>	<u>Mean</u>	<u>Max</u>	<u>Mean</u>	<u>Max</u>
53.67	144.11	63.67	172.03	60.52	149.74	58.54	150.35	58.09	149.15
57.30	6.56	58.45	6.72	57.53	7.20	57.68	6.61	57.04	6.57
57.88	4.91	58.98	6.70	57.58	7.39	59.06	8.37	57.95	7.82
58.01	7.66	59.16	9.05	58.28	7.30	59.92	8.61	59.06	8.84
58.07	4.38	60.02	6.73	58.36	6.78	59.92	8.02	59.10	7.71
58.35	3.94	60.21	7.82	58.71	7.03	61.19	8.53	59.72	7.27
58.45	6.97	61.06	8.29	58.85	8.51	61.30	9.54	60.01	8.34
58.52	5.89	61.47	6.53	59.66	7.98	62.95	10.39	60.17	9.66
58.58	3.72	61.59	6.52	60.17	6.98	63.16	8.60	61.67	7.13
58.81	6.58	62.16	9.85	60.48	9.67	63.36	6.92	61.70	6.72
59.21	5.83	62.28	6.77	60.71	9.78	63.83	8.42	61.88	9.09
60.38	4.04	62.80	8.02	61.47	6.85	64.89	6.88	62.68	6.89
62.61	4.03	63.19	7.79	61.75	6.60	65.08	9.16	62.99	9.59
62.77	4.03	63.55	7.50	61.91	10.67	65.23	8.09	63.01	6.95
62.86	5.25	63.85	8.42	62.34	7.07	65.25	8.25	63.41	10.59
62.92	3.63	64.05	7.23	62.38	6.72	65.38	7.73	64.10	9.46
63.93	8.75	64.06	6.51	62.78	8.35	65.42	8.30	64.51	6.68
64.03	3.64	64.24	13.56	64.86	9.48	65.45	10.97	64.67	7.16
64.69	4.03	64.45	8.30	64.88	7.76	65.99	6.70	65.07	6.81
65.08	5.15	64.48	7.60	67.29	6.93	66.59	9.53	65.66	8.79
65.34	6.55	64.69	8.70	67.69	7.65	66.64	6.81	66.27	6.81
65.46	4.18	64.69	7.97	67.77	7.00	66.95	8.01	66.74	8.61
65.48	3.65	65.29	8.52	67.79	8.91	66.97	8.69	66.78	9.48
65.75	8.19	65.62	8.21	68.07	7.24	66.99	8.33	66.79	6.61
66.50	3.93	66.14	9.32	68.44	7.24	67.32	11.05	66.94	9.33
67.06	3.86	66.18	8.63	68.71	8.67	67.51	10.76	67.36	9.62
67.56	3.69	66.30	8.09	68.76	8.98	67.58	7.35	68.09	7.39
67.70	4.61	66.68	8.64	69.35	10.78	68.77	6.69	68.20	8.18
67.79	3.95	66.83	6.81	69.84	8.22	68.81	7.19	68.28	8.82
67.86	4.61	67.43	8.55	69.85	9.07	68.98	8.14	68.68	7.73
68.02	4.52	67.43	8.71	69.91	9.37	69.03	7.73	68.74	7.44
68.95	4.45	67.67	7.50	70.19	9.34	69.09	8.94	68.78	8.84
69.36	6.43	67.75	9.54	70.44	9.11	69.73	9.00	69.10	6.94
69.97	8.02	67.97	8.81	70.52	10.75	70.06	8.13	69.43	10.95
70.10	5.66	67.98	9.26	70.82	9.29	70.16	9.46	70.33	6.85

70.74	4.26	68.03	6.93	70.83	8.19	70.17	10.25	70.39	8.87
70.84	3.71	68.21	8.02	70.84	9.24	70.29	10.01	70.97	8.63
71.13	7.13	68.34	8.61	71.63	8.45	70.50	11.22	71.48	7.58
71.46	3.55	68.45	7.06	71.64	6.52	70.89	11.15	71.65	8.62
71.58	4.02	68.61	6.85	71.83	9.00	71.12	10.38	71.95	10.86
71.62	4.77	68.70	6.67	72.31	7.49	71.13	9.26	72.35	7.51
72.57	7.99	69.09	6.83	72.51	8.04	71.17	8.89	72.50	11.10
72.60	3.94	69.58	8.24	72.59	10.05	71.19	8.43	72.55	6.83
72.63	4.03	69.61	7.71	72.60	9.90	71.53	7.64	72.63	6.87
72.79	4.14	69.69	8.16	72.83	7.05	71.53	11.67	73.00	6.63
72.90	5.86	69.81	8.42	72.86	9.51	72.13	7.98	73.11	7.42
72.95	3.83	70.31	6.63	72.97	7.93	72.33	7.90	73.65	8.52
73.00	7.01	70.38	7.51	73.30	7.03	72.64	9.62	73.70	6.72
73.08	4.38	70.79	8.69	73.52	6.75	72.93	10.13	73.73	9.51
73.15	3.58	71.18	7.48	74.21	11.86	73.08	9.35	73.80	7.63
73.19	3.54	71.39	6.62	74.36	8.39	73.22	7.55	74.01	7.91
73.95	6.59	71.69	10.74	74.59	10.45	73.27	10.22	74.43	9.39
74.12	7.05	71.71	7.02	74.66	10.40	73.49	6.73	75.03	6.56
74.22	4.26	71.76	7.02	74.67	10.17	73.78	8.47	75.03	6.71
74.23	3.96	71.80	8.07	75.49	9.45	74.05	8.19	75.32	9.97
74.24	4.44	71.88	9.82	75.60	9.01	74.20	9.78	75.76	10.59
74.73	3.62	72.05	8.81	75.65	6.91	74.88	6.77	76.46	8.60
75.01	4.36	72.41	10.21	75.69	8.03	74.89	7.41	76.57	6.79
75.02	6.10	72.59	7.32	76.03	6.90	74.98	8.09	76.74	7.98
75.08	7.23	72.63	7.17	76.11	8.40	75.20	8.88	76.75	6.93
75.18	4.94	72.77	7.02	76.16	7.37	75.38	8.70	76.82	7.68
75.36	3.54	72.87	10.32	76.20	8.22	75.41	9.81	77.00	7.32
75.45	3.86	72.87	7.51	76.59	8.64	75.60	6.59	77.16	8.02
75.46	4.80	72.90	7.10	76.66	10.93	75.86	10.15	77.52	9.17
76.10	4.24	73.22	6.74	76.70	8.35	76.29	6.57	77.84	7.00
76.12	6.07	73.23	6.63	76.75	8.15	76.31	9.90	77.85	6.72
76.13	3.63	73.29	6.69	76.84	9.42	76.39	8.70	77.89	6.97
76.13	6.71	73.90	11.68	77.38	9.08	76.51	8.02	78.24	6.71
76.30	4.19	74.45	7.69	77.47	6.90	76.69	8.25	78.61	7.11
76.67	4.21	74.53	7.99	77.71	9.89	76.71	7.36	78.68	6.73
77.11	7.93	74.78	8.80	77.74	7.35	76.72	8.14	78.80	7.70
77.18	4.25	74.94	8.47	78.10	7.00	76.96	7.93	78.89	9.49
77.19	4.70	74.99	8.34	78.22	8.31	76.98	8.47	79.07	6.59
77.41	4.48	75.01	8.69	78.45	9.16	77.01	8.79	79.09	8.80
77.46	7.64	75.27	9.09	78.71	7.23	77.16	6.78	79.18	10.81
77.47	5.59	75.28	9.96	78.74	10.03	77.20	10.12	79.56	8.50
77.49	3.69	75.29	9.57	78.81	6.68	77.26	8.46	79.58	8.34

77.61	3.52	75.29	9.03	78.96	9.28	77.30	8.92	80.08	8.83
78.05	5.80	75.53	8.92	78.99	7.52	77.50	9.14	80.26	9.87
78.23	7.51	75.97	10.43	79.08	8.45	77.69	9.47	80.51	7.43
78.25	5.95	76.11	6.99	79.11	9.74	77.72	10.49	80.57	9.74
78.37	4.29	76.32	6.67	79.11	8.77	77.92	7.18	80.70	12.01
78.45	4.43	76.47	10.35	79.30	8.61	77.95	7.48	80.74	9.24
78.53	6.26	76.53	6.53	79.57	11.00	78.38	10.26	80.96	7.70
78.63	5.15	76.98	6.80	79.60	7.45	78.47	8.98	81.17	13.76
78.71	3.85	77.11	7.13	79.81	12.41	78.59	9.58	81.19	7.80
79.28	5.89	77.15	8.60	79.90	6.61	78.91	8.15	81.29	10.49
79.30	6.36	77.42	7.91	80.21	8.94	79.09	10.53	81.36	9.56
79.49	6.76	77.44	8.38	80.22	10.67	79.10	9.43	81.52	8.48
80.04	6.96	77.61	9.79	80.52	6.78	79.10	9.17	81.62	9.46
80.10	3.60	78.32	8.73	80.77	10.80	79.36	9.55	81.66	7.85
80.34	6.10	78.55	8.88	80.81	9.76	79.37	10.62	81.90	6.81
80.52	5.54	78.68	6.59	80.88	8.43	79.59	10.06	82.15	9.90
80.55	4.69	78.77	6.85	81.01	9.32	79.78	8.24	82.40	12.38
81.12	6.86	79.00	8.41	81.19	7.57	79.85	9.35	83.01	7.16
81.29	6.54	79.03	6.75	81.19	8.65	79.86	11.15	83.23	9.54
81.79	6.68	79.18	7.82	81.40	8.83	80.01	9.46	83.27	8.20
82.04	3.68	79.49	8.31	81.46	8.58	80.06	10.70	83.38	7.67
82.19	5.16	79.51	8.85	81.65	7.72	80.21	9.70	83.84	8.78
82.35	7.19	79.54	9.25	81.69	11.54	80.23	11.41	83.94	8.43
82.35	6.19	79.68	8.27	81.86	9.73	80.40	7.53	83.96	8.97
82.69	4.10	79.69	7.10	82.29	8.17	80.45	10.40	84.04	9.50
82.98	7.11	80.21	6.84	82.36	7.39	81.15	7.42	84.22	7.88
83.09	5.25	80.41	8.63	82.51	8.87	81.17	10.75	84.30	10.66
83.23	4.47	80.61	10.49	82.88	12.82	81.17	8.02	85.10	6.75
83.26	4.30	80.65	12.43	82.90	9.99	81.22	9.14	85.32	10.40
83.43	9.49	80.79	8.16	83.09	10.04	81.43	10.23	85.34	9.48
83.55	3.62	80.84	10.89	83.27	9.84	81.46	10.47	85.34	8.00
83.93	3.89	81.03	10.55	83.48	9.91	81.59	7.08	85.45	6.73
83.97	8.04	81.08	6.52	83.59	7.60	81.67	7.61	85.71	10.44
84.00	4.03	81.14	11.69	83.74	10.44	81.93	7.72	85.74	7.32
84.31	10.06	81.15	9.69	83.76	7.54	82.00	9.79	86.11	9.13
84.48	5.31	81.26	9.42	83.77	9.25	82.09	9.23	86.26	8.30
84.50	3.53	81.55	12.15	84.61	12.27	82.28	9.96	86.52	8.54
84.74	3.73	81.65	10.82	84.78	9.08	82.51	9.01	86.66	8.35
84.83	3.71	81.78	8.09	84.81	9.29	82.56	10.07	86.95	10.14
84.99	7.36	81.80	9.55	85.16	6.87	83.25	8.43	86.97	8.81
85.13	4.49	81.82	8.09	85.20	8.41	83.46	10.95	87.06	6.55
85.15	3.61	81.86	9.02	85.34	10.03	83.54	13.88	87.64	8.96

85.35	6.86	82.73	10.06	85.63	7.67	83.66	8.95	87.77	8.76
85.56	6.94	82.98	8.88	85.78	7.57	83.67	7.00	87.83	10.05
85.58	7.09	83.10	11.10	85.83	7.92	83.70	11.42	87.84	7.19
85.69	4.85	83.22	9.13	85.92	7.33	83.74	6.68	88.08	8.55
85.72	6.17	83.24	10.53	86.23	7.15	83.80	8.79	88.23	10.24
85.84	4.28	83.33	10.33	86.47	8.27	83.84	7.18	88.62	6.60
85.87	4.00	83.34	8.18	86.55	8.89	83.88	10.17	88.90	8.72
85.96	3.70	83.41	6.77	86.73	8.68	84.05	9.46	88.90	11.75
86.22	6.91	83.65	10.30	86.85	9.65	84.09	7.90	89.11	6.74
86.33	3.54	83.87	7.76	87.02	6.63	84.16	10.25	89.24	9.36
86.65	4.16	83.89	9.44	87.21	7.33	84.28	7.24	89.28	7.85
86.66	8.45	84.25	7.58	87.24	7.45	84.72	9.51	89.46	8.12
86.91	5.69	84.80	7.64	87.28	8.91	85.08	10.95	89.70	7.20
87.39	3.82	84.85	7.03	87.41	7.52	85.32	10.17	89.84	7.82
87.39	4.59	85.02	8.86	87.71	6.80	85.71	10.84	89.92	10.36
87.71	4.27	85.03	9.41	87.98	8.08	85.76	11.05	90.01	9.09
87.78	6.33	85.05	7.72	88.01	11.93	85.83	9.51	90.11	11.69
87.96	5.78	85.44	9.81	88.37	7.11	85.96	10.42	90.14	8.34
88.03	4.65	85.48	9.07	88.57	8.26	86.41	9.97	90.22	11.46
88.24	5.72	85.54	7.83	88.59	8.49	87.26	6.79	90.25	7.36
88.45	6.84	85.72	13.34	88.77	6.82	87.49	7.32	90.32	7.59
88.49	8.52	85.91	7.50	88.80	7.59	87.66	7.49	91.18	8.12
88.54	7.13	85.95	10.65	89.00	10.72	87.92	8.28	91.37	9.25
88.77	4.48	86.02	8.60	89.04	8.90	87.97	7.53	91.58	10.02
88.83	5.09	86.09	9.40	89.32	8.17	88.03	7.05	91.69	10.47
89.08	6.52	86.27	6.85	89.61	9.38	88.23	7.76	91.72	7.00
89.26	4.02	86.30	7.94	89.76	8.53	88.29	6.84	91.94	7.93
89.32	5.07	86.56	6.58	90.09	8.86	88.30	7.09	91.98	9.17
89.60	4.17	87.10	7.64	90.10	9.17	88.30	7.00	92.08	9.60
89.65	4.62	87.11	10.55	90.12	9.14	88.58	8.78	92.18	7.53
89.80	4.35	87.26	8.94	90.64	9.06	88.96	8.27	92.36	7.22
89.89	5.26	87.81	11.24	90.65	7.72	89.27	8.87	92.37	10.89
90.03	3.65	88.01	7.14	90.68	7.13	89.47	8.05	92.51	10.53
90.18	3.70	88.02	6.87	90.77	9.44	89.49	9.63	92.71	9.33
90.37	3.76	88.03	6.98	90.84	6.71	89.62	8.76	93.42	8.28
90.57	7.35	88.04	6.85	91.10	11.28	89.69	9.71	93.64	7.06
90.67	6.44	88.06	9.57	91.15	9.88	90.10	7.90	93.77	7.73
90.68	3.64	88.09	10.32	91.35	11.01	90.37	6.60	93.77	12.25
90.88	5.39	88.11	8.35	91.39	8.62	90.44	8.43	93.80	13.16
91.00	6.28	88.13	8.69	91.41	9.10	90.50	8.56	93.95	8.08
91.19	4.34	88.28	9.26	91.84	8.20	91.34	10.48	94.07	8.04
91.39	3.84	88.38	8.78	91.95	9.30	91.57	9.44	94.19	8.35

91.41	4.15	88.68	10.56	92.16	10.13	91.60	8.62	94.25	7.68
91.75	4.88	88.87	8.97	92.17	9.11	91.69	8.12	94.36	6.77
91.91	3.74	88.88	8.65	92.20	9.15	91.72	7.53	94.43	11.51
91.92	4.56	89.17	12.47	92.40	10.57	91.80	12.11	94.44	10.34
92.01	7.28	89.37	10.08	92.58	6.59	92.33	8.16	94.63	7.12
92.06	5.48	89.91	10.33	92.72	9.49	92.44	8.43	94.85	6.97
92.10	7.36	90.10	7.38	93.33	7.69	92.49	7.53	94.92	10.17
92.25	5.75	90.11	8.38	93.35	9.99	92.51	9.11	95.12	10.04
92.44	6.77	90.13	7.63	93.54	8.69	92.65	11.50	95.27	8.17
92.49	6.76	90.17	10.31	93.93	7.61	92.77	10.26	95.50	8.82
92.57	6.17	90.27	7.23	94.00	10.28	92.84	8.11	95.57	7.70
92.78	5.22	90.41	11.76	94.03	9.58	93.07	7.00	95.66	7.65
93.05	5.20	90.46	9.81	94.25	10.38	93.38	7.17	95.68	7.65
93.23	5.94	90.95	8.54	94.27	8.00	93.42	7.14	95.78	10.97
93.30	5.05	91.00	9.61	94.28	11.65	93.66	11.59	95.86	7.57
93.47	4.83	91.10	8.61	94.48	8.28	93.99	6.72	96.16	7.54
93.84	4.47	91.28	10.36	94.49	9.05	94.04	9.18	96.25	6.63
93.93	3.66	91.45	8.26	94.79	7.57	94.57	7.60	96.35	8.42
93.95	3.87	91.46	7.74	94.88	9.24	94.71	7.60	96.51	8.88
94.17	7.20	91.95	9.24	94.88	9.16	94.91	9.91	96.52	10.67
94.28	5.53	91.96	9.23	95.19	11.13	95.19	6.57	96.52	7.55
94.47	6.89	92.18	8.87	95.24	8.98	95.20	8.02	96.68	7.76
94.53	6.81	92.32	7.54	95.42	10.63	95.33	8.91	97.10	11.92
94.65	3.80	92.43	8.99	95.86	6.79	95.73	6.63	97.60	7.72
94.79	7.02	92.66	11.10	96.32	10.47	95.74	9.74	97.72	6.74
95.01	6.58	92.67	7.40	96.34	8.27	95.77	9.95	97.85	7.06
95.12	6.29	92.72	10.16	96.62	10.56	95.89	8.33	97.87	7.56
95.26	8.14	92.76	6.53	96.78	8.90	95.94	8.10	97.90	8.47
95.27	6.87	92.81	7.12	96.78	8.34	96.40	9.30	97.94	7.18
95.32	4.09	93.09	7.85	96.85	6.61	96.90	6.87	98.04	8.61
95.52	4.00	93.53	7.67	96.87	7.08	97.16	6.80	98.40	8.01
95.84	6.53	94.08	10.70	96.88	8.32	97.43	8.02	98.42	8.68
95.95	4.79	94.19	7.71	96.97	7.96	97.61	8.41	98.59	10.29
96.17	6.73	94.35	6.57	97.00	10.16	97.73	7.65	98.68	9.24
96.32	4.05	94.41	8.03	97.61	9.62	97.78	8.40	98.74	9.14
96.37	7.21	94.67	9.15	97.63	6.75	97.81	7.43	99.20	6.95
97.01	6.04	94.72	6.75	98.02	10.36	97.85	10.08	99.24	7.29
97.05	6.11	95.12	7.68	98.09	7.37	97.97	9.33	99.56	8.76
97.23	5.12	95.17	6.91	98.21	8.27	98.02	10.86	99.73	8.82
97.26	3.99	95.71	8.99	98.24	8.38	98.07	11.09	99.92	9.06
97.27	5.15	96.04	8.07	98.39	10.37	98.28	7.37	99.95	7.72
97.42	7.18	96.08	6.52	98.43	9.37	98.56	7.96	100.08	7.59

97.44	5.34	96.18	7.50	98.56	6.84	98.85	9.64	100.12	9.09
97.60	4.72	96.22	7.43	98.70	11.25	99.04	8.55	100.70	9.94
97.73	5.54	96.27	9.48	98.84	9.55	99.06	8.84	100.92	8.48
98.15	3.59	96.43	7.60	98.87	11.22	99.21	8.02	101.01	8.74
98.26	5.45	96.49	8.18	99.08	9.09	99.27	10.05	101.19	6.71
98.31	6.90	96.49	6.69	99.13	7.53	99.41	9.06	101.31	8.79
98.50	5.79	96.74	8.14	99.15	7.32	99.54	10.72	101.55	8.31
98.61	4.15	96.81	8.98	99.70	10.05	99.61	8.57	101.77	7.95
98.78	5.62	96.98	6.84	100.08	7.20	99.71	9.86	101.79	9.94
98.81	4.81	97.60	8.25	100.18	9.28	99.81	8.76	101.81	8.72
98.97	4.76	97.66	6.86	100.28	8.39	99.83	8.21	101.82	6.59
99.67	4.85	97.74	6.84	100.30	9.01	99.91	9.24	102.04	9.87
99.71	5.62	97.78	6.92	100.49	11.16	100.09	7.47	102.19	10.74
99.73	3.70	97.90	8.99	100.51	8.99	100.13	10.06	102.45	10.13
99.77	6.14	98.23	9.14	100.52	8.59	100.79	6.69	102.61	7.85
99.94	4.23	98.24	9.95	100.70	8.55	100.92	8.08	102.75	9.10
99.96	6.47	98.26	9.23	100.76	9.16	100.92	8.87	102.76	6.90
99.96	6.26	98.29	6.95	100.81	9.44	101.09	7.71	102.85	9.49
100.14	7.11	98.37	10.64	101.07	8.09	101.14	8.02	102.91	6.86
100.46	5.64	98.52	12.11	101.15	8.04	101.42	9.38	102.97	7.60
100.58	3.62	98.61	8.23	101.21	10.05	101.68	8.70	103.27	9.40
100.62	5.93	98.81	11.31	101.31	11.89	101.71	6.80	103.32	9.53
100.72	8.14	98.82	9.75	101.38	8.89	101.77	8.61	103.43	7.82
100.75	4.44	99.07	10.26	101.72	6.87	101.78	9.90	103.67	9.44
100.79	4.31	99.20	7.84	101.78	7.93	101.91	12.99	103.88	8.23
100.98	5.16	99.45	8.17	101.85	6.67	101.98	9.70	103.90	8.81
101.19	7.21	99.69	6.55	102.27	7.65	102.10	8.97	104.27	7.82
101.30	6.06	99.71	7.25	102.56	10.23	102.28	7.17	104.27	10.06
101.48	6.64	99.85	10.75	102.59	9.30	102.45	8.11	104.51	8.27
101.56	5.23	99.96	8.14	102.61	7.99	102.87	8.67	104.59	6.71
101.76	7.16	100.09	9.51	102.68	7.33	102.90	8.88	104.83	10.53
101.82	4.05	100.24	9.61	102.72	7.11	103.00	8.27	104.89	9.31
102.02	4.39	100.45	10.53	102.85	11.85	103.01	13.52	104.92	8.33
102.04	9.43	100.60	13.77	103.25	11.95	103.05	8.92	104.98	10.30
102.08	3.54	100.69	13.18	103.46	10.19	103.22	9.09	105.39	11.25
102.27	4.87	100.89	10.78	103.53	8.05	103.27	9.66	105.44	8.82
102.34	3.96	100.92	11.77	103.83	6.77	103.35	9.63	105.45	7.94
102.38	7.92	101.14	7.54	103.86	9.14	103.46	6.70	105.75	8.27
102.42	6.69	101.73	6.88	104.18	6.95	103.50	9.26	105.89	8.96
102.61	5.26	101.82	11.94	104.34	7.80	103.64	9.27	106.07	7.88
102.71	3.53	101.93	10.95	104.41	7.12	103.84	7.00	106.34	9.66
103.08	4.31	102.07	6.73	104.54	6.77	103.86	9.41	106.96	9.51

103.16	4.50	102.09	7.48	104.55	8.59	103.98	8.15	107.00	7.83
103.42	4.75	102.19	11.94	104.76	9.31	104.00	8.80	107.05	10.21
103.47	6.36	102.36	6.91	104.78	6.98	104.10	9.48	107.29	7.17
103.91	5.73	102.51	9.10	104.85	7.49	104.11	6.60	107.32	6.66
104.01	6.77	102.51	6.99	104.87	8.87	104.22	10.53	107.35	6.78
104.15	7.41	102.70	11.68	105.13	9.79	104.35	9.42	107.37	8.87
104.34	4.95	102.76	7.24	105.24	6.99	105.09	8.44	107.40	9.88
104.40	5.48	102.78	7.47	105.39	7.49	105.12	7.95	107.87	7.06
105.20	4.62	102.94	8.66	105.40	6.75	105.29	9.65	108.05	9.08
105.57	4.30	102.98	7.83	105.51	8.69	105.41	9.41	108.17	6.67
105.61	4.23	103.28	8.73	105.64	12.25	105.64	6.57	108.20	12.04
105.64	6.64	103.30	8.08	105.93	9.96	105.70	9.32	108.56	8.61
105.66	5.86	103.88	8.62	106.25	8.83	105.71	9.66	108.63	7.42
105.97	6.32	103.89	8.28	106.41	7.81	105.93	9.62	108.77	8.63
106.09	5.86	104.01	9.19	106.51	8.15	105.98	7.73	108.81	9.10
106.28	5.34	104.01	9.83	106.62	9.89	105.98	9.88	108.96	7.43
106.62	5.02	104.29	7.46	106.70	6.96	106.03	6.68	109.27	10.29
106.66	4.14	104.36	8.63	106.83	6.85	106.24	7.60	109.39	10.27
106.67	5.01	104.55	7.50	106.87	8.45	106.28	8.06	109.39	9.18
106.73	3.93	104.60	8.69	106.93	7.96	106.33	6.60	109.69	9.74
106.77	3.99	104.79	11.49	107.25	9.77	106.56	7.86	109.91	6.72
107.21	4.71	104.86	6.61	107.47	7.71	106.68	9.71	110.27	8.63
107.32	4.71	104.91	7.32	107.60	9.11	107.15	9.51	110.35	10.50
107.68	4.89	105.06	12.36	107.67	7.37	107.20	9.38	110.40	6.81
107.77	4.04	105.14	7.11	107.73	7.51	107.26	7.63	110.79	8.74
107.81	6.41	105.22	6.64	107.91	9.60	107.49	9.94	110.88	9.40
108.10	6.30	105.37	8.42	108.35	11.77	107.75	10.25	110.96	7.91
108.25	3.59	105.96	10.20	108.49	11.86	108.03	8.43	111.05	8.94
108.56	4.73	105.98	8.61	108.56	7.13	108.06	8.36	111.08	7.89
108.72	4.57	106.42	6.83	108.57	9.52	108.11	8.50	111.35	7.40
108.87	5.52	106.48	6.83	108.65	6.82	108.30	6.51	111.46	9.33
108.92	6.64	106.72	8.15	109.01	6.98	108.32	10.19	111.49	7.49
108.92	3.97	106.74	7.05	109.57	7.20	108.37	7.72	111.83	8.07
108.96	6.60	106.93	9.89	109.76	9.88	108.55	9.08	112.05	8.81
109.08	3.80	107.05	9.33	109.79	10.20	108.65	7.40	112.22	7.35
109.19	3.90	107.16	10.39	109.91	7.38	108.66	7.40	112.33	8.23
109.97	3.58	107.19	8.66	110.41	10.04	108.71	8.98	112.43	7.26
110.00	5.49	107.99	8.39	110.44	8.37	108.76	7.81	112.52	8.96
110.32	4.71	108.03	9.31	110.47	7.36	109.02	6.60	112.54	9.44
110.52	3.81	108.08	10.00	110.56	12.72	109.26	10.45	112.93	8.68
110.55	3.58	108.34	7.47	110.65	8.48	109.30	15.42	112.94	7.02
110.71	4.35	108.49	10.36	110.65	8.30	109.34	7.98	113.03	8.48

110.97	5.05	108.82	9.35	110.74	8.49	109.56	7.20	113.05	11.02
111.35	3.63	109.02	7.47	110.99	8.78	109.60	7.72	113.12	8.03
111.42	4.04	109.12	8.24	111.13	9.09	109.79	9.20	113.16	7.11
111.52	4.21	109.13	8.90	111.63	9.73	109.82	7.10	113.36	7.63
111.59	7.99	109.13	9.36	111.65	11.13	110.09	9.76	113.41	7.43
111.66	4.87	109.23	11.10	111.72	8.51	110.41	7.30	113.41	7.87
111.88	3.70	109.24	8.88	112.15	7.96	110.43	9.46	113.53	7.65
112.32	6.63	109.26	10.82	112.29	6.71	110.46	10.19	113.89	10.70
112.47	3.63	109.51	6.85	112.44	7.73	110.57	10.71	114.04	7.18
112.49	6.56	109.77	10.11	112.49	9.89	110.72	10.68	114.11	9.54
112.57	3.57	109.79	6.67	112.52	8.92	110.76	9.12	114.17	8.09
112.59	3.57	110.04	7.29	112.63	6.77	111.00	7.43	114.52	10.21
112.63	4.91	110.14	8.32	112.65	11.47	111.06	8.58	114.64	7.96
112.64	7.72	110.47	6.76	112.77	6.78	111.06	9.29	114.76	8.19
112.71	5.62	110.73	7.27	112.77	7.08	111.09	10.17	114.93	6.89
112.77	3.96	111.07	10.40	112.82	8.34	111.32	9.34	114.94	9.08
112.92	4.47	111.23	10.37	112.84	8.83	111.35	10.77	114.98	8.27
112.94	4.29	111.98	8.85	113.33	6.62	111.39	9.89	115.19	7.04
113.00	4.21	112.00	8.87	113.52	7.64	111.39	7.69	115.44	11.94
113.40	6.96	112.10	9.55	113.60	8.56	111.53	8.41	115.50	8.80
113.51	4.15	112.22	8.27	113.73	10.87	111.66	10.16	115.55	9.90
113.52	3.84	112.54	8.47	113.79	8.33	111.67	6.89	115.62	11.00
113.65	7.36	112.65	7.36	114.04	6.90	111.71	7.30	115.66	7.61
113.70	7.15	112.90	8.21	114.33	7.23	111.90	9.87	115.79	6.74
113.82	4.29	113.00	6.94	114.53	11.98	112.17	9.66	115.87	6.97
113.82	4.00	113.08	6.86	114.59	7.99	112.50	10.00	115.93	6.75
113.89	4.37	113.38	7.96	114.63	11.59	112.57	7.77	115.96	7.09
113.97	3.76	113.44	7.68	114.71	10.88	112.62	8.54	115.99	8.42
113.98	5.24	113.46	6.59	114.74	9.01	112.79	10.30	116.17	12.56
114.45	5.75	113.52	9.45	114.77	10.75	112.86	8.16	116.18	9.09
114.58	6.55	113.60	7.78	114.77	7.59	113.03	7.90	116.26	8.04
114.60	8.67	113.64	8.70	114.81	8.72	113.07	8.05	116.33	6.88
114.71	5.62	113.73	8.13	114.84	8.56	113.12	9.58	116.42	7.64
114.74	5.40	113.95	8.02	114.85	10.19	113.40	9.11	116.69	7.08
114.81	5.16	114.04	8.55	114.89	8.06	113.42	7.79	116.80	10.01
114.88	4.03	114.18	7.68	114.97	7.41	113.66	6.66	116.84	6.73
114.93	7.57	114.31	7.89	115.03	7.74	113.74	9.00	116.89	8.09
115.03	4.82	114.40	8.80	115.42	11.17	113.78	8.10	117.02	8.49
115.23	6.31	114.44	7.31	115.54	9.42	113.98	10.02	117.05	8.30
115.53	4.26	114.61	9.08	115.63	10.12	114.06	6.68	117.07	9.84
115.64	4.62	114.96	11.02	115.67	8.31	114.16	9.94	117.50	11.25
115.68	4.79	115.07	10.26	115.74	10.04	114.24	9.61	117.57	9.41

115.82	9.36	115.17	10.82	115.79	9.95	114.58	10.36	117.61	9.57
115.84	9.79	115.30	8.68	115.86	8.23	114.67	7.62	117.70	10.13
115.86	5.69	115.43	10.08	115.87	7.94	114.72	8.18	117.77	7.85
115.95	6.09	115.46	10.10	116.39	8.48	114.90	11.47	117.81	9.40
116.00	6.21	115.51	9.45	116.60	11.12	114.93	9.78	117.91	8.05
116.08	3.92	115.58	8.07	116.65	8.31	114.94	8.04	118.04	11.21
116.10	8.77	115.72	9.12	116.67	7.25	115.07	9.97	118.07	10.10
116.35	4.89	115.78	10.22	116.69	9.92	115.11	10.29	118.25	9.39
116.46	3.70	116.00	9.73	116.76	10.26	115.15	9.46	118.26	7.39
116.57	6.90	116.27	6.61	116.79	7.90	115.24	8.06	118.40	11.95
116.68	6.62	116.37	9.53	116.82	8.57	115.50	9.88	118.40	7.43
116.73	4.28	116.48	10.10	116.87	8.83	115.51	7.17	118.69	6.78
116.86	6.03	116.63	8.85	116.88	8.76	115.52	12.99	118.78	11.78
116.89	4.93	117.05	8.65	117.12	8.29	115.56	7.59	118.82	8.17
117.05	5.31	117.08	10.27	117.15	7.63	115.61	8.18	118.82	7.41
117.11	6.27	117.10	6.99	117.34	10.72	115.84	7.56	118.84	6.59
117.18	6.36	117.14	9.97	117.49	10.38	115.96	8.40	118.91	9.42
117.23	3.69	117.21	9.02	117.70	9.87	116.06	7.41	118.97	9.39
117.42	6.74	117.27	8.48	117.75	11.46	116.10	8.78	119.12	7.86
117.43	5.29	117.30	10.28	117.79	7.83	116.22	9.26	119.14	9.60
117.51	4.08	117.37	8.37	117.87	9.99	116.31	8.75	119.59	7.76
117.52	4.36	117.41	9.00	117.92	7.12	116.31	7.68	119.65	10.70
117.65	5.39	117.54	13.84	117.94	7.08	116.33	10.16	119.71	9.37
117.71	3.89	117.58	8.53	118.17	9.90	116.69	8.20	119.80	11.89
117.75	6.29	117.59	11.04	118.39	9.39	116.77	10.01	120.09	7.60
117.94	8.11	117.68	8.32	118.66	8.37	116.79	9.57	120.13	9.92
117.94	4.49	117.83	8.20	118.79	12.07	116.96	10.27	120.26	7.10
118.10	3.59	117.84	8.23	118.87	12.25	117.01	10.72	120.33	8.16
118.10	5.56	117.97	6.77	118.90	7.64	117.08	9.23	120.41	7.82
118.21	5.06	118.08	9.69	119.05	7.54	117.15	8.45	120.45	11.53
118.33	3.91	118.45	8.15	119.19	9.19	117.24	8.38	120.53	9.48
118.37	6.83	118.66	6.95	119.22	8.48	117.26	10.25	120.77	8.95
118.49	7.10	119.00	9.28	119.24	6.67	117.32	9.07	120.81	8.18
118.57	5.75	119.06	6.52	119.24	6.93	117.33	11.24	120.88	9.59
118.72	6.26	119.12	6.72	119.27	6.93	117.37	7.12	120.89	8.21
118.77	6.70	119.20	8.91	119.40	10.97	117.48	9.29	120.92	10.93
118.98	5.23	119.22	9.38	119.42	7.91	117.55	9.73	121.02	8.64
118.99	4.09	119.24	11.55	119.51	9.06	117.56	9.61	121.05	11.90
119.02	4.81	119.28	11.08	119.57	9.77	117.58	8.93	121.10	6.82
119.15	4.59	119.42	7.57	119.70	8.14	117.60	13.21	121.15	9.41
119.16	6.31	119.43	6.68	119.86	8.37	117.92	9.67	121.52	10.54
119.42	4.81	119.45	8.29	119.93	8.93	118.13	10.90	121.68	10.46

119.56	3.74	119.60	12.53	119.94	9.94	118.23	6.77	121.72	10.07
119.61	5.38	119.66	7.41	119.99	6.62	118.59	10.25	121.80	7.51
120.00	3.71	119.68	10.59	120.02	12.21	118.86	7.59	121.86	10.19
120.05	8.56	119.76	9.01	120.24	8.32	118.96	6.56	122.22	10.87
120.05	6.50	119.90	9.49	120.25	9.03	119.06	10.00	122.22	12.58
120.06	8.12	119.91	7.58	120.61	8.46	119.12	11.59	122.26	8.98
120.21	4.15	120.09	8.94	120.85	7.97	119.32	10.10	122.26	8.34
120.26	8.86	120.11	8.89	120.90	7.29	119.40	11.81	122.41	7.86
120.30	4.54	120.54	12.12	120.94	10.09	119.44	7.43	122.41	10.00
120.34	8.29	120.73	8.29	120.99	9.74	119.56	10.02	122.43	10.96
120.37	3.80	120.91	8.31	121.05	9.46	119.67	11.10	122.54	10.97
120.47	3.89	121.18	11.47	121.19	9.84	119.79	6.87	122.92	8.01
120.61	6.73	121.26	8.30	121.31	8.38	119.79	11.38	122.93	9.29
120.68	4.72	121.29	9.66	121.33	11.84	119.84	9.12	122.97	12.08
120.80	3.64	121.32	8.93	121.35	12.63	120.04	9.80	122.99	8.74
120.99	5.70	121.36	11.42	121.50	10.22	120.12	9.20	123.02	7.33
121.07	4.77	121.47	10.14	121.57	8.69	120.20	11.77	123.09	9.94
121.14	10.20	121.49	8.51	121.65	9.91	120.21	7.69	123.13	10.15
121.30	5.45	121.51	11.20	121.70	8.55	120.33	7.54	123.28	7.92
121.34	5.00	121.52	9.58	121.76	9.85	120.38	6.94	123.58	10.62
121.40	4.33	121.52	7.73	121.77	9.49	120.39	8.56	123.58	8.88
121.43	7.59	121.71	12.38	122.02	9.29	120.43	9.51	123.74	10.27
121.52	4.20	121.75	9.09	122.04	11.90	120.59	8.73	123.77	7.71
121.56	6.01	121.83	9.18	122.08	8.23	120.75	7.97	123.80	12.48
121.65	5.74	121.98	10.20	122.32	8.31	120.83	9.37	123.94	10.13
121.66	6.20	122.00	9.25	122.56	8.47	120.84	10.48	124.28	12.19
121.74	5.25	122.07	7.72	122.69	7.88	120.95	7.91	124.34	9.18
121.89	7.49	122.15	10.23	122.77	7.33	121.00	7.47	124.34	9.05
121.93	4.12	122.43	6.76	122.85	6.52	121.04	10.53	124.48	7.00
121.98	4.68	122.60	12.10	122.94	11.60	121.06	10.43	124.51	9.41
122.05	5.05	122.66	8.47	123.02	13.43	121.13	9.66	124.55	9.97
122.15	4.65	122.82	8.31	123.12	8.26	121.33	6.62	124.58	10.41
122.18	3.83	122.86	9.07	123.40	11.25	121.42	10.32	124.60	10.62
122.37	6.03	122.93	7.79	123.41	9.01	121.48	10.31	124.99	8.51
122.41	9.71	123.37	10.76	123.45	7.50	121.57	10.27	125.01	6.90
122.49	8.59	123.38	8.11	123.48	7.78	121.61	7.63	125.06	9.76
122.65	8.44	123.45	12.45	123.56	7.81	121.67	13.11	125.08	8.52
122.71	4.21	123.53	6.84	123.59	8.03	121.75	12.36	125.10	10.80
122.80	9.51	123.56	7.55	123.75	11.77	121.86	8.30	125.13	8.30
122.86	5.74	123.57	9.36	123.77	8.62	121.86	7.17	125.20	11.31
122.93	4.48	123.57	7.99	123.80	7.57	121.90	9.52	125.36	7.74
123.03	4.97	123.57	8.93	123.82	7.55	122.10	9.74	125.43	10.26

123.16	6.64	123.58	12.22	123.86	7.33	122.19	10.77	125.79	8.72
123.25	4.55	123.62	7.75	124.09	10.84	122.28	11.77	125.81	11.82
123.27	4.86	123.78	10.40	124.15	6.93	122.45	8.34	125.84	7.82
123.47	5.70	123.83	9.76	124.23	9.10	122.58	8.27	125.87	15.17
123.51	6.52	123.91	6.74	124.41	9.56	122.80	8.75	126.04	8.48
123.57	5.81	123.92	9.76	124.49	6.82	122.81	8.20	126.06	7.44
123.68	6.44	124.07	9.56	124.62	7.78	122.85	9.11	126.38	12.13
123.70	5.67	124.07	12.12	124.76	8.79	122.91	11.79	126.43	12.92
123.73	3.89	124.23	9.72	124.85	8.00	122.92	10.34	126.51	6.75
123.75	3.86	124.31	6.91	124.87	7.25	123.01	8.11	126.68	9.69
123.84	6.42	124.37	7.44	124.91	6.60	123.08	9.11	127.10	8.99
123.91	4.51	124.68	12.45	124.97	6.54	123.12	12.67	127.14	9.45
123.99	4.89	124.74	8.68	124.98	6.63	123.14	9.69	127.15	8.69
124.08	3.84	124.91	8.01	125.04	11.47	123.21	11.69	127.17	8.20
124.10	5.14	125.04	8.96	125.11	12.44	123.41	11.35	127.21	7.85
124.30	5.24	125.06	8.91	125.32	6.96	123.48	11.11	127.26	9.80
124.31	5.42	125.47	8.58	125.49	9.15	123.56	8.74	127.28	11.19
124.52	6.54	125.47	7.81	125.50	13.07	123.62	8.58	127.33	9.02
124.59	6.18	125.51	11.25	125.54	10.52	123.76	14.79	127.39	8.18
124.61	3.77	125.64	8.25	125.55	8.16	123.83	11.47	127.43	8.71
124.74	6.03	125.66	7.51	125.58	10.14	124.20	7.73	127.47	9.10
124.79	10.42	125.81	7.69	125.67	12.25	124.28	9.43	127.50	8.90
124.85	5.46	125.87	11.64	125.81	9.75	124.28	10.21	127.60	6.62
124.87	7.28	125.92	10.25	125.86	8.21	124.39	12.41	127.66	7.58
124.92	6.71	125.93	7.13	125.91	11.49	124.60	9.55	127.86	7.92
125.02	3.77	125.98	9.71	126.16	9.86	124.63	8.24	127.87	9.47
125.15	4.83	125.99	8.39	126.49	8.42	124.90	10.25	127.89	11.94
125.22	3.66	126.12	10.04	126.65	9.91	124.91	9.30	127.96	12.36
125.36	4.88	126.14	9.94	126.72	11.68	124.91	11.76	127.97	8.05
125.37	6.09	126.32	13.95	126.78	8.11	124.99	9.45	128.12	10.17
125.38	9.40	126.45	9.68	126.79	7.27	125.01	11.33	128.44	10.27
125.60	6.31	126.62	8.86	126.93	9.28	125.06	9.69	128.76	8.27
125.68	7.25	126.76	13.76	126.98	8.99	125.09	9.11	128.88	8.90
125.69	5.90	127.19	6.75	127.04	8.30	125.14	6.59	129.15	8.95
125.83	5.81	127.19	8.43	127.10	12.41	125.15	8.07	129.21	7.97
125.84	5.03	127.53	9.03	127.10	11.61	125.25	8.20	129.26	10.24
125.91	3.90	127.56	10.35	127.12	10.93	125.27	10.11	129.26	9.21
125.91	5.31	127.57	7.41	127.18	14.37	125.28	9.54	129.33	10.35
125.98	7.19	127.59	10.31	127.38	10.50	125.44	8.06	129.36	10.65
126.04	3.79	127.76	8.06	127.40	10.06	125.55	11.64	129.46	8.57
126.23	9.69	127.88	11.02	127.57	11.62	125.63	10.35	129.55	8.57
126.24	5.34	127.93	12.01	127.58	11.90	125.67	6.66	129.60	9.37

126.25	5.54	127.98	8.17	127.63	10.98	125.71	12.28	129.68	7.52
126.41	6.06	127.99	7.88	127.64	8.21	125.82	10.94	129.79	8.62
126.41	3.78	128.06	7.90	127.67	10.52	125.91	12.52	129.80	7.88
126.63	5.10	128.15	8.99	127.72	11.79	126.00	9.94	129.98	11.70
126.74	8.31	128.24	10.24	127.88	9.42	126.31	8.21	130.02	6.80
126.90	5.21	128.36	10.81	127.89	7.36	126.35	9.30	130.03	12.29
126.90	10.06	128.40	11.77	127.93	10.70	126.45	10.27	130.05	10.22
127.03	6.95	128.71	7.60	127.99	9.59	126.49	7.44	130.14	8.24
127.04	6.85	128.84	11.54	128.24	10.20	126.68	7.02	130.18	10.37
127.16	5.55	129.06	8.32	128.46	8.92	126.72	8.25	130.37	11.76
127.27	5.94	129.07	9.25	128.78	7.91	126.75	6.69	130.44	10.28
127.29	4.44	129.26	8.23	128.87	7.00	126.76	7.75	130.74	8.88
127.31	3.78	129.26	8.54	128.89	8.97	126.97	11.20	130.83	7.41
127.46	6.26	129.64	13.72	128.99	10.56	126.98	11.74	131.00	10.18
127.69	7.28	129.68	13.26	129.01	13.08	126.98	7.87	131.19	8.17
127.80	5.01	129.72	8.53	129.12	7.56	127.06	10.33	131.30	11.54
128.00	7.44	129.72	10.24	129.17	11.50	127.08	9.81	131.32	9.18
128.05	6.70	129.86	8.00	129.20	12.40	127.13	8.80	131.33	11.26
128.09	5.10	129.96	10.10	129.26	12.40	127.20	9.59	131.44	10.73
128.11	11.21	130.01	9.64	129.60	8.12	127.25	8.21	131.66	10.41
128.21	4.76	130.01	9.41	129.64	10.23	127.33	10.33	131.85	12.75
128.21	8.05	130.09	7.44	129.65	10.26	127.34	10.23	131.99	8.11
128.32	6.34	130.16	11.72	129.70	8.71	127.38	14.88	132.06	11.57
128.43	6.67	130.28	6.52	129.70	9.36	127.48	10.18	132.10	8.21
128.52	7.43	130.32	8.56	129.72	8.28	127.66	11.88	132.11	9.96
128.62	3.70	130.42	11.24	129.80	12.09	127.72	7.05	132.12	10.04
128.68	6.30	130.47	10.91	129.96	12.05	127.78	11.35	132.18	6.82
128.74	5.55	130.64	9.85	130.03	10.25	127.89	7.93	132.19	8.56
128.76	9.35	130.71	7.76	130.09	10.40	127.92	6.65	132.26	10.26
128.86	5.26	130.78	10.78	130.37	12.54	127.98	11.45	132.35	9.01
128.98	7.16	130.91	7.67	130.55	9.43	128.06	7.71	132.37	10.30
129.13	5.00	131.13	10.21	130.66	6.62	128.31	9.25	132.80	8.69
129.15	5.49	131.24	8.61	130.87	12.41	128.37	8.26	132.81	9.44
129.16	6.45	131.34	6.98	131.00	9.05	128.42	10.19	132.91	10.75
129.29	3.81	131.71	9.89	131.10	6.57	128.53	7.16	133.07	7.33
129.41	6.07	131.77	11.39	131.11	12.11	128.54	11.95	133.14	9.06
129.46	5.91	131.82	8.23	131.25	11.75	128.82	8.91	133.32	10.42
129.48	6.53	131.93	11.07	131.36	16.46	128.95	8.75	133.39	10.45
129.57	4.21	132.04	10.31	131.39	8.78	129.07	12.49	133.40	11.05
129.59	4.30	132.08	8.86	131.39	6.76	129.14	10.59	133.52	8.31
129.67	4.30	132.21	10.24	131.73	10.14	129.16	9.70	133.53	12.25
129.79	5.62	132.24	8.00	131.74	13.50	129.22	11.41	133.54	6.65

129.80	6.25	132.27	7.53	131.76	10.12	129.28	9.92	133.74	10.33
129.91	5.85	132.27	9.81	131.80	10.00	129.31	8.46	133.86	8.88
129.91	3.95	132.39	10.36	131.88	9.99	129.41	10.44	134.12	10.25
130.04	7.95	132.55	10.75	131.93	8.21	129.44	11.60	134.23	7.97
130.16	7.36	132.72	8.71	132.04	10.20	129.53	8.31	134.26	8.12
130.24	6.64	132.86	8.27	132.05	8.63	129.54	9.36	134.27	8.09
130.24	7.34	132.98	9.93	132.13	7.65	129.72	11.28	134.33	10.28
130.37	6.36	133.17	6.84	132.42	7.65	129.78	6.89	134.42	7.83
130.44	6.72	133.20	8.62	132.44	9.84	129.79	6.80	134.47	10.15
130.53	6.22	133.27	7.48	132.50	7.97	129.81	11.98	134.67	9.28
130.62	6.08	133.42	8.27	132.78	11.08	129.83	8.46	134.87	11.07
130.66	4.64	133.53	7.53	133.10	7.35	129.85	10.04	134.90	8.55
130.85	4.83	133.56	7.82	133.17	12.05	130.01	13.51	134.94	8.18
130.86	7.37	133.74	7.64	133.32	6.82	130.08	15.00	134.99	8.74
130.88	5.54	133.79	13.65	133.35	6.84	130.13	9.84	135.05	7.97
130.96	4.65	133.84	11.16	133.37	14.51	130.30	7.16	135.28	6.66
130.96	6.26	133.88	8.39	133.45	14.35	130.51	9.48	135.39	9.70
131.09	5.66	134.00	9.03	133.80	13.59	130.52	8.43	135.49	11.06
131.13	5.76	134.00	6.84	133.83	13.35	130.61	11.87	135.51	10.79
131.27	5.45	134.15	10.34	133.89	9.91	130.72	8.79	135.59	8.66
131.28	5.10	134.30	11.86	133.93	6.69	131.00	7.06	135.59	12.32
131.32	3.79	134.34	11.16	133.97	12.46	131.13	9.54	135.79	8.62
131.38	3.90	134.49	9.89	134.06	8.01	131.22	12.46	135.81	9.82
131.49	8.35	134.62	11.45	134.11	8.38	131.22	10.12	135.91	8.47
131.50	7.23	134.76	10.75	134.12	8.96	131.31	9.86	136.14	10.05
131.51	3.60	134.94	7.98	134.15	6.74	131.36	8.02	136.20	10.12
131.57	5.15	134.94	10.63	134.23	9.01	131.39	8.62	136.30	12.00
131.60	4.60	135.04	7.74	134.27	8.42	131.44	10.16	136.35	7.90
131.68	6.77	135.06	9.74	134.32	10.09	131.48	10.21	136.39	11.35
131.90	5.01	135.17	9.13	134.51	9.99	131.53	11.51	136.43	9.38
131.91	7.46	135.31	9.03	134.77	7.77	131.57	7.00	136.49	7.10
131.95	4.43	135.33	9.62	134.81	8.29	131.61	7.39	136.56	13.63
132.23	3.66	135.50	8.32	134.84	7.78	131.62	7.30	136.83	8.22
132.27	3.70	135.59	8.91	135.17	6.64	131.79	7.50	136.97	11.54
132.33	6.21	135.65	7.39	135.37	10.69	131.82	12.03	136.99	9.45
132.44	7.18	135.68	9.40	135.41	10.25	131.86	9.76	137.03	7.95
132.56	5.21	135.73	10.20	135.43	11.80	131.88	9.90	137.06	9.66
132.64	6.72	135.86	11.29	135.53	14.80	131.91	13.16	137.10	9.58
132.73	5.16	135.86	11.62	135.87	8.26	131.93	10.34	137.13	11.44
132.75	6.10	135.91	12.13	135.89	12.23	132.06	8.89	137.13	8.05
132.96	7.56	136.02	7.75	135.97	8.14	132.08	8.47	137.46	9.95
132.97	5.58	136.07	9.41	136.01	10.09	132.15	11.59	137.46	7.63

133.04	3.63	136.19	8.69	136.19	10.13	132.21	10.16	137.56	12.37
133.23	8.07	136.23	9.79	136.22	9.43	132.61	10.34	137.58	13.36
133.40	4.53	136.37	11.93	136.29	10.87	132.68	11.59	137.67	9.55
133.47	3.54	136.49	8.34	136.35	8.49	133.03	8.03	137.68	10.95
133.53	7.84	136.54	8.45	136.36	11.41	133.04	9.03	137.75	9.49
133.62	6.04	136.55	10.60	136.37	10.02	133.06	6.54	137.86	8.54
133.67	3.56	136.70	8.44	136.40	10.02	133.06	10.50	137.92	11.61
133.69	5.09	136.72	9.64	136.44	9.93	133.29	11.66	137.98	7.60
133.75	5.31	136.73	8.98	136.49	8.98	133.30	10.49	138.27	8.41
133.79	4.11	136.81	10.99	136.58	10.01	133.32	6.50	138.37	7.96
133.80	6.63	137.03	10.38	136.61	11.59	133.35	8.30	138.43	8.89
133.84	6.27	137.11	7.74	136.71	9.52	133.38	10.68	138.45	10.43
134.04	5.34	137.14	9.48	136.88	9.58	133.45	11.56	138.49	8.33
134.05	6.50	137.28	9.27	136.91	9.83	133.49	9.04	138.56	10.33
134.14	8.04	137.40	8.54	136.91	11.69	133.50	8.42	138.61	9.53
134.28	5.98	137.57	8.77	137.04	8.12	133.53	8.48	138.75	6.87
134.52	6.80	137.68	7.71	137.24	7.94	133.57	9.73	139.04	10.17
134.68	4.74	137.74	10.42	137.33	7.92	133.62	9.25	139.11	7.78
134.71	6.85	137.76	7.67	137.45	7.84	133.76	11.59	139.12	6.66
134.78	5.45	137.93	6.99	137.50	10.33	133.87	6.57	139.15	9.39
134.85	6.43	137.94	12.31	137.52	11.94	133.87	11.97	139.22	7.90
134.89	4.88	137.95	9.03	137.60	13.12	133.94	7.14	139.38	8.76
134.97	5.50	138.02	15.58	137.95	10.16	133.95	9.26	139.57	7.44
135.08	5.18	138.05	10.25	137.99	10.37	133.97	8.04	139.58	14.37
135.11	10.49	138.17	7.25	138.04	12.35	134.02	10.98	139.64	10.23
135.16	3.52	138.18	7.90	138.10	10.43	134.15	9.94	139.68	14.38
135.18	6.94	138.25	8.04	138.18	7.36	134.21	12.52	139.72	9.07
135.35	5.37	138.26	7.04	138.28	14.35	134.22	9.95	139.76	11.86
135.40	4.41	138.29	10.47	138.29	10.21	134.28	8.18	139.91	11.93
135.42	6.10	138.47	8.22	138.43	10.68	134.69	8.10	139.98	12.22
135.59	6.89	138.47	11.76	138.43	10.74	134.69	6.69	140.15	9.27
135.74	9.10	138.55	12.74	138.49	6.72	134.77	12.20	140.26	10.71
135.84	9.73	138.64	12.36	138.52	8.81	134.80	6.70	140.35	10.30
135.90	5.86	138.70	9.85	138.53	8.14	135.14	7.93	140.36	8.40
135.93	6.19	138.79	13.08	138.56	9.76	135.37	11.77	140.50	9.79
136.02	5.61	138.89	11.04	138.61	9.77	135.41	10.67	140.52	13.04
136.06	4.05	139.09	11.14	138.66	7.55	135.43	9.80	140.60	9.98
136.16	6.01	139.17	6.90	138.68	8.32	135.44	10.13	140.63	7.86
136.17	7.47	139.22	10.42	138.70	9.63	135.51	9.95	140.71	10.19
136.24	4.13	139.35	10.98	138.95	7.19	135.57	9.41	141.12	7.39
136.26	5.42	139.57	9.17	138.96	9.71	135.61	9.08	141.14	8.64
136.30	6.10	139.65	9.09	138.98	9.53	135.63	9.55	141.19	13.37

136.34	3.67	139.76	7.61	138.99	12.08	135.71	14.33	141.23	9.80
136.42	9.74	139.80	10.96	139.36	7.53	135.79	6.81	141.28	8.90
136.47	5.78	139.82	10.37	139.55	9.87	135.83	7.38	141.34	9.28
136.64	5.95	140.01	12.51	139.57	8.94	135.89	6.95	141.47	10.48
136.78	6.11	140.01	9.50	139.58	14.26	135.96	12.37	141.66	12.39
136.89	7.32	140.02	9.77	139.62	7.48	135.98	9.99	141.72	11.66
136.89	6.22	140.11	14.58	139.67	11.15	136.02	8.22	141.73	12.17
136.95	6.35	140.17	9.76	140.02	9.61	136.04	10.64	141.73	9.04
136.98	5.93	140.25	12.51	140.05	12.09	136.07	9.14	141.78	8.63
137.09	5.38	140.35	7.41	140.11	13.28	136.12	11.98	141.83	15.67
137.13	8.20	140.36	12.33	140.16	9.75	136.28	10.33	141.96	11.45
137.21	7.15	140.53	14.45	140.20	6.59	136.31	9.55	142.08	12.47
137.21	8.31	140.66	11.63	140.32	12.45	136.32	7.81	142.31	8.39
137.29	4.25	140.72	10.00	140.34	12.49	136.36	7.49	142.39	6.70
137.34	6.28	140.86	13.21	140.41	10.10	136.41	6.65	142.41	9.12
137.45	5.90	140.96	14.59	140.52	9.85	136.74	6.68	142.43	8.53
137.70	5.47	140.97	7.74	140.57	10.00	136.77	8.67	142.44	8.70
137.81	3.52	141.17	8.45	140.57	10.36	136.77	9.99	142.45	10.41
137.84	6.11	141.19	14.60	140.64	7.66	136.84	8.25	142.51	11.17
137.85	7.00	141.28	7.14	140.74	9.91	136.88	6.71	142.51	7.60
137.95	7.67	141.30	11.73	140.74	9.06	137.22	7.56	142.59	9.68
138.00	5.68	141.39	9.53	140.75	13.15	137.39	9.23	142.62	12.21
138.13	5.36	141.43	10.69	140.94	8.41	137.46	10.31	142.62	9.49
138.27	7.43	141.69	11.77	141.04	9.69	137.46	10.85	142.64	9.36
138.35	4.90	141.74	10.16	141.07	11.27	137.53	10.37	142.65	8.26
138.41	5.61	141.86	10.55	141.14	9.26	137.59	11.02	142.73	8.90
138.53	6.25	141.91	12.43	141.39	7.03	137.71	10.29	142.79	10.35
138.75	6.05	141.97	10.07	141.65	9.93	137.76	9.85	143.20	8.36
138.85	6.05	142.09	13.06	141.66	13.76	137.90	7.95	143.21	8.70
138.88	7.19	142.09	8.21	141.78	12.54	138.03	12.48	143.25	11.10
138.88	5.67	142.14	8.20	141.78	9.77	138.09	9.69	143.30	8.24
138.89	5.33	142.19	15.38	141.93	10.91	138.14	8.73	143.43	8.41
138.95	6.12	142.32	13.47	142.09	8.67	138.17	12.24	143.54	7.61
139.00	7.00	142.44	11.54	142.10	10.04	138.19	9.15	143.69	7.84
139.07	6.33	142.49	9.73	142.12	7.91	138.20	6.79	143.72	12.23
139.13	6.18	142.61	14.01	142.12	9.79	138.39	14.20	143.79	11.02
139.14	6.37	142.71	11.74	142.18	7.22	138.41	8.94	143.82	9.28
139.33	7.36	142.77	7.05	142.19	10.32	138.57	8.75	143.83	13.62
139.41	7.92	142.79	7.66	142.27	10.07	138.57	10.00	143.90	13.34
139.46	4.18	142.94	12.18	142.27	7.32	138.58	7.23	144.05	12.56
139.59	6.33	142.99	8.68	142.41	12.34	138.65	7.28	144.14	9.96
139.74	8.71	143.03	13.56	142.42	8.54	138.82	10.81	144.16	11.16

139.80	5.50	143.04	11.18	142.42	11.37	138.82	7.66	144.40	12.65
139.94	7.60	143.28	14.52	142.48	8.33	138.84	7.99	144.51	12.11
139.98	7.86	143.34	10.80	142.59	9.42	138.85	14.09	144.53	8.99
140.05	5.23	143.37	12.57	142.64	8.28	138.94	13.91	144.57	10.84
140.14	9.39	143.39	9.06	142.71	8.40	139.29	11.23	144.59	10.38
140.19	6.76	143.50	11.24	142.84	11.92	139.36	8.43	144.64	8.60
140.19	7.17	143.80	7.00	142.90	8.08	139.53	12.36	144.66	10.48
140.37	7.73	143.80	10.08	143.12	11.48	139.57	10.33	144.69	12.11
140.41	7.40	143.93	9.87	143.15	12.02	139.58	8.80	144.72	8.86
140.46	5.36	143.94	6.78	143.21	8.63	139.60	8.92	144.73	11.41
140.54	8.55	143.97	10.26	143.28	8.29	139.68	12.11	144.74	11.48
140.64	6.87	144.05	12.01	143.44	9.68	139.70	6.94	144.81	8.57
140.65	7.02	144.10	6.70	143.75	12.34	139.79	10.35	144.84	8.64
140.87	5.78	144.10	7.13	143.76	11.73	139.87	13.37	144.89	8.44
140.99	5.84	144.16	13.22	143.80	7.07	139.89	8.95	144.99	9.50
141.11	8.53	144.18	8.38	143.87	16.64	140.10	12.44	145.28	10.07
141.18	5.28	144.20	7.10	144.07	8.14	140.11	6.74	145.29	10.21
141.25	6.98	144.26	16.55	144.14	9.28	140.17	10.34	145.32	9.31
141.28	3.51	144.39	12.15	144.16	8.60	140.21	8.67	145.37	10.14
141.42	4.57	144.55	11.06	144.18	10.29	140.25	11.64	145.65	11.24
141.47	6.29	144.58	9.87	144.20	12.45	140.47	9.18	145.78	8.60
141.55	6.11	144.70	8.41	144.24	10.26	140.48	14.02	145.82	12.35
141.59	7.23	144.72	14.52	144.27	10.59	140.64	7.76	145.86	6.75
141.70	6.41	144.74	6.63	144.28	10.37	140.90	7.97	145.86	6.87
141.91	5.96	144.78	11.32	144.46	10.43	140.90	9.39	145.88	12.05
141.94	4.06	144.85	7.24	144.52	12.52	140.93	10.39	145.89	12.50
141.98	7.74	144.89	12.59	144.54	10.17	140.97	9.86	145.98	12.35
142.17	5.01	145.02	12.42	144.66	6.76	141.01	12.15	146.06	8.52
142.27	7.32	145.11	14.24	144.72	12.54	141.10	9.26	146.10	9.27
142.30	5.02	145.36	15.43	144.73	6.80	141.27	10.15	146.21	10.42
142.33	6.60	145.45	12.38	144.79	9.78	141.28	6.84	146.22	10.45
142.41	3.98	145.59	10.23	144.85	8.80	141.38	7.82	146.42	8.47
142.48	5.53	145.91	9.92	144.94	10.13	141.42	10.11	146.47	9.78
142.50	3.62	145.97	10.48	145.23	12.49	141.56	8.14	146.59	10.31
142.51	5.52	146.01	11.45	145.30	7.89	141.60	10.86	146.59	11.51
142.53	3.63	146.03	9.76	145.33	9.32	141.63	9.88	146.69	8.55
142.58	5.09	146.04	10.84	145.54	11.19	141.66	7.04	146.73	9.87
142.65	6.23	146.06	11.94	145.65	6.82	141.87	10.26	146.77	11.43
142.71	4.12	146.12	7.33	145.82	10.46	141.90	9.18	146.80	10.27
142.74	6.15	146.24	12.65	145.85	10.23	141.92	9.13	146.83	12.38
142.98	5.50	146.26	13.24	145.87	7.90	142.02	10.00	146.84	7.50
143.02	5.79	146.29	9.14	145.87	9.08	142.17	9.66	146.88	9.92

143.02	5.06	146.33	17.24	145.94	13.18	142.25	10.66	146.96	9.77
143.23	6.79	146.47	10.31	146.14	8.01	142.28	8.29	147.12	10.13
143.24	7.01	146.48	9.73	146.24	7.64	142.31	7.77	147.19	6.66
143.26	3.95	146.53	11.15	146.27	11.81	142.32	14.75	147.27	6.82
143.31	5.30	146.60	11.70	146.28	11.84	142.56	11.01	147.29	9.39
143.36	4.32	146.65	9.96	146.32	10.13	142.57	13.63	147.36	10.40
143.38	4.23	146.78	17.82	146.36	11.85	142.70	9.16	147.42	13.88
143.46	7.95	146.88	12.44	146.53	10.20	142.73	8.12	147.45	10.16
143.54	6.18	146.93	9.82	146.58	8.30	142.98	9.28	147.57	9.51
143.56	5.96	146.97	10.36	146.62	10.01	143.00	13.31	147.71	8.85
143.57	6.43	147.09	11.43	146.75	7.88	143.08	12.52	147.85	7.93
143.65	4.33	147.18	12.14	146.81	9.25	143.21	11.75	147.88	12.39
143.66	5.49	147.20	8.14	146.88	10.24	143.34	9.25	147.97	12.01
143.75	5.19	147.42	16.10	146.92	6.73	143.45	8.27	147.98	13.61
143.80	7.99	147.54	11.70	147.00	11.56	143.45	12.30	148.06	11.16
144.05	4.57	147.66	8.08	147.12	6.60	143.50	11.02	148.18	9.32
144.07	5.41	147.91	10.35	147.32	15.65	143.63	8.40	148.19	9.91
144.28	4.64	147.97	7.51	147.38	9.60	143.69	8.33	148.25	10.23
144.30	7.27	148.04	9.31	147.42	11.57	143.71	10.16	148.29	10.56
144.33	6.89	148.04	10.61	147.54	7.08	143.74	8.69	148.32	11.86
144.36	8.33	148.10	12.16	147.60	8.33	143.94	9.03	148.49	10.18
144.41	4.27	148.10	10.35	147.89	6.57	144.00	13.36	148.57	12.31
144.43	5.83	148.13	10.35	147.89	10.31	144.02	6.63	148.68	11.75
144.50	3.93	148.20	11.00	147.90	7.58	144.07	7.85	148.68	10.34
144.51	7.28	148.33	14.29	147.93	8.14	144.27	13.28	148.79	9.87
144.59	6.22	148.34	12.21	148.00	13.45	144.36	8.88	148.81	9.39
144.62	6.15	148.37	9.17	148.22	11.61	144.39	10.05	148.84	10.26
144.65	6.57	148.38	8.40	148.30	10.50	144.40	9.09	148.86	11.64
144.70	5.08	148.40	18.63	148.34	8.96	144.58	10.38	148.90	9.23
144.71	4.46	148.54	11.62	148.35	14.45	144.62	12.57	148.95	9.56
144.82	8.24	148.56	8.96	148.43	12.30	144.63	7.80	148.97	8.12
144.85	6.94	148.64	6.82	148.61	8.73	144.71	6.62	149.18	9.17
145.10	7.39	148.69	11.46	148.62	11.22	144.74	8.87	149.26	9.22
145.14	6.12	148.74	8.11	148.65	8.33	144.79	10.18	149.31	8.57
145.27	4.13	148.87	18.57	148.70	11.30	144.80	6.81	149.38	9.78
145.34	5.66	148.95	12.70	148.82	7.35	145.01	7.67	149.43	8.86
145.36	4.41	149.00	7.50	148.88	9.77	145.07	11.05	149.48	11.44
145.41	7.83	149.04	11.78	148.88	7.31	145.15	12.48	149.55	11.38
145.51	8.18	149.13	9.62	148.90	7.87	145.27	8.15	149.66	7.20
145.52	6.36	149.18	11.66	148.94	9.65	145.35	8.80	149.83	10.42
145.57	4.36	149.26	12.11	149.01	10.45	145.55	11.71	149.96	11.98
145.67	5.10	149.30	6.76	149.07	9.95	145.57	10.01	150.05	13.74

145.67	7.00	149.51	14.40	149.23	10.90	145.60	6.91	150.12	8.02
145.67	5.81	149.60	9.85	149.42	12.18	145.76	8.00	150.13	13.72
145.70	6.83	149.61	9.88	149.45	10.19	145.78	10.01	150.26	9.31
145.77	9.32	149.69	6.73	149.49	7.53	145.88	8.65	150.33	8.87
145.78	5.29	149.73	8.30	149.58	9.04	145.90	10.32	150.37	8.61
145.88	8.52	149.78	9.71	149.59	9.76	146.04	12.07	150.41	12.20
145.92	7.12	149.98	8.12	149.64	9.11	146.07	10.54	150.43	9.41
146.18	5.49	150.05	11.57	149.69	10.48	146.10	10.78	150.63	11.00
146.20	6.18	150.11	9.32	149.98	9.85	146.36	12.28	150.69	8.14
146.27	3.80	150.12	10.06	149.98	12.20	146.43	10.34	150.76	14.33
146.31	7.34	150.17	9.53	149.99	10.71	146.52	7.84	150.77	12.49
146.40	4.39	150.19	10.53	150.09	16.68	146.55	7.95	150.85	10.74
146.50	6.43	150.24	14.38	150.31	8.98	146.57	7.48	150.88	13.00
146.57	6.32	150.28	10.11	150.44	14.44	146.64	10.00	150.92	14.44
146.58	7.89	150.39	14.35	150.44	13.55	146.72	11.50	150.94	10.82
146.71	7.34	150.44	8.75	150.45	6.93	146.73	12.48	150.97	12.41
146.72	5.15	150.44	11.99	150.50	12.57	146.81	8.65	151.00	10.37
146.74	9.55	150.46	10.20	150.64	7.48	146.87	10.12	151.03	8.14
146.84	8.52	150.50	20.18	150.70	12.25	146.92	8.13	151.23	10.01
146.86	10.08	150.62	10.45	150.77	11.32	147.15	14.46	151.39	11.02
146.90	6.03	150.62	10.32	150.78	9.95	147.23	7.07	151.46	8.63
146.93	5.47	150.73	9.29	150.88	7.94	147.36	7.76	151.51	7.84
146.96	5.82	150.78	11.58	150.89	10.18	147.57	7.27	151.57	12.06
146.96	6.36	150.82	11.89	150.90	10.37	147.60	8.55	151.63	10.21
147.23	8.43	150.93	16.61	150.96	10.24	147.61	11.67	151.75	10.42
147.26	6.12	151.03	13.98	150.97	10.34	147.64	11.56	151.93	6.55
147.46	7.21	151.08	9.61	151.03	9.87	147.80	8.88	151.95	7.89
147.55	6.58	151.12	10.84	151.04	7.44	147.86	10.67	152.06	14.25
147.61	6.99	151.19	9.73	151.08	9.82	147.93	6.61	152.12	9.58
147.65	9.54	151.27	12.32	151.18	9.96	147.96	7.93	152.21	13.79
147.78	7.34	151.37	16.90	151.30	10.39	147.97	8.85	152.35	10.02
147.80	6.82	151.61	17.02	151.43	8.23	148.07	9.26	152.46	13.43
147.80	5.99	151.68	9.21	151.47	10.93	148.10	11.73	152.47	11.43
147.90	4.72	151.81	7.27	151.52	9.85	148.15	11.76	152.52	7.90
147.91	7.46	151.82	11.18	151.59	10.05	148.16	11.14	152.56	9.15
147.96	4.45	151.90	8.21	151.66	9.56	148.43	12.44	152.57	8.52
147.97	6.25	152.05	7.95	151.67	7.32	148.51	10.13	152.70	12.16
148.01	6.95	152.13	10.38	151.69	7.53	148.54	7.56	152.77	10.54
148.02	9.40	152.19	7.38	151.77	10.35	148.62	9.12	152.82	10.24
148.27	8.44	152.22	9.19	151.85	6.91	148.66	10.44	152.82	11.63
148.30	5.24	152.25	10.37	152.05	6.90	148.71	11.29	152.85	10.91
148.39	3.67	152.26	12.01	152.06	10.05	148.76	7.27	152.88	6.77

148.48	5.03	152.33	14.45	152.07	10.39	148.76	8.13	152.96	12.37
148.51	4.11	152.35	12.70	152.16	12.46	148.80	12.61	152.99	14.16
148.59	9.05	152.47	12.43	152.37	9.09	148.81	10.20	153.02	11.74
148.68	5.17	152.52	12.45	152.49	12.24	148.87	8.53	153.05	7.51
148.69	5.13	152.53	12.47	152.50	12.18	148.88	8.88	153.06	11.69
148.83	6.99	152.56	10.16	152.53	10.50	149.00	6.94	153.10	9.31
148.85	9.13	152.59	20.45	152.60	11.07	149.05	6.59	153.21	9.31
148.85	8.42	152.67	6.69	152.77	12.24	149.24	12.28	153.31	6.61
148.94	10.22	152.70	14.13	152.83	8.32	149.31	9.86	153.31	9.13
148.97	6.52	152.73	10.25	152.84	7.99	149.33	10.29	153.47	8.09
149.02	4.56	152.84	9.72	152.85	9.55	149.35	10.04	153.55	8.04
149.06	4.94	152.85	9.66	153.01	10.34	149.48	8.52	153.60	10.91
149.08	9.12	152.90	7.73	153.03	10.62	149.49	8.04	153.64	11.95
149.34	8.43	153.02	18.31	153.04	8.39	149.69	11.91	153.70	9.81
149.39	6.13	153.09	14.12	153.10	8.26	149.94	11.90	153.80	8.26
149.48	6.69	153.15	7.59	153.12	11.27	149.99	7.78	153.86	6.80
149.53	8.14	153.19	14.31	153.17	8.43	150.01	7.54	154.00	10.59
149.60	8.00	153.27	7.89	153.27	14.95	150.04	9.65	154.04	6.93
149.66	3.68	153.35	16.49	153.32	7.10	150.05	13.45	154.13	12.26
149.67	10.65	153.43	13.82	153.39	8.83	150.16	7.91	154.17	7.32
149.72	6.97	153.69	16.10	153.42	6.73	150.20	7.29	154.20	11.24
149.74	7.98	153.79	12.54	153.49	9.81	150.22	16.20	154.30	9.64
149.92	7.81	153.89	11.62	153.56	12.42	150.24	10.97	154.43	9.93
149.92	6.43	154.13	8.97	153.62	9.75	150.49	13.26	154.54	10.80
149.93	5.25	154.20	14.27	153.66	9.35	150.56	10.91	154.56	11.77
149.99	6.54	154.28	8.32	153.74	9.67	150.61	11.48	154.63	10.02
150.01	4.81	154.33	10.92	153.77	7.73	150.69	9.97	154.68	8.55
150.03	8.18	154.36	11.91	153.81	7.84	150.69	10.80	154.78	13.11
150.12	5.86	154.39	8.33	153.84	11.12	150.73	10.63	154.84	9.96
150.14	7.10	154.45	12.42	153.93	10.30	150.80	11.07	154.89	9.27
150.15	10.69	154.54	14.83	154.14	13.86	150.83	10.46	154.90	15.20
150.41	6.44	154.55	9.95	154.17	14.55	150.89	13.28	155.05	10.71
150.44	9.59	154.58	9.22	154.24	16.49	150.90	13.57	155.10	12.49
150.57	8.01	154.61	9.54	154.46	9.41	150.94	9.53	155.10	11.74
150.58	3.95	154.66	19.67	154.57	10.94	150.98	8.82	155.14	9.93
150.67	4.29	154.77	12.38	154.59	15.11	151.14	10.32	155.17	10.15
150.71	9.65	154.79	11.84	154.60	12.27	151.30	9.51	155.39	12.23
150.76	4.22	154.91	9.89	154.64	10.67	151.32	16.31	155.53	9.00
150.79	6.27	154.95	10.46	154.67	12.37	151.37	7.25	155.60	9.10
150.80	9.50	154.97	12.04	154.84	12.69	151.39	9.33	155.62	7.87
150.96	8.45	155.08	18.73	154.92	10.99	151.42	9.73	155.67	9.56
151.01	8.55	155.15	6.70	154.92	12.77	151.77	9.24	155.74	11.98

151.07	7.23	155.17	14.45	155.08	10.43	151.79	11.38	155.77	10.12
151.07	4.23	155.23	10.39	155.11	11.91	152.02	11.87	155.90	8.77
151.20	6.17	155.28	14.54	155.12	10.83	152.12	10.13	156.09	13.00
151.20	8.35	155.37	12.87	155.16	6.81	152.14	10.14	156.09	9.53
151.21	4.06	155.42	15.04	155.19	11.88	152.15	12.61	156.21	14.50
151.22	3.61	155.53	12.30	155.25	12.31	152.16	8.11	156.28	11.23
151.46	9.37	155.77	16.13	155.34	12.45	152.24	8.87	156.37	14.51
151.49	6.22	155.82	8.49	155.46	7.90	152.28	12.21	156.47	7.74
151.56	3.65	155.87	10.74	155.48	8.31	152.30	10.57	156.50	8.57
151.63	4.05	155.93	6.58	155.57	10.54	152.31	10.31	156.56	9.80
151.77	9.16	155.96	9.87	155.66	16.52	152.58	14.51	156.56	8.68
151.81	4.80	156.20	6.76	155.72	11.56	152.63	9.02	156.61	11.35
151.84	4.28	156.30	13.32	155.76	11.31	152.67	11.48	156.62	12.23
151.85	9.57	156.40	7.92	155.81	9.92	152.76	12.33	156.83	10.57
152.02	8.69	156.43	10.27	155.84	11.47	152.77	6.65	156.87	14.56
152.07	5.96	156.48	13.04	155.88	9.79	152.80	13.21	156.93	10.08
152.12	7.21	156.53	14.45	155.91	9.57	152.92	9.72	156.97	15.08
152.15	7.90	156.64	12.56	156.03	13.42	152.94	14.59	156.98	13.30
152.24	6.27	156.66	9.25	156.21	11.82	152.95	11.42	157.11	6.84
152.25	10.15	156.68	14.42	156.22	12.19	153.21	7.99	157.11	11.99
152.28	6.42	156.69	9.94	156.24	7.09	153.35	9.79	157.15	12.49
152.31	5.76	156.73	20.34	156.32	16.44	153.38	14.23	157.17	10.28
152.51	9.57	156.79	8.47	156.42	7.98	153.46	7.19	157.17	10.06
152.56	8.24	156.86	16.00	156.45	9.90	153.47	7.74	157.21	8.89
152.61	6.76	156.87	13.35	156.54	12.04	153.49	14.72	157.25	8.02
152.68	5.22	156.98	11.27	156.63	10.16	153.59	8.22	157.26	11.62
152.82	9.50	157.02	15.46	156.66	13.48	153.85	10.08	157.46	6.81
152.87	5.17	157.07	12.43	156.68	13.14	153.87	10.77	157.51	9.61
152.90	8.35	157.16	18.38	156.69	9.76	153.88	8.03	157.55	7.47
152.93	8.53	157.22	7.82	156.77	10.92	153.93	6.79	157.60	8.76
153.07	8.33	157.25	12.45	156.93	14.40	153.93	6.92	157.68	8.35
153.12	5.37	157.34	14.10	157.00	11.73	154.08	10.46	157.71	7.01
153.18	10.42	157.45	14.04	157.00	14.27	154.14	8.45	157.76	9.90
153.28	5.21	157.49	16.17	157.14	10.62	154.19	8.52	157.79	14.25
153.30	9.06	157.58	13.95	157.18	10.24	154.19	8.88	157.85	10.10
153.33	4.75	157.80	9.05	157.18	12.30	154.21	8.45	157.96	10.15
153.37	6.07	157.83	14.51	157.26	12.29	154.23	11.81	158.03	8.17
153.56	8.41	157.90	9.82	157.35	11.49	154.33	9.68	158.17	8.20
153.64	5.15	157.93	10.76	157.40	13.65	154.34	7.81	158.20	10.14
153.67	5.76	158.01	7.05	157.57	11.58	154.37	9.78	158.29	12.99
153.77	6.15	158.04	10.34	157.60	13.49	154.40	11.05	158.37	12.06
153.91	9.62	158.15	8.70	157.64	11.65	154.51	7.98	158.44	15.07

153.96	5.05	158.38	14.65	157.72	12.46	154.67	14.42	158.58	9.98
153.99	6.35	158.48	10.54	157.80	11.86	154.71	8.14	158.62	7.75
154.14	7.46	158.53	9.01	157.89	8.14	154.72	8.73	158.68	10.23
154.19	9.58	158.57	10.84	157.93	7.30	154.76	12.77	158.70	11.65
154.23	8.29	158.59	10.38	157.99	9.16	154.85	10.32	158.78	9.49
154.34	5.23	158.70	15.11	158.10	8.19	154.85	12.37	158.89	8.02
154.35	8.37	158.73	11.03	158.13	6.55	154.87	11.21	158.96	13.39
154.37	5.27	158.75	8.92	158.28	12.13	154.98	7.73	159.00	9.10
154.39	5.11	158.80	20.45	158.30	12.50	155.02	14.66	159.05	9.66
154.45	8.05	158.86	7.75	158.36	10.50	155.03	12.33	159.06	16.25
154.51	7.50	158.93	15.81	158.38	16.58	155.36	8.30	159.19	11.05
154.61	6.65	158.94	11.93	158.53	12.02	155.43	10.64	159.25	8.56
154.69	7.20	159.08	13.18	158.55	7.96	155.49	14.21	159.26	13.80
154.72	7.20	159.08	9.28	158.61	12.21	155.53	8.96	159.26	10.55
154.83	6.73	159.16	9.60	158.71	10.21	155.53	8.11	159.30	9.95
154.86	5.59	159.23	18.41	158.73	12.28	155.55	10.27	159.33	9.89
154.95	9.56	159.32	7.59	158.75	16.27	155.82	8.52	159.34	9.81
155.03	9.23	159.32	13.48	158.82	10.39	155.94	9.00	159.37	9.03
155.04	8.49	159.44	16.07	158.82	13.89	155.95	14.61	159.41	8.77
155.19	8.21	159.51	9.86	158.98	6.84	155.96	9.03	159.55	7.36
155.22	8.52	159.57	16.22	158.99	13.09	156.00	8.97	159.67	9.58
155.29	10.51	159.67	12.47	159.08	12.23	156.05	10.54	159.67	9.28
155.39	7.62	159.72	9.05	159.09	8.81	156.16	14.30	159.68	9.89
155.42	5.01	159.86	10.41	159.22	10.71	156.19	9.55	159.77	9.66
155.42	10.43	159.92	15.98	159.26	12.33	156.27	13.39	159.80	11.88
155.44	6.12	159.96	9.74	159.28	11.53	156.28	8.45	159.84	10.28
155.48	7.03	160.00	10.28	159.34	14.01	156.30	10.51	159.87	13.71
155.68	7.51	160.08	9.29	159.41	11.43	156.36	10.68	159.92	9.46
155.76	8.11	160.09	8.12	159.50	14.59	156.40	10.93	160.07	9.75
155.78	5.74	160.12	10.66	159.64	7.86	156.43	8.31	160.24	6.92
155.91	8.89	160.24	9.76	159.65	9.81	156.45	8.33	160.36	13.11
156.00	7.82	160.45	16.55	159.69	10.97	156.50	11.96	160.43	10.39
156.08	6.32	160.56	9.75	159.74	9.66	156.54	9.08	160.52	14.53
156.08	8.14	160.61	10.21	159.80	16.21	156.73	14.28	160.66	9.61
156.25	8.71	160.63	13.67	159.87	12.55	156.80	13.19	160.77	10.79
156.31	7.78	160.69	13.01	159.94	9.99	156.81	11.52	160.77	10.44
156.36	8.11	160.79	14.89	159.98	12.26	156.83	11.43	160.85	8.41
156.44	5.12	160.83	11.99	160.07	12.54	156.92	11.97	160.97	8.67
156.47	11.56	160.83	10.08	160.17	10.38	156.94	10.51	161.02	14.13
156.47	3.63	160.88	20.53	160.26	8.47	156.95	11.66	161.08	12.08
156.48	9.44	160.95	11.74	160.38	16.47	157.06	11.51	161.13	9.40
156.50	3.67	161.00	16.85	160.39	12.39	157.12	8.09	161.13	15.13

156.73	9.42	161.03	16.39	160.46	6.80	157.13	17.63	161.25	9.25
156.75	6.00	161.15	12.34	160.46	14.61	157.14	17.69	161.27	12.50
156.80	5.73	161.16	14.53	160.58	8.15	157.42	6.75	161.35	14.64
156.83	7.40	161.22	12.47	160.59	8.19	157.50	10.39	161.35	9.10
156.94	7.86	161.32	17.33	160.64	8.29	157.55	12.43	161.35	10.23
157.00	6.50	161.41	7.17	160.68	9.71	157.55	8.79	161.36	8.61
157.05	9.66	161.42	13.36	160.82	12.45	157.63	10.29	161.40	14.01
157.14	8.34	161.50	12.84	160.83	14.23	157.65	12.34	161.41	12.63
157.15	7.15	161.62	15.33	160.92	12.49	157.91	9.04	161.44	6.98
157.19	5.76	161.64	16.61	161.08	16.60	157.92	10.35	161.61	7.92
157.29	8.39	161.76	14.78	161.15	11.88	158.02	14.58	161.65	6.93
157.35	8.52	161.79	9.54	161.18	10.95	158.03	10.86	161.74	9.32
157.40	6.46	161.80	6.78	161.27	10.63	158.04	10.68	161.75	12.37
157.52	5.95	161.94	7.92	161.29	9.85	158.11	10.19	161.87	8.09
157.52	9.15	161.98	14.51	161.36	10.06	158.23	13.19	161.88	9.28
157.53	10.38	162.04	14.35	161.37	10.25	158.35	11.96	161.90	10.77
157.71	5.83	162.11	13.71	161.41	14.37	158.38	12.37	161.95	9.91
157.80	8.55	162.16	9.92	161.50	14.05	158.41	9.39	162.02	13.62
157.85	4.81	162.16	7.94	161.57	12.12	158.47	9.99	162.06	6.53
157.87	5.78	162.21	10.64	161.60	8.03	158.50	11.28	162.13	10.42
157.90	5.90	162.37	12.93	161.72	9.24	158.53	11.83	162.46	14.39
158.01	9.06	162.55	16.54	161.76	8.82	158.53	11.20	162.50	12.45
158.05	4.41	162.67	11.38	161.84	13.81	158.54	6.81	162.60	12.38
158.10	8.42	162.67	10.34	161.91	14.45	158.55	10.26	162.67	8.73
158.19	6.29	162.72	14.62	161.95	10.35	158.82	14.48	162.74	10.12
158.21	7.19	162.77	8.67	162.02	7.91	158.82	9.51	162.85	10.05
158.25	6.46	162.89	15.84	162.06	11.72	158.86	10.84	162.85	11.63
158.34	9.54	162.90	11.92	162.16	10.30	158.87	10.52	162.93	7.98
158.41	8.87	162.92	15.07	162.26	7.52	158.90	14.80	163.04	8.53
158.48	7.31	162.99	20.60	162.32	8.25	159.00	12.90	163.09	11.28
158.57	6.98	163.03	11.49	162.44	14.26	159.02	10.29	163.09	12.83
158.57	7.82	163.07	18.73	162.46	15.81	159.02	11.08	163.16	11.38
158.60	9.30	163.10	16.23	162.54	17.26	159.15	9.95	163.20	15.59
158.79	4.40	163.22	14.28	162.54	8.08	159.19	14.43	163.21	9.80
158.85	7.46	163.23	14.42	162.64	8.47	159.19	8.56	163.30	8.65
158.91	7.04	163.33	15.85	162.66	8.02	159.20	16.22	163.35	17.69
158.91	6.57	163.41	15.84	162.71	7.04	159.49	8.44	163.40	10.20
158.96	5.85	163.48	12.68	162.78	13.88	159.59	14.61	163.41	8.60
159.05	7.32	163.52	11.51	162.88	10.53	159.62	16.49	163.44	10.26
159.06	5.16	163.58	12.54	162.90	14.44	159.69	12.11	163.44	13.39
159.11	7.36	163.68	14.38	162.99	15.17	159.70	12.30	163.47	11.45
159.17	10.66	163.74	14.53	163.05	11.17	159.72	15.45	163.48	10.18

159.26	7.05	163.83	14.63	163.17	15.31	160.00	8.82	163.59	8.16
159.26	5.92	163.86	10.04	163.25	12.03	160.02	13.74	163.72	11.63
159.35	5.04	163.87	10.41	163.25	15.40	160.11	11.34	163.79	9.57
159.40	8.70	164.01	8.60	163.34	10.80	160.11	13.45	163.81	9.96
159.46	8.54	164.09	16.88	163.40	13.17	160.13	14.91	163.83	9.19
159.55	7.58	164.11	12.19	163.42	10.91	160.33	14.40	163.95	7.78
159.62	10.25	164.16	12.29	163.42	12.90	160.44	11.70	163.96	8.24
159.62	8.02	164.24	8.11	163.49	13.77	160.47	10.46	163.97	7.95
159.66	5.67	164.31	12.18	163.60	13.02	160.50	9.29	164.05	7.94
159.82	4.22	164.45	8.78	163.67	11.96	160.59	10.06	164.05	14.31
159.91	7.36	164.61	16.30	163.68	9.20	160.59	10.10	164.11	12.07
159.96	6.14	164.73	10.65	163.85	11.11	160.62	9.01	164.13	8.02
159.96	5.59	164.75	10.48	163.89	11.89	160.62	13.41	164.20	8.27
160.01	6.14	164.78	9.66	163.97	17.23	160.63	10.10	164.27	10.01
160.11	5.46	164.78	13.28	164.01	13.58	160.88	14.33	164.54	14.42
160.12	6.73	164.84	11.54	164.13	7.31	160.89	8.45	164.59	15.54
160.16	7.04	164.95	16.61	164.15	9.99	160.94	9.95	164.67	14.67
160.22	7.53	164.99	11.64	164.22	7.97	160.94	12.34	164.72	9.74
160.30	9.21	165.00	11.50	164.32	10.00	160.99	14.58	164.82	10.37
160.32	7.15	165.04	18.58	164.54	16.63	161.07	14.39	164.91	11.09
160.39	5.34	165.10	8.79	164.55	13.36	161.10	12.37	164.94	14.97
160.46	9.60	165.17	18.68	164.61	16.44	161.12	10.06	165.14	12.48
160.52	8.39	165.17	15.39	164.65	8.53	161.23	10.11	165.17	9.06
160.58	7.20	165.30	13.91	164.73	10.79	161.26	16.03	165.19	7.80
160.68	8.63	165.33	13.57	164.75	12.37	161.28	15.84	165.20	13.63
160.69	7.48	165.42	13.89	164.80	7.11	161.58	8.00	165.24	12.35
160.71	9.55	165.47	18.75	164.81	10.05	161.66	13.09	165.28	14.85
160.88	7.39	165.55	14.62	164.86	10.45	161.70	17.59	165.31	15.67
160.96	10.31	165.60	9.28	164.96	12.33	161.76	12.30	165.41	9.20
161.01	5.97	165.65	12.15	164.97	13.78	161.79	13.99	165.43	14.55
161.02	4.80	165.77	15.70	165.06	13.81	161.96	6.87	165.49	8.18
161.06	6.15	165.80	14.29	165.13	10.65	162.08	13.14	165.49	14.32
161.18	7.93	165.92	17.63	165.23	16.43	162.17	12.80	165.50	11.45
161.19	7.46	165.94	8.19	165.31	14.63	162.18	10.27	165.52	13.60
161.22	6.35	166.10	9.69	165.32	9.54	162.19	7.22	165.56	10.40
161.27	10.51	166.16	17.70	165.33	8.89	162.19	12.53	165.56	15.39
161.37	4.93	166.18	12.14	165.41	9.58	162.41	12.45	165.60	8.20
161.37	6.06	166.24	12.58	165.46	12.02	162.52	12.10	165.89	10.00
161.45	8.08	166.31	8.58	165.51	10.11	162.56	12.01	165.90	9.32
161.51	9.71	166.36	11.84	165.52	12.28	162.66	6.84	165.98	8.36
161.57	11.03	166.51	12.04	165.56	14.53	162.66	14.84	166.07	11.62
161.64	11.13	166.71	16.71	165.69	14.33	162.66	11.92	166.12	9.01

161.74	11.26	166.82	9.13	165.74	13.01	162.68	10.48	166.14	16.05
161.74	10.69	166.85	8.84	165.76	11.01	162.72	15.24	166.16	12.12
161.76	6.31	166.85	12.52	165.93	11.43	162.74	13.68	166.29	12.49
161.94	4.64	166.87	13.13	165.98	8.49	162.77	6.73	166.30	8.40
162.04	6.66	166.91	11.93	166.05	18.04	162.88	9.10	166.33	8.86
162.08	5.69	167.02	17.15	166.10	16.00	162.92	10.32	166.40	9.62
162.09	4.32	167.05	11.46	166.24	9.20	162.97	17.76	166.60	18.03
162.13	5.93	167.06	12.53	166.33	14.04	162.97	12.28	166.68	14.57
162.22	4.20	167.14	17.95	166.40	10.29	163.02	10.29	166.75	14.57
162.23	9.15	167.18	8.80	166.60	16.33	163.04	7.26	166.82	8.86
162.27	5.76	167.25	16.86	166.62	14.58	163.05	12.38	166.86	9.01
162.32	10.70	167.26	18.94	166.69	12.77	163.15	12.25	166.89	11.87
162.43	8.27	167.37	14.05	166.74	10.57	163.18	11.12	167.00	12.36
162.44	7.02	167.39	13.97	166.82	7.27	163.18	15.05	167.00	11.90
162.52	10.22	167.48	14.53	166.83	8.88	163.30	7.65	167.20	9.54
162.57	12.48	167.54	9.33	166.86	9.84	163.34	17.28	167.28	14.62
162.64	9.10	167.56	18.99	166.88	8.87	163.36	9.27	167.29	8.53
162.70	6.96	167.63	12.10	166.93	13.00	163.37	15.98	167.31	12.17
162.79	8.67	167.67	9.78	167.04	15.98	163.74	13.94	167.35	15.59
162.79	9.05	167.73	12.58	167.05	14.68	163.77	16.47	167.39	11.92
162.81	9.57	167.87	16.44	167.14	12.42	163.85	14.61	167.45	7.47
163.02	7.84	167.88	14.06	167.22	11.51	163.86	15.16	167.47	10.40
163.07	8.82	167.98	16.02	167.31	16.61	163.95	9.32	167.52	15.38
163.12	5.94	168.02	9.00	167.39	12.15	164.14	10.21	167.56	14.48
163.14	6.21	168.20	9.26	167.40	9.76	164.26	12.51	167.58	7.97
163.18	4.11	168.24	17.24	167.40	13.60	164.27	14.28	167.59	9.73
163.27	4.70	168.26	14.30	167.50	9.60	164.28	14.43	167.59	9.82
163.28	7.83	168.32	15.57	167.53	11.35	164.31	7.92	167.60	12.22
163.35	7.02	168.38	7.19	167.58	10.17	164.47	6.55	167.63	11.66
163.40	7.29	168.44	12.76	167.58	13.01	164.50	14.78	167.66	13.99
163.47	6.10	168.61	11.46	167.64	12.10	164.58	12.04	167.69	7.94
163.50	5.11	168.79	20.89	167.77	13.75	164.63	10.10	167.99	10.05
163.56	7.01	168.88	10.31	167.80	13.88	164.73	12.13	167.99	11.70
163.64	10.07	168.92	10.62	167.94	7.93	164.73	11.81	168.04	8.58
163.70	9.64	168.94	12.05	168.00	10.04	164.76	9.39	168.13	11.01
163.75	9.68	168.95	14.62	168.02	10.91	164.78	11.95	168.23	13.87
163.85	9.66	168.99	11.78	168.05	10.38	164.79	12.73	168.26	11.92
163.85	10.47	169.10	17.30	168.12	16.31	164.79	13.25	168.35	8.09
163.86	9.29	169.14	14.45	168.17	10.59	164.92	10.93	168.38	11.02
164.07	4.11	169.15	17.08	168.33	10.25	164.97	9.79	168.38	8.00
164.14	7.57	169.21	21.52	168.42	13.81	165.03	16.35	168.43	10.54
164.19	5.28	169.26	9.97	168.48	10.26	165.06	10.32	168.51	8.53

164.19	6.36	169.34	16.96	168.71	16.62	165.09	9.23	168.52	9.65
164.23	5.46	169.34	20.59	168.71	17.34	165.13	9.08	168.68	16.67
164.33	5.27	169.45	11.35	168.76	16.91	165.16	16.74	168.75	14.16
164.38	12.85	169.50	19.73	168.81	9.01	165.25	11.20	168.82	12.46
164.39	5.41	169.57	16.15	168.88	7.95	165.25	12.33	168.95	8.43
164.45	10.06	169.64	20.50	168.91	13.06	165.26	14.30	169.00	10.41
164.54	7.93	169.71	15.66	168.94	11.13	165.38	9.44	169.07	12.68
164.54	10.56	169.76	12.28	169.00	10.48	165.41	18.87	169.07	11.41
164.61	6.89	169.81	15.53	169.01	10.53	165.45	7.13	169.27	11.26
164.71	10.23	169.93	16.34	169.11	14.17	165.46	11.85	169.34	13.80
164.76	10.43	169.96	15.66	169.13	12.46	165.83	14.44	169.35	9.27
164.80	8.28	170.09	16.13	169.21	12.37	165.85	16.42	169.38	11.29
164.90	10.68	170.11	13.09	169.30	13.56	165.92	11.71	169.46	15.89
164.91	7.99	170.24	6.84	169.39	14.58	165.94	15.58	169.47	13.38
164.94	11.73	170.28	6.83	169.46	13.27	166.03	6.73	169.52	11.01
165.12	6.70	170.32	18.20	169.47	12.35	166.22	10.95	169.55	10.93
165.19	6.38	170.37	12.81	169.48	11.12	166.35	17.61	169.59	16.60
165.25	6.32	170.39	14.54	169.59	14.08	166.35	14.37	169.63	14.15
165.27	6.28	170.51	12.96	169.62	12.00	166.37	13.22	169.65	11.16
165.30	7.10	170.67	11.69	169.66	11.50	166.39	9.17	169.66	9.57
165.38	4.10	170.85	18.57	169.68	15.87	166.58	18.49	169.66	12.19
165.43	8.64	170.95	10.39	169.70	9.50	166.59	10.74	169.67	11.33
165.44	7.82	171.00	12.16	169.73	14.55	166.66	12.30	169.71	10.23
165.51	8.58	171.00	10.30	169.84	11.04	166.70	9.76	169.73	12.07
165.60	5.20	171.02	12.44	169.90	12.23	166.81	11.95	169.82	10.31
165.61	6.49	171.07	12.53	170.08	7.71	166.81	14.28	170.05	12.40
165.66	9.16	171.18	6.71	170.10	9.40	166.84	12.27	170.08	12.05
165.77	10.40	171.19	18.44	170.13	10.35	166.87	14.51	170.12	7.54
165.83	10.48	171.21	14.10	170.19	16.50	166.88	12.95	170.13	8.95
165.89	7.24	171.23	16.07	170.25	11.45	166.98	8.14	170.18	8.97
165.95	8.30	171.27	22.92	170.47	12.41	167.06	9.79	170.23	10.64
165.96	10.13	171.33	10.38	170.56	12.38	167.12	15.97	170.29	14.34
166.00	9.41	171.41	17.38	170.76	13.17	167.13	7.93	170.32	11.09
166.17	7.41	171.41	20.59	170.77	16.43	167.20	9.10	170.44	11.25
166.24	7.58	171.55	18.71	170.86	15.36	167.20	13.50	170.48	9.17
166.30	5.47	171.56	15.49	170.89	9.17	167.21	14.23	170.49	7.57
166.31	5.59	171.64	15.89	170.95	8.74	167.23	7.17	170.53	8.56
166.36	5.87	171.72	20.52	170.96	8.91	167.31	12.46	170.61	11.04
166.43	5.98	171.78	14.42	170.99	11.41	167.32	10.21	170.79	16.24
166.48	9.95	171.83	9.42	171.01	10.20	167.36	9.87	170.85	14.35
166.51	6.54	171.89	14.38	171.08	10.94	167.45	9.63	170.90	15.66
166.56	7.70	172.00	15.91	171.08	10.33	167.49	18.88	171.06	12.94

166.65	5.82	172.03	16.05	171.19	14.51	167.54	12.40	171.15	14.49
166.65	8.62	172.14	16.33	171.21	17.67	167.55	17.48	171.15	11.01
166.72	5.22	172.20	11.42	171.30	15.42	167.90	14.35	171.27	8.50
166.80	14.00	172.31	11.35	171.36	10.29	167.92	15.82	171.30	7.98
166.87	10.98	172.37	11.24	171.46	12.46	168.00	12.21	171.35	10.30
166.95	7.04	172.39	18.26	171.56	9.79	168.02	16.60	171.45	14.63
167.01	11.05	172.46	14.13	171.56	13.28	168.03	7.64	171.46	14.47
167.03	11.73	172.48	14.45	171.57	15.96	168.10	9.98	171.47	14.38
167.08	9.43	172.59	12.46	171.65	11.83	168.30	10.14	171.54	14.95
167.23	6.25	172.75	9.10	171.69	13.59	168.41	13.91	171.54	11.12
167.29	9.40	172.93	18.42	171.74	13.63	168.42	13.76	171.63	9.62
167.39	7.17	173.03	12.28	171.75	12.67	168.43	13.86	171.64	10.75
167.39	7.10	173.07	14.96	171.77	8.88	168.45	9.67	171.68	15.90
167.43	7.53	173.10	10.94	171.81	12.68	168.64	16.45	171.73	11.03
167.50	7.65	173.13	10.14	171.91	12.38	168.68	10.82	171.73	12.40
167.53	10.49	173.14	13.88	171.97	13.82	168.73	11.32	171.74	15.28
167.56	7.02	173.25	17.15	172.18	13.23	168.79	10.22	171.74	14.53
167.60	8.61	173.28	11.03	172.19	12.63	168.88	12.22	171.76	15.41
167.70	8.10	173.29	14.33	172.21	12.20	168.88	14.35	171.80	16.21
167.71	8.57	173.29	14.38	172.28	20.31	168.94	12.20	171.80	14.46
167.77	7.06	173.35	22.71	172.33	8.30	168.94	14.46	171.88	9.18
167.86	14.03	173.41	12.32	172.37	8.30	168.94	11.32	172.13	10.12
167.94	15.86	173.47	20.31	172.56	16.63	169.06	12.39	172.16	10.16
167.99	7.48	173.48	16.08	172.63	11.25	169.14	12.21	172.21	12.50
168.07	8.47	173.62	13.75	172.86	11.80	169.20	18.30	172.22	7.44
168.09	11.42	173.63	17.59	172.87	16.09	169.24	12.49	172.30	12.55
168.11	12.61	173.70	18.29	172.94	20.84	169.27	7.56	172.37	12.17
168.31	5.22	173.80	20.57	172.97	8.85	169.29	12.09	172.41	11.87
168.35	7.52	173.88	19.09	173.03	10.01	169.29	8.08	172.52	9.63
168.42	5.96	173.90	9.43	173.04	7.82	169.30	10.73	172.53	8.77
168.43	5.87	173.96	13.96	173.05	11.56	169.40	11.88	172.56	11.09
168.47	7.14	174.10	14.37	173.12	13.39	169.40	10.04	172.69	9.26
168.57	7.15	174.11	16.53	173.14	10.97	169.41	11.72	172.85	20.37
168.58	8.26	174.22	13.82	173.17	14.12	169.55	9.27	172.93	14.44
168.62	7.27	174.27	12.13	173.27	14.26	169.57	17.30	172.98	14.46
168.67	10.74	174.42	9.87	173.27	16.06	169.62	12.80	173.12	6.91
168.76	6.17	174.48	16.61	173.38	15.01	169.62	17.80	173.14	12.44
168.77	9.98	174.52	17.72	173.43	11.95	169.99	16.61	173.22	12.44
168.84	8.90	174.54	13.77	173.56	17.45	170.02	16.55	173.25	14.81
168.93	12.17	174.66	12.01	173.62	16.64	170.09	14.47	173.26	8.73
168.97	12.25	174.83	12.30	173.63	14.23	170.11	10.30	173.35	9.69
169.05	9.67	175.00	18.60	173.66	12.74	170.12	16.66	173.38	8.21

169.13	10.44	175.14	15.48	173.74	16.30	170.20	11.63	173.44	11.94
169.15	10.33	175.16	9.41	173.77	18.23	170.39	13.28	173.51	16.95
169.17	10.55	175.18	9.72	173.84	14.57	170.49	14.51	173.53	14.09
169.35	7.54	175.18	12.47	173.84	9.51	170.50	14.57	173.53	8.69
169.42	8.60	175.23	13.93	173.85	14.01	170.52	12.64	173.63	17.76
169.51	10.59	175.31	9.44	173.88	13.31	170.54	11.06	173.65	16.00
169.51	4.91	175.32	21.37	174.02	17.34	170.71	16.17	173.73	11.21
169.54	8.06	175.35	11.29	174.06	18.35	170.74	9.35	173.74	15.13
169.65	7.14	175.37	16.41	174.25	11.53	170.81	12.65	173.79	12.63
169.65	9.55	175.39	17.13	174.26	13.22	170.86	13.00	173.82	12.28
169.67	7.43	175.46	22.78	174.28	13.43	170.95	13.25	173.82	12.31
169.73	7.51	175.50	15.49	174.35	16.49	170.96	12.37	173.83	11.43
169.81	8.46	175.57	16.43	174.42	12.02	171.00	10.61	173.87	17.19
169.81	8.96	175.58	19.81	174.44	10.59	171.03	16.17	173.90	12.00
169.90	7.44	175.70	13.20	174.65	13.50	171.04	16.43	173.96	13.58
169.98	13.94	175.73	18.81	174.71	12.52	171.14	13.08	174.23	12.45
170.04	11.70	175.78	15.36	174.92	10.27	171.18	9.45	174.24	12.73
170.11	12.57	175.87	18.71	174.94	14.55	171.21	11.28	174.29	13.71
170.18	9.53	175.95	16.40	175.00	18.78	171.27	18.81	174.30	11.44
170.18	12.25	175.99	12.02	175.05	10.99	171.29	14.44	174.30	7.69
170.22	9.84	176.06	14.74	175.12	10.96	171.36	12.12	174.31	8.04
170.41	7.90	176.17	15.88	175.14	8.69	171.38	11.92	174.37	13.72
170.48	10.63	176.19	15.54	175.15	10.13	171.39	9.87	174.44	15.92
170.54	6.69	176.32	13.23	175.18	13.39	171.42	8.95	174.49	10.54
170.57	7.02	176.36	13.75	175.22	10.95	171.49	13.49	174.59	9.52
170.58	5.94	176.51	8.66	175.24	14.85	171.50	12.43	174.63	11.07
170.70	8.81	176.54	14.04	175.35	18.86	171.65	18.76	174.64	10.85
170.70	7.17	176.62	13.36	175.36	20.36	171.67	9.51	174.77	14.15
170.72	7.61	176.63	15.02	175.47	16.68	171.68	14.07	174.91	18.75
170.78	10.73	176.73	12.51	175.52	14.86	171.68	11.58	174.99	16.87
170.86	6.31	176.92	8.91	175.65	14.44	172.06	14.29	175.06	14.47
170.87	6.18	177.08	16.74	175.70	14.07	172.08	16.43	175.24	15.12
170.97	10.66	177.19	12.75	175.71	17.43	172.16	9.86	175.30	15.70
171.03	14.03	177.24	10.74	175.71	13.22	172.17	7.30	175.33	9.31
171.08	11.75	177.24	11.76	175.82	14.42	172.18	13.86	175.34	16.61
171.18	10.09	177.26	12.66	175.87	16.00	172.18	18.40	175.38	7.45
171.24	10.15	177.33	14.47	175.91	15.16	172.31	16.27	175.50	11.83
171.24	9.57	177.37	9.55	175.92	14.36	172.45	13.42	175.51	11.93
171.27	9.13	177.40	21.83	175.92	8.95	172.56	14.58	175.59	16.46
171.46	6.29	177.46	8.63	175.98	16.49	172.60	16.59	175.61	13.60
171.52	9.34	177.47	20.61	176.07	15.17	172.61	14.40	175.63	13.93
171.62	6.11	177.48	13.91	176.12	15.39	172.63	11.76	175.72	18.69

171.62	6.27	177.52	20.22	176.32	9.95	172.80	16.90	175.73	12.31
171.66	9.08	177.58	12.18	176.34	15.59	172.82	10.43	175.80	11.22
171.75	6.85	177.63	20.49	176.37	14.27	172.89	14.43	175.82	18.87
171.75	9.66	177.66	16.14	176.43	18.94	172.93	10.26	175.83	8.39
171.78	6.43	177.77	15.78	176.48	13.25	173.04	14.43	175.87	12.15
171.84	8.50	177.78	22.37	176.53	10.27	173.05	15.82	175.88	12.47
171.92	9.46	177.85	17.82	176.71	15.14	173.08	11.58	175.90	13.18
171.95	11.56	177.96	18.72	176.81	14.11	173.09	15.83	175.91	12.28
172.01	7.59	178.03	16.28	177.00	14.18	173.11	13.82	175.96	11.70
172.08	12.21	178.06	11.85	177.03	18.17	173.22	9.96	175.98	15.15
172.14	12.99	178.14	16.30	177.10	19.51	173.25	7.29	176.06	11.24
172.22	7.66	178.24	14.21	177.13	10.42	173.29	14.29	176.30	13.60
172.29	9.41	178.26	16.70	177.19	12.23	173.36	17.06	176.33	11.85
172.29	12.35	178.37	13.85	177.22	13.79	173.37	15.00	176.37	8.71
172.32	8.13	178.42	12.64	177.24	9.77	173.43	15.28	176.37	9.36
172.51	5.60	178.58	12.00	177.27	14.46	173.47	10.42	176.38	11.23
172.60	7.79	178.64	15.37	177.31	13.21	173.48	9.71	176.38	9.18
172.69	6.52	178.70	16.06	177.32	14.91	173.56	13.89	176.46	12.99
172.70	7.59	178.71	14.25	177.45	17.82	173.57	13.37	176.53	18.76
172.73	4.83	178.82	11.95	177.46	16.11	173.73	16.77	176.57	11.48
172.80	9.67	179.00	14.40	177.53	14.46	173.74	10.92	176.67	12.24
172.83	5.55	179.17	20.69	177.59	13.30	173.76	13.21	176.70	11.23
172.88	11.87	179.27	14.51	177.72	17.96	173.78	12.23	176.71	10.28
172.98	6.47	179.31	12.62	177.78	17.89	174.15	7.51	176.85	14.56
172.99	10.21	179.33	16.11	177.79	15.57	174.16	15.27	176.99	18.51
173.07	8.46	179.33	13.79	177.79	11.45	174.16	18.42	177.07	14.40
173.16	12.87	179.41	13.46	177.88	15.99	174.24	8.39	177.13	18.61
173.19	11.75	179.45	10.38	177.94	14.29	174.25	9.43	177.29	13.46
173.29	7.71	179.47	20.66	177.98	14.35	174.26	14.39	177.39	15.96
173.35	9.42	179.51	10.24	178.01	13.74	174.26	18.25	177.40	16.46
173.36	10.01	179.53	17.80	178.01	12.04	174.36	12.59	177.41	7.93
173.37	10.56	179.54	14.06	178.07	16.35	174.53	12.91	177.57	11.02
173.56	7.80	179.60	20.22	178.15	18.56	174.66	16.39	177.61	12.13
173.63	10.47	179.66	14.01	178.19	16.17	174.66	14.27	177.62	9.00
173.73	8.83	179.71	20.81	178.40	14.34	174.69	12.91	177.68	15.21
173.75	5.59	179.72	17.11	178.43	10.17	174.71	11.81	177.69	10.33
173.77	3.72	179.84	16.04	178.46	14.06	174.87	18.68	177.70	14.49
173.78	4.27	179.86	19.68	178.52	17.88	174.89	10.77	177.78	13.23
173.88	9.36	179.94	22.52	178.59	13.60	174.96	16.27	177.79	18.08
173.88	8.03	180.02	16.50	178.60	9.24	175.04	12.66	177.88	10.07
173.94	12.97	180.10	16.18	178.80	16.11	175.11	15.29	177.89	16.65
174.04	8.33	180.15	10.40	178.89	14.61	175.12	13.98	177.92	9.07

174.07	7.76	180.23	14.70	179.09	15.74	175.15	13.69	177.95	13.73
174.11	6.01	180.32	18.16	179.09	15.37	175.18	16.36	177.95	8.73
174.23	11.91	180.36	18.40	179.16	18.71	175.18	15.74	177.98	16.67
174.25	11.71	180.46	14.02	179.20	12.14	175.30	7.68	177.99	16.53
174.34	8.72	180.49	14.56	179.27	11.78	175.36	13.93	178.03	13.74
174.39	11.80	180.66	11.55	179.29	9.83	175.46	20.90	178.03	15.31
174.42	8.61	180.70	16.11	179.32	10.61	175.46	13.67	178.15	12.39
174.46	13.53	180.79	16.57	179.34	16.82	175.51	16.06	178.38	13.65
174.64	6.41	180.80	14.97	179.37	12.30	175.54	13.05	178.39	12.61
174.69	9.74	180.90	15.49	179.40	14.30	175.55	10.58	178.44	8.49
174.78	8.71	181.07	14.39	179.51	18.07	175.63	13.25	178.45	10.20
174.80	5.88	181.23	19.54	179.51	16.47	175.64	12.29	178.46	9.71
174.84	7.89	181.35	15.30	179.61	17.90	175.79	14.56	178.50	14.73
174.84	8.90	181.40	13.08	179.68	13.33	175.82	11.94	178.53	16.14
174.95	7.39	181.42	11.22	179.79	16.97	175.84	12.26	178.60	18.75
174.95	10.43	181.42	13.23	179.85	17.41	175.86	10.21	178.63	14.64
174.99	8.10	181.49	14.31	179.86	16.51	175.96	6.91	178.74	10.43
175.09	7.55	181.55	8.72	179.88	14.80	176.22	14.28	178.77	12.23
175.10	9.59	181.56	25.08	179.99	17.16	176.22	8.21	178.81	10.67
175.17	7.06	181.60	10.03	180.01	17.64	176.23	18.24	178.95	14.02
175.27	16.16	181.60	20.58	180.06	17.18	176.32	9.71	179.07	18.79
175.31	12.32	181.61	14.87	180.08	9.49	176.32	8.16	179.17	16.39
175.39	12.35	181.67	18.70	180.09	13.20	176.33	17.19	179.24	17.04
175.46	9.09	181.76	15.40	180.13	17.70	176.33	16.18	179.37	14.46
175.48	14.80	181.81	20.78	180.24	17.01	176.44	12.82	179.47	13.52
175.49	11.66	181.83	21.45	180.29	15.65	176.62	15.86	179.49	15.98
175.71	7.53	181.92	17.29	180.47	16.52	176.72	17.97	179.50	11.65
175.74	9.73	181.94	21.41	180.48	11.06	176.74	18.33	179.65	9.74
175.84	7.82	182.00	20.07	180.52	13.61	176.75	16.21	179.67	10.67
175.87	6.00	182.11	18.64	180.58	20.53	176.77	11.11	179.71	8.64
175.87	8.81	182.17	16.38	180.65	14.50	176.94	17.42	179.74	16.51
175.88	6.65	182.22	11.48	180.67	10.12	176.97	11.20	179.77	14.55
176.00	11.88	182.28	17.27	180.86	16.07	177.03	15.00	179.80	13.42
176.03	11.63	182.41	19.85	180.95	14.30	177.11	12.63	179.86	17.21
176.04	10.44	182.42	15.01	181.15	14.46	177.20	13.40	179.89	17.37
176.14	7.88	182.56	16.87	181.19	20.23	177.20	15.40	179.96	12.86
176.15	7.35	182.57	14.00	181.26	19.38	177.24	14.45	180.00	18.99
176.22	9.39	182.74	9.70	181.27	12.86	177.25	17.16	180.01	11.93
176.33	13.34	182.79	16.35	181.35	14.45	177.26	15.83	180.04	12.59
176.36	12.09	182.87	14.69	181.37	12.39	177.40	12.74	180.04	9.97
176.44	10.08	182.87	22.16	181.37	12.16	177.43	14.49	180.06	14.34
176.51	10.08	182.97	14.75	181.41	13.20	177.52	17.96	180.06	15.30

176.54	11.74	183.14	10.44	181.46	12.85	177.55	12.24	180.10	14.03
176.58	10.39	183.31	20.62	181.48	15.94	177.58	15.74	180.12	16.13
176.74	9.52	183.43	16.19	181.58	18.23	177.61	10.98	180.24	13.69
176.81	8.66	183.47	15.28	181.59	19.99	177.65	9.18	180.46	14.22
176.89	6.38	183.49	16.45	181.69	19.03	177.71	12.33	180.46	14.53
176.93	7.04	183.52	15.97	181.74	15.13	177.72	12.42	180.53	10.45
176.94	9.20	183.59	18.61	181.88	21.21	177.88	12.07	180.56	9.59
176.96	8.94	183.63	22.96	181.93	20.18	177.89	10.92	180.57	7.93
177.05	9.95	183.63	9.43	181.93	14.64	177.93	14.64	180.57	9.22
177.08	8.77	183.68	20.17	181.96	12.81	177.94	12.12	180.61	14.08
177.10	12.25	183.68	13.08	182.04	16.33	178.29	18.40	180.67	18.42
177.19	8.25	183.72	16.54	182.11	20.37	178.30	9.46	180.71	14.56
177.24	11.80	183.75	20.07	182.13	17.99	178.32	19.90	180.81	11.93
177.31	11.58	183.85	15.75	182.15	11.97	178.39	8.44	180.86	11.54
177.39	13.09	183.86	20.16	182.19	14.58	178.40	12.13	180.87	11.97
177.42	13.36	183.91	18.67	182.21	16.70	178.40	14.09	181.03	14.51
177.49	9.09	183.99	16.40	182.30	18.66	178.41	20.57	181.17	18.53
177.57	13.35	184.01	22.46	182.36	16.67	178.53	13.71	181.25	16.10
177.60	8.59	184.08	22.86	182.57	16.26	178.70	15.74	181.29	18.74
177.63	9.93	184.17	18.73	182.57	16.11	178.81	19.39	181.46	12.02
177.79	6.00	184.28	16.96	182.59	14.49	178.82	18.20	181.54	18.32
177.86	7.55	184.32	11.88	182.66	21.13	178.83	15.85	181.55	17.22
177.94	9.65	184.38	17.15	182.72	14.38	178.87	13.78	181.57	10.22
177.99	7.86	184.47	19.64	182.75	9.47	179.00	9.70	181.74	14.35
178.00	6.15	184.49	17.80	182.95	14.04	179.02	18.76	181.75	12.48
178.00	6.35	184.61	16.35	183.03	14.55	179.05	10.78	181.77	11.27
178.13	10.50	184.66	17.94	183.26	17.80	179.11	18.61	181.82	16.83
178.13	8.46	184.81	13.84	183.28	23.13	179.17	14.50	181.85	10.28
178.15	7.64	184.85	18.29	183.32	23.58	179.26	13.96	181.85	15.86
178.25	8.33	184.94	22.51	183.36	12.92	179.29	16.60	181.94	15.52
178.27	9.87	184.95	12.85	183.44	12.79	179.31	13.56	181.96	17.62
178.36	8.90	185.06	13.19	183.45	12.30	179.33	17.45	182.04	15.84
178.45	14.10	185.21	13.70	183.45	16.98	179.35	17.27	182.07	18.08
178.47	13.44	185.41	22.93	183.49	16.87	179.47	10.81	182.08	10.93
178.56	11.13	185.51	14.26	183.54	16.65	179.52	13.81	182.11	16.87
178.63	13.61	185.56	14.60	183.55	14.59	179.60	22.16	182.12	12.19
178.65	13.05	185.57	14.79	183.66	18.35	179.61	13.72	182.13	15.86
178.68	13.87	185.59	15.37	183.68	22.05	179.66	14.58	182.13	14.21
178.85	6.24	185.64	16.94	183.77	18.00	179.69	12.52	182.19	17.40
178.92	7.23	185.71	25.06	183.82	15.34	179.74	13.33	182.20	15.27
179.00	9.41	185.73	13.61	183.94	20.71	179.79	11.69	182.29	12.39
179.05	8.52	185.75	10.85	184.01	16.60	179.80	16.67	182.54	14.44

179.05	7.49	185.76	20.40	184.03	17.89	179.95	16.69	182.55	16.39
179.07	10.50	185.78	15.35	184.06	13.98	179.97	14.22	182.62	12.48
179.18	6.85	185.85	20.85	184.15	16.66	179.99	11.53	182.64	9.64
179.19	9.48	185.91	14.47	184.17	18.34	180.01	16.62	182.64	12.21
179.20	10.07	185.94	24.03	184.22	18.62	180.37	14.51	182.69	17.27
179.32	7.54	185.96	21.82	184.23	11.30	180.37	10.94	182.76	14.57
179.35	7.59	186.08	17.56	184.24	18.60	180.39	19.03	182.79	14.47
179.40	6.39	186.08	22.22	184.28	17.64	180.47	10.31	182.90	15.18
179.50	16.09	186.17	21.57	184.38	20.08	180.48	18.34	182.93	12.79
179.52	13.08	186.27	18.82	184.43	17.51	180.50	18.24	182.97	14.41
179.64	10.57	186.35	17.62	184.64	13.10	180.51	9.58	183.01	10.63
179.69	12.10	186.39	16.76	184.65	17.34	180.63	14.27	183.09	15.87
179.71	9.63	186.46	20.28	184.67	13.97	180.78	16.15	183.23	22.12
179.72	9.94	186.54	16.22	184.77	20.91	180.88	18.62	183.34	16.73
179.90	6.77	186.60	21.16	184.79	15.92	180.89	18.12	183.36	18.98
179.98	10.92	186.70	18.57	184.83	12.26	180.90	16.71	183.52	12.57
180.08	8.46	186.73	18.54	185.02	18.59	180.93	12.82	183.62	18.19
180.09	6.90	186.89	14.20	185.13	17.95	181.10	19.22	183.65	14.13
180.10	6.16	186.94	18.80	185.33	14.54	181.14	13.31	183.66	13.97
180.11	8.75	187.01	20.65	185.33	20.63	181.19	18.37	183.80	12.25
180.22	11.01	187.05	19.29	185.39	20.71	181.25	14.38	183.82	14.37
180.23	7.30	187.13	14.56	185.46	16.44	181.35	14.14	183.88	9.37
180.25	11.83	187.30	17.20	185.51	14.52	181.36	16.01	183.90	18.30
180.36	9.46	187.47	22.97	185.52	13.05	181.39	17.31	183.93	16.44
180.41	7.96	187.59	16.47	185.54	18.73	181.40	18.17	183.95	13.08
180.46	7.88	187.64	16.12	185.57	16.42	181.41	18.23	184.03	18.54
180.56	13.97	187.64	14.35	185.62	15.99	181.54	12.44	184.04	16.98
180.57	11.78	187.65	16.70	185.62	17.45	181.60	16.22	184.13	18.14
180.67	8.17	187.72	18.65	185.74	20.39	181.67	18.80	184.13	19.08
180.75	13.36	187.77	12.39	185.76	18.87	181.72	17.62	184.15	13.32
180.75	11.65	187.78	24.66	185.85	17.82	181.73	15.18	184.20	18.62
180.78	10.48	187.84	12.80	185.91	15.58	181.77	10.12	184.21	18.48
180.99	8.67	187.85	16.39	186.02	18.70	181.81	11.63	184.22	9.70
181.03	8.49	187.85	23.40	186.09	20.56	181.88	9.77	184.22	13.98
181.11	9.30	187.91	20.42	186.11	21.49	181.88	17.11	184.26	17.58
181.15	9.68	187.98	15.49	186.13	18.09	181.90	9.22	184.26	15.39
181.16	6.35	188.01	25.23	186.23	16.58	182.04	14.11	184.39	14.55
181.16	9.38	188.04	23.15	186.25	17.20	182.07	14.90	184.62	14.58
181.29	7.39	188.14	21.10	186.29	18.66	182.08	13.44	184.62	16.62
181.31	13.91	188.16	26.04	186.32	12.88	182.10	13.67	184.70	16.70
181.31	10.10	188.24	22.65	186.33	16.78	182.45	18.24	184.72	12.20
181.41	10.57	188.33	19.42	186.36	16.15	182.45	14.39	184.76	16.50

181.45	8.26	188.42	16.96	186.45	18.63	182.49	19.01	184.86	20.06
181.54	10.08	188.46	13.54	186.50	18.55	182.56	18.17	184.88	14.12
181.60	16.14	188.53	19.30	186.72	14.24	182.56	17.67	184.98	14.57
181.66	12.56	188.65	20.89	186.73	16.26	182.56	9.62	185.00	12.40
181.72	9.62	188.68	22.97	186.75	13.66	182.58	11.85	185.04	13.98
181.80	12.80	188.77	17.10	186.85	23.11	182.70	13.58	185.10	12.57
181.81	10.44	188.81	17.55	186.87	16.09	182.85	16.21	185.16	15.24
181.85	10.52	188.97	13.87	186.90	12.35	182.95	20.02	185.33	20.13
182.02	8.58	189.03	20.62	187.12	20.24	182.98	18.39	185.41	19.26
182.08	10.77	189.09	20.50	187.19	16.65	182.98	18.34	185.45	19.87
182.17	7.59	189.11	18.87	187.40	18.20	183.01	15.11	185.59	14.44
182.21	6.98	189.23	18.62	187.42	22.11	183.17	18.54	185.69	18.77
182.22	9.40	189.40	15.80	187.47	24.97	183.20	13.48	185.71	14.64
182.23	10.79	189.55	23.92	187.51	16.07	183.26	15.79	185.73	12.09
182.35	10.30	189.65	16.54	187.58	14.37	183.32	13.24	185.89	13.45
182.36	11.19	189.73	17.14	187.59	12.32	183.42	12.23	185.89	17.68
182.37	10.85	189.73	16.32	187.63	14.29	183.43	15.84	185.97	13.65
182.49	10.88	189.74	18.58	187.67	17.36	183.46	15.82	185.98	18.80
182.52	11.79	189.81	22.96	187.70	16.36	183.48	18.00	186.00	16.50
182.59	10.36	189.86	27.56	187.70	13.68	183.50	18.29	186.01	14.11
182.65	11.97	189.87	14.56	187.81	19.81	183.62	11.88	186.10	18.05
182.69	12.51	189.90	17.15	187.84	18.75	183.67	14.81	186.10	18.63
182.78	11.80	189.92	15.91	187.95	20.91	183.75	22.44	186.20	20.80
182.86	11.61	189.93	23.51	187.99	16.08	183.79	16.51	186.21	15.15
182.86	14.76	189.98	21.05	188.09	18.57	183.81	16.60	186.23	12.19
182.89	13.90	190.05	15.63	188.18	20.47	183.84	12.63	186.27	16.81
183.07	8.54	190.10	24.24	188.19	17.84	183.91	12.90	186.30	10.36
183.14	11.97	190.11	22.22	188.21	14.49	183.95	15.98	186.31	18.60
183.24	10.13	190.24	20.47	188.29	19.66	183.96	13.60	186.32	17.93
183.26	10.51	190.25	25.10	188.32	18.38	184.05	8.95	186.34	16.30
183.27	8.45	190.34	23.57	188.38	18.63	184.10	15.25	186.34	18.22
183.27	10.43	190.41	23.00	188.39	13.84	184.14	13.89	186.47	8.35
183.40	9.58	190.49	18.17	188.41	18.76	184.14	12.17	186.48	16.54
183.41	11.80	190.55	17.71	188.44	16.26	184.17	16.20	186.69	16.32
183.43	13.68	190.61	20.89	188.55	22.68	184.54	12.86	186.69	18.03
183.54	10.78	190.74	21.51	188.60	17.97	184.54	16.62	186.78	14.16
183.59	12.90	190.74	22.97	188.81	19.42	184.56	20.72	186.81	10.09
183.64	8.23	190.84	18.10	188.82	16.30	184.63	17.76	186.84	18.70
183.73	16.18	190.88	20.05	188.82	14.26	184.63	12.81	186.94	17.62
183.76	16.99	191.05	13.54	188.90	23.44	184.65	18.70	186.95	16.24
183.84	12.48	191.09	18.69	188.97	16.70	184.67	9.75	187.05	16.40
183.91	9.99	191.18	23.19	188.97	10.23	184.80	15.72	187.11	13.88

183.93	12.51	191.19	17.18	189.20	17.15	184.94	19.15	187.11	15.37
183.97	16.65	191.29	17.68	189.27	19.48	185.03	20.88	187.16	10.59
184.16	8.07	191.45	16.35	189.49	22.61	185.04	18.57	187.24	17.20
184.19	10.72	191.64	22.96	189.50	20.72	185.05	17.73	187.41	20.84
184.28	8.67	191.73	13.84	189.54	22.97	185.08	16.45	187.49	18.46
184.33	8.48	191.80	20.82	189.63	18.36	185.26	21.74	187.55	18.95
184.35	12.93	191.81	15.82	189.65	16.12	185.28	14.71	187.67	12.51
184.36	9.56	191.82	20.58	189.69	14.28	185.33	18.69	187.77	19.32
184.45	9.02	191.88	20.47	189.69	18.04	185.39	14.39	187.80	16.15
184.49	12.76	191.94	14.56	189.75	18.69	185.52	16.54	187.80	8.99
184.49	11.58	191.96	26.80	189.76	19.28	185.52	19.32	187.95	11.28
184.60	9.31	191.98	13.58	189.80	18.03	185.55	17.80	187.98	16.34
184.62	10.15	192.00	23.39	189.89	19.87	185.56	20.38	188.03	14.17
184.69	10.77	192.02	20.82	189.93	19.96	185.56	18.69	188.07	21.80
184.78	13.21	192.06	22.79	190.04	20.89	185.71	11.87	188.07	16.59
184.81	13.32	192.13	13.73	190.05	14.01	185.76	17.85	188.10	14.36
184.90	10.38	192.17	27.10	190.20	23.43	185.81	20.10	188.17	19.06
184.96	9.40	192.20	22.55	190.25	20.82	185.87	17.24	188.21	22.32
184.97	12.50	192.32	26.33	190.27	20.78	185.90	16.68	188.27	18.23
185.00	12.63	192.32	19.34	190.30	14.17	185.91	11.99	188.28	18.79
185.19	8.48	192.40	24.33	190.38	19.31	185.97	11.83	188.33	15.70
185.27	15.94	192.48	22.82	190.42	22.84	186.02	15.63	188.37	16.48
185.33	8.25	192.56	22.12	190.45	19.86	186.03	15.47	188.37	10.40
185.38	9.11	192.64	15.97	190.46	14.49	186.12	12.94	188.37	19.65
185.39	8.39	192.69	24.94	190.48	18.74	186.18	16.73	188.41	16.66
185.40	10.50	192.81	22.87	190.54	21.33	186.21	15.14	188.41	19.29
185.51	10.39	192.83	25.05	190.61	20.14	186.24	14.63	188.45	20.82
185.53	11.79	192.92	20.71	190.66	18.54	186.24	16.32	188.53	14.58
185.53	10.86	192.96	20.32	190.89	15.41	186.63	16.70	188.55	8.61
185.65	11.08	193.12	17.50	190.90	16.12	186.64	24.99	188.76	18.63
185.71	10.54	193.18	20.26	190.91	17.36	186.64	15.03	188.77	16.13
185.76	9.69	193.25	26.85	190.98	24.86	186.71	12.98	188.84	13.79
185.83	16.71	193.26	16.57	191.04	16.59	186.73	19.81	188.88	12.80
185.86	14.70	193.39	18.67	191.07	12.77	186.73	16.39	188.93	16.53
185.95	12.31	193.53	17.87	191.28	17.80	186.76	10.14	189.00	16.67
186.02	15.70	193.71	26.84	191.34	20.77	186.88	13.84	189.02	18.56
186.03	13.79	193.81	17.45	191.56	18.87	187.01	18.69	189.13	16.06
186.05	12.29	193.88	20.59	191.57	22.70	187.10	19.52	189.16	16.68
186.26	11.50	193.88	18.98	191.64	21.31	187.12	22.05	189.19	16.60
186.31	11.82	193.88	18.80	191.68	18.36	187.14	19.39	189.25	11.87
186.40	11.93	193.96	22.98	191.73	15.17	187.18	15.00	189.34	18.73
186.44	9.52	194.01	15.61	191.77	18.27	187.35	21.66	189.48	24.95

186.45	12.16	194.05	27.17	191.78	12.43	187.38	14.85	189.56	18.85
186.45	12.09	194.07	16.02	191.82	17.48	187.42	18.56	189.63	22.82
186.57	10.23	194.09	20.68	191.85	19.98	187.47	14.58	189.74	11.94
186.58	13.96	194.10	26.66	191.86	16.00	187.58	15.23	189.85	20.87
186.60	13.70	194.14	26.78	191.96	21.99	187.59	18.77	189.86	14.20
186.71	11.59	194.23	17.76	192.02	19.96	187.62	19.48	189.88	12.97
186.74	8.62	194.25	26.90	192.09	18.84	187.63	20.05	190.04	14.69
186.84	12.53	194.27	23.04	192.14	18.71	187.66	18.06	190.04	16.58
186.90	15.02	194.38	22.20	192.27	19.77	187.77	11.77	190.10	13.96
186.91	14.97	194.41	27.16	192.32	21.69	187.82	17.87	190.15	20.99
187.00	9.72	194.50	30.79	192.34	23.29	187.89	22.78	190.16	12.80
187.07	13.23	194.56	22.48	192.36	18.38	187.93	16.50	190.18	19.42
187.08	14.42	194.65	20.53	192.45	20.64	187.96	18.30	190.25	20.11
187.11	13.82	194.73	17.47	192.52	19.93	187.99	10.05	190.28	23.95
187.32	8.52	194.76	23.33	192.52	18.58	188.06	16.43	190.35	20.13
187.36	12.61	194.88	21.83	192.54	14.50	188.12	17.99	190.36	17.73
187.45	11.87	194.89	24.12	192.58	17.89	188.13	14.27	190.39	15.60
187.52	9.65	195.01	19.30	192.60	18.09	188.19	9.02	190.44	12.16
187.53	12.36	195.06	22.71	192.69	21.52	188.26	15.83	190.45	20.13
187.53	11.53	195.20	16.76	192.74	22.32	188.28	16.55	190.45	20.87
187.62	10.71	195.27	23.29	192.96	16.40	188.31	12.12	190.46	20.01
187.64	13.88	195.32	26.91	192.98	20.48	188.33	17.66	190.49	23.37
187.64	12.07	195.37	23.00	192.98	13.87	188.68	16.64	190.52	18.65
187.76	10.36	195.45	19.78	193.06	24.72	188.69	13.61	190.61	16.50
187.82	11.21	195.61	17.98	193.11	18.85	188.70	19.91	190.63	13.47
187.87	11.49	195.80	24.80	193.15	15.34	188.78	14.63	190.84	18.70
187.94	15.17	195.88	17.06	193.35	17.98	188.79	20.70	190.84	18.67
187.96	15.48	195.95	18.71	193.41	20.67	188.79	20.76	190.92	12.31
188.05	11.28	195.98	20.74	193.64	19.12	188.82	13.61	190.98	11.90
188.14	15.96	195.99	20.41	193.65	22.06	188.95	16.11	190.99	20.51
188.16	13.61	196.03	23.26	193.71	21.18	189.10	20.21	191.08	18.48
188.16	14.62	196.08	18.97	193.77	19.72	189.18	20.63	191.10	17.48
188.38	11.78	196.11	27.93	193.80	16.33	189.19	21.98	191.21	14.06
188.42	13.03	196.17	19.21	193.84	16.49	189.22	21.00	191.25	15.87
188.50	10.66	196.17	28.11	193.85	13.96	189.25	16.18	191.26	14.48
188.56	10.28	196.18	20.55	193.92	16.33	189.41	22.73	191.32	11.92
188.58	9.78	196.21	22.62	193.92	20.44	189.44	14.14	191.40	17.40
188.59	10.37	196.29	18.13	193.94	17.85	189.48	18.66	191.54	22.93
188.67	9.59	196.32	25.04	194.04	21.67	189.55	18.41	191.63	20.75
188.69	15.09	196.37	23.14	194.07	19.94	189.66	18.59	191.71	22.41
188.70	17.09	196.46	20.38	194.18	22.96	189.69	15.33	191.83	13.15
188.84	15.35	196.47	28.29	194.23	16.02	189.70	19.35	191.94	18.74

188.88	10.22	196.55	28.90	194.34	20.87	189.71	21.93	191.94	14.00
188.92	9.33	196.63	21.76	194.41	19.25	189.72	22.89	191.95	13.58
188.99	15.27	196.73	20.16	194.41	22.80	189.87	11.76	192.12	15.21
189.04	16.06	196.78	17.93	194.43	17.57	189.92	16.42	192.15	18.86
189.11	10.41	196.83	23.97	194.53	18.15	189.99	26.10	192.19	15.30
189.18	13.79	196.96	25.48	194.58	23.28	190.02	19.80	192.24	21.78
189.20	12.73	196.96	24.32	194.60	21.16	190.06	14.75	192.24	14.05
189.22	14.89	197.09	20.67	194.63	15.53	190.07	16.44	192.27	19.57
189.42	11.05	197.12	21.79	194.65	18.51	190.14	18.16	192.35	21.69
189.47	13.96	197.29	20.40	194.70	18.81	190.18	18.60	192.35	21.24
189.55	9.69	197.34	21.61	194.77	21.24	190.19	12.09	192.45	17.85
189.62	8.58	197.39	25.84	194.81	19.84	190.28	9.53	192.46	25.15
189.63	9.58	197.43	20.83	195.03	16.68	190.34	15.47	192.46	16.30
189.63	10.91	197.54	20.88	195.05	17.05	190.37	17.37	192.52	19.95
189.72	10.89	197.68	19.64	195.06	19.96	190.38	13.21	192.53	18.82
189.74	14.00	197.87	26.48	195.13	24.69	190.40	17.87	192.53	12.03
189.75	15.01	197.96	16.80	195.19	18.41	190.76	18.32	192.55	19.05
189.87	13.82	198.04	18.69	195.24	15.59	190.78	13.34	192.56	22.37
189.92	14.04	198.06	19.84	195.42	19.29	190.81	22.81	192.58	20.07
189.97	11.65	198.07	22.72	195.49	22.53	190.88	14.01	192.68	18.73
190.07	20.48	198.11	22.79	195.72	20.65	190.89	18.80	192.69	12.67
190.10	16.42	198.16	20.22	195.75	24.86	190.90	10.12	192.91	19.91
190.16	14.01	198.19	33.34	195.80	27.20	190.91	21.10	192.92	16.47
190.23	16.88	198.22	18.31	195.84	17.11	191.02	15.76	193.02	13.91
190.28	13.35	198.23	28.41	195.91	17.37	191.17	20.48	193.05	12.34
190.28	18.28	198.25	20.33	195.91	16.80	191.26	20.88	193.08	18.78
190.47	9.45	198.31	26.79	195.92	17.79	191.28	22.85	193.16	16.19
190.53	11.78	198.36	17.31	195.97	19.81	191.31	22.84	193.19	18.80
190.64	10.75	198.40	29.05	196.01	21.68	191.32	17.33	193.29	18.17
190.67	11.88	198.44	27.12	196.04	16.56	191.51	23.53	193.32	16.43
190.68	9.63	198.53	23.99	196.13	21.95	191.54	16.21	193.35	18.33
190.69	14.22	198.55	31.25	196.14	20.60	191.56	20.63	193.39	12.04
190.79	13.22	198.64	28.65	196.28	25.89	191.64	21.26	193.48	19.33
190.80	14.21	198.72	22.89	196.31	21.86	191.75	21.42	193.63	24.88
190.80	12.81	198.81	24.92	196.42	20.66	191.77	15.66	193.70	20.30
190.93	11.43	198.86	20.79	196.50	22.63	191.78	23.20	193.77	20.33
190.99	13.85	198.92	27.09	196.51	17.01	191.79	20.16	193.90	14.17
191.04	10.58	199.03	22.62	196.52	25.13	191.80	20.39	194.00	20.30
191.10	16.18	199.04	25.97	196.62	22.07	191.96	14.19	194.02	14.17
191.15	16.69	199.16	20.30	196.67	21.52	191.98	18.01	194.04	13.26
191.24	15.74	199.21	23.20	196.67	21.36	192.05	24.91	194.19	15.04
191.30	16.07	199.35	21.37	196.71	19.29	192.09	18.65	194.22	16.27

191.31	12.93	199.43	22.53	196.72	15.86	192.13	16.64	194.26	15.83
191.35	14.85	199.47	27.34	196.76	19.79	192.15	15.40	194.31	21.73
191.53	10.55	199.52	24.51	196.86	20.03	192.20	17.38	194.34	14.46
191.60	14.92	199.62	21.94	196.88	20.48	192.26	14.13	194.35	18.74
191.67	13.24	199.76	22.79	197.11	17.60	192.27	20.85	194.41	22.49
191.73	10.47	199.95	26.97	197.13	15.67	192.35	11.29	194.42	25.10
191.74	10.91	200.05	19.64	197.15	19.74	192.42	13.94	194.53	26.21
191.76	9.47	200.12	21.01	197.22	24.94	192.44	18.29	194.54	17.48
191.84	10.18	200.13	24.29	197.26	18.78	192.47	18.18	194.54	18.35
191.86	15.39	200.14	18.36	197.31	16.60	192.47	18.23	194.59	14.59
191.87	17.09	200.18	24.68	197.49	20.84	192.83	17.93	194.59	20.62
192.00	11.56	200.24	20.72	197.56	23.10	192.87	22.10	194.60	23.61
192.05	11.90	200.25	31.18	197.80	18.93	192.89	11.98	194.64	21.22
192.10	14.66	200.29	19.61	197.80	24.26	192.95	20.27	194.65	20.92
192.17	19.50	200.31	28.07	197.88	25.03	192.96	18.29	194.66	23.56
192.21	17.11	200.32	21.15	197.92	20.78	192.96	21.96	194.78	18.47
192.29	11.78	200.39	24.99	197.96	18.48	192.97	11.51	194.78	11.76
192.35	18.70	200.45	20.42	198.01	19.84	193.09	17.17	195.01	20.22
192.36	13.49	200.48	27.04	198.01	18.80	193.24	19.26	195.02	19.38
192.38	17.36	200.52	23.87	198.06	17.44	193.35	23.51	195.11	18.08
192.58	10.71	200.62	23.88	198.08	21.61	193.36	22.40	195.14	20.61
192.65	12.77	200.62	29.29	198.09	18.91	193.38	22.90	195.15	13.57
192.72	11.58	200.70	31.83	198.20	22.51	193.40	17.68	195.24	16.61
192.79	13.49	200.78	25.08	198.22	20.90	193.56	22.77	195.25	18.75
192.80	13.55	200.88	22.87	198.36	27.72	193.60	19.61	195.36	16.67
192.81	13.83	200.93	20.47	198.37	21.68	193.65	19.88	195.40	15.92
192.90	12.71	200.99	25.32	198.50	20.92	193.73	20.59	195.43	20.65
192.91	13.33	201.11	26.39	198.58	25.60	193.82	20.75	195.48	13.95
192.92	17.95	201.13	29.00	198.59	18.13	193.83	16.25	195.57	19.98
193.05	14.31	201.23	19.85	198.60	21.89	193.85	20.47	195.71	24.88
193.12	12.92	201.27	24.91	198.69	20.79	193.86	24.52	195.80	23.02
193.15	14.16	201.43	21.85	198.74	22.18	193.87	23.31	195.84	22.02
193.21	14.88	201.49	22.21	198.75	20.67	194.01	12.61	196.01	14.01
193.26	17.02	201.55	27.95	198.78	18.43	194.08	18.19	196.08	21.53
193.33	15.07	201.58	23.25	198.79	20.78	194.13	26.10	196.10	16.97
193.42	16.86	201.70	23.58	198.85	18.81	194.16	19.82	196.11	14.03
193.43	16.01	201.83	22.07	198.94	24.15	194.22	12.20	196.26	15.58
193.46	18.14	202.03	27.87	198.96	21.16	194.23	20.80	196.32	21.17
193.64	13.87	202.14	23.95	199.20	19.00	194.28	18.09	196.35	18.16
193.71	12.89	202.20	20.84	199.22	20.99	194.37	20.87	196.40	20.88
193.78	10.37	202.21	24.74	199.23	16.50	194.37	18.29	196.42	16.05
193.84	13.39	202.21	22.78	199.30	27.66	194.43	7.93	196.44	20.80

193.84	13.48	202.29	29.20	199.34	20.23	194.50	17.98	196.50	23.92
193.85	12.46	202.32	20.08	199.38	16.60	194.52	17.51	196.51	23.89
193.95	13.30	202.33	34.98	199.57	22.41	194.54	16.34	196.59	24.54
193.96	15.09	202.40	18.69	199.65	24.82	194.58	18.69	196.63	17.17
193.97	17.08	202.41	30.78	199.88	23.02	194.92	18.25	196.63	20.00
194.11	14.96	202.43	24.17	199.88	22.45	194.94	13.96	196.67	21.62
194.15	11.82	202.45	26.60	199.95	23.30	194.95	23.27	196.67	13.66
194.22	11.48	202.52	20.23	199.99	22.94	195.03	20.01	196.67	20.52
194.28	16.01	202.56	30.99	200.05	18.61	195.03	18.38	196.71	21.52
194.31	16.55	202.61	28.95	200.07	20.32	195.04	22.90	196.72	24.68
194.38	13.50	202.68	26.79	200.08	20.85	195.05	15.21	196.75	22.92
194.47	20.04	202.72	31.25	200.15	22.19	195.19	15.94	196.86	11.70
194.48	13.58	202.81	30.24	200.15	18.44	195.32	19.13	196.86	20.15
194.51	15.83	202.87	24.58	200.17	18.54	195.41	18.75	197.09	18.69
194.69	14.14	202.95	23.73	200.27	23.64	195.42	22.80	197.09	20.17
194.77	16.78	203.02	20.29	200.30	20.45	195.47	18.03	197.19	14.31
194.83	12.53	203.09	29.06	200.41	24.89	195.48	23.62	197.20	14.43
194.89	10.55	203.19	27.13	200.44	19.44	195.67	26.15	197.22	24.94
194.91	11.77	203.19	28.97	200.57	19.82	195.68	18.97	197.31	15.19
194.92	12.15	203.33	21.14	200.66	19.09	195.71	20.76	197.33	18.82
195.01	12.46	203.35	24.93	200.67	27.20	195.79	19.37	197.43	17.90
195.03	17.89	203.51	22.09	200.67	24.46	195.90	20.82	197.48	20.15
195.03	15.49	203.56	22.15	200.76	19.79	195.92	16.69	197.50	20.21
195.17	13.97	203.63	28.81	200.80	22.63	195.93	24.92	197.56	13.84
195.24	11.61	203.67	25.83	200.84	23.06	195.94	24.36	197.63	19.39
195.28	14.53	203.76	24.30	200.85	18.72	195.97	21.19	197.78	27.47
195.36	21.53	203.91	24.56	200.86	22.25	196.09	14.47	197.86	22.11
195.38	17.05	204.10	29.19	200.92	18.69	196.14	20.68	197.92	26.28
195.44	12.69	204.21	22.94	201.00	23.20	196.21	26.55	198.08	16.47
195.52	16.71	204.28	25.80	201.03	22.92	196.23	20.83	198.16	14.32
195.53	14.03	204.29	20.00	201.28	20.85	196.31	12.58	198.17	26.53
195.57	17.92	204.30	22.61	201.29	20.88	196.32	18.75	198.20	15.87
195.76	11.77	204.38	27.81	201.30	18.40	196.35	18.23	198.34	16.17
195.83	16.32	204.39	23.85	201.38	27.03	196.43	15.01	198.40	22.51
195.90	14.49	204.40	32.86	201.43	20.81	196.44	22.86	198.44	17.22
195.96	10.44	204.47	20.40	201.46	18.76	196.52	13.02	198.46	24.08
195.97	13.63	204.47	30.78	201.64	21.00	196.58	16.77	198.48	16.89
195.98	14.59	204.51	24.85	201.73	24.78	196.59	20.65	198.50	18.90
196.06	12.21	204.56	26.86	201.94	22.52	196.62	16.12	198.57	24.52
196.08	16.15	204.59	22.33	201.97	27.13	196.64	20.84	198.60	24.19
196.10	15.70	204.63	30.39	202.02	27.16	197.01	17.03	198.67	25.04
196.21	14.78	204.66	28.90	202.09	25.71	197.02	21.78	198.69	20.34

196.27	14.62	204.78	26.26	202.12	20.48	197.03	15.92	198.71	20.13
196.32	12.37	204.78	32.08	202.15	20.31	197.11	19.02	198.74	14.69
196.39	20.35	204.89	31.04	202.15	24.78	197.11	20.26	198.74	21.59
196.45	22.23	204.97	24.51	202.21	22.78	197.12	22.74	198.74	20.56
196.51	15.14	205.03	26.69	202.25	22.92	197.14	10.65	198.78	20.88
196.58	16.75	205.11	24.03	202.27	19.14	197.28	16.80	198.82	24.29
196.58	12.83	205.17	28.07	202.35	21.68	197.39	20.78	198.82	27.54
196.61	15.82	205.27	28.47	202.39	26.26	197.49	22.51	198.95	20.66
196.82	12.58	205.27	28.93	202.51	29.22	197.51	26.38	198.95	16.05
196.88	14.94	205.39	22.38	202.53	21.99	197.54	24.12	199.16	20.40
196.94	10.83	205.45	30.10	202.65	22.72	197.57	19.70	199.17	18.80
197.01	12.71	205.60	23.17	202.73	23.99	197.75	29.19	199.29	18.25
197.02	13.06	205.67	23.44	202.74	18.25	197.76	20.01	199.29	22.75
197.03	13.13	205.70	29.85	202.75	27.88	197.80	20.41	199.30	19.69
197.11	15.05	205.74	27.21	202.84	22.94	197.89	20.84	199.40	17.64
197.13	16.14	205.83	25.86	202.89	21.70	197.97	23.36	199.41	16.57
197.16	18.66	205.99	24.33	202.93	19.75	197.98	16.37	199.51	18.47
197.29	12.69	206.18	29.12	202.94	20.69	198.03	22.88	199.55	18.75
197.35	16.11	206.27	23.88	202.94	23.12	198.04	23.02	199.57	20.23
197.40	15.73	206.36	26.85	203.02	22.56	198.04	24.55	199.63	13.02
197.44	21.40	206.36	22.84	203.08	24.11	198.17	14.41	199.70	21.33
197.48	18.54	206.37	22.95	203.11	24.17	198.21	20.07	199.86	25.51
197.55	15.17	206.46	29.16	203.36	22.94	198.29	28.97	199.94	20.90
197.63	19.94	206.49	22.45	203.37	19.68	198.31	22.27	199.99	24.43
197.66	17.08	206.51	33.14	203.39	20.95	198.37	18.56	200.15	15.83
197.68	16.05	206.54	23.93	203.44	24.56	198.39	18.02	200.24	24.82
197.89	12.60	206.55	30.68	203.50	21.69	198.44	21.50	200.25	15.61
197.94	14.94	206.56	24.10	203.53	17.45	198.51	14.41	200.30	14.55
198.02	12.49	206.63	27.10	203.74	22.81	198.53	22.00	200.42	20.29
198.07	11.58	206.68	25.33	203.81	24.75	198.60	13.00	200.45	22.79
198.08	11.05	206.73	28.65	204.04	26.13	198.66	21.44	200.53	20.22
198.08	12.99	206.74	26.70	204.05	23.11	198.69	16.48	200.53	25.43
198.17	13.64	206.85	27.59	204.09	25.95	198.70	22.36	200.56	18.54
198.18	13.90	206.88	37.38	204.15	24.77	198.71	17.96	200.57	20.50
198.19	14.89	206.95	34.87	204.20	19.61	199.08	20.61	200.64	26.08
198.34	12.48	207.06	24.80	204.22	21.11	199.11	14.89	200.65	25.51
198.38	11.44	207.10	24.54	204.23	21.85	199.12	24.98	200.74	29.29
198.44	12.64	207.18	22.35	204.29	22.78	199.18	20.81	200.78	20.19
198.49	19.26	207.24	31.31	204.33	27.06	199.19	19.19	200.78	21.33
198.56	23.17	207.34	28.07	204.35	20.71	199.19	22.87	200.82	21.15
198.60	13.46	207.36	31.69	204.42	24.20	199.20	12.04	200.82	16.56
198.69	15.60	207.48	23.19	204.46	26.47	199.33	21.25	200.82	24.70

198.70	16.78	207.51	27.74	204.59	29.51	199.48	25.01	200.88	24.79
198.72	19.14	207.69	24.57	204.63	26.04	199.58	24.84	200.88	24.85
198.93	13.29	207.73	24.63	204.72	21.20	199.59	24.78	200.90	22.30
198.98	17.03	207.79	30.52	204.81	23.36	199.63	24.82	201.00	20.60
199.06	14.12	207.81	26.74	204.81	26.95	199.66	20.25	201.01	15.66
199.12	12.47	207.93	27.02	204.81	18.39	199.80	25.90	201.24	21.68
199.13	14.62	208.07	24.92	204.91	22.84	199.83	18.80	201.25	24.99
199.13	11.73	208.27	29.06	204.96	24.58	199.88	18.67	201.36	18.17
199.22	14.44	208.35	25.04	204.99	24.35	199.98	24.76	201.38	20.89
199.23	17.03	208.43	23.57	205.00	20.69	200.05	23.92	201.40	16.51
199.25	16.88	208.44	21.86	205.02	25.02	200.08	20.98	201.49	21.84
199.40	16.55	208.44	28.81	205.11	20.87	200.10	27.00	201.49	22.32
199.45	13.90	208.52	29.88	205.15	22.86	200.11	27.79	201.60	18.67
199.52	17.40	208.56	22.08	205.19	25.34	200.12	23.53	201.63	20.57
199.58	24.97	208.57	37.33	205.43	22.86	200.25	16.95	201.64	20.86
199.59	19.21	208.62	33.57	205.44	20.13	200.32	22.47	201.73	17.99
199.66	13.97	208.64	25.34	205.44	22.69	200.37	28.85	201.79	21.83
199.75	14.50	208.65	23.44	205.54	29.18	200.39	22.70	201.93	29.74
199.76	21.27	208.72	26.23	205.57	22.99	200.45	19.97	202.02	25.00
199.78	18.02	208.76	24.67	205.60	18.70	200.47	16.73	202.07	27.25
200.01	16.95	208.80	33.07	205.80	27.14	200.51	22.71	202.23	18.71
200.04	15.10	208.85	31.62	205.88	26.14	200.58	23.28	202.32	24.89
200.11	13.01	208.93	27.49	206.10	24.05	200.60	18.56	202.33	20.36
200.17	14.47	208.95	33.63	206.13	26.58	200.68	14.67	202.36	17.87
200.18	14.46	209.02	33.80	206.17	29.01	200.73	18.84	202.49	18.25
200.20	14.02	209.11	27.05	206.23	24.65	200.77	22.76	202.53	20.62
200.27	13.52	209.18	28.85	206.27	23.06	200.79	17.00	202.61	20.32
200.30	14.79	209.25	23.99	206.30	21.24	200.80	23.02	202.63	25.41
200.31	17.91	209.31	31.23	206.30	22.71	201.16	18.78	202.64	18.30
200.45	15.33	209.41	30.85	206.36	21.15	201.17	24.33	202.68	23.99
200.49	15.46	209.42	30.05	206.41	26.83	201.18	15.91	202.71	22.91
200.56	15.88	209.54	24.17	206.41	19.85	201.26	20.14	202.73	26.90
200.63	21.41	209.60	31.00	206.50	28.51	201.26	22.33	202.82	28.51
200.66	18.94	209.76	25.60	206.53	24.90	201.29	24.65	202.86	20.51
200.71	17.08	209.80	24.87	206.65	29.07	201.31	17.79	202.87	24.14
200.81	18.21	209.87	35.84	206.69	24.89	201.41	19.64	202.89	24.12
200.82	18.22	209.90	29.42	206.83	24.76	201.56	22.90	202.90	22.99
200.86	22.42	210.00	26.91	206.88	24.44	201.65	21.72	202.93	17.06
201.05	14.57	210.15	25.89	206.89	22.43	201.66	24.61	202.93	24.91
201.09	14.00	210.35	33.67	206.91	28.34	201.70	24.85	202.97	22.94
201.16	12.06	210.43	28.80	206.98	23.99	201.72	21.93	202.98	28.77
201.23	16.51	210.51	29.16	207.03	24.88	201.88	29.51	203.08	20.12

201.24	12.77	210.51	23.58	207.08	24.17	201.91	21.21	203.09	16.53
201.26	13.47	210.51	20.95	207.09	20.37	201.97	22.11	203.31	24.72
201.33	13.79	210.60	31.15	207.09	25.96	202.03	23.73	203.32	21.78
201.36	17.56	210.64	26.67	207.18	24.03	202.12	24.76	203.42	16.08
201.36	19.19	210.65	35.31	207.23	24.18	202.15	18.43	203.45	24.80
201.51	17.51	210.69	32.55	207.29	27.01	202.17	27.01	203.45	18.46
201.55	14.45	210.73	22.13	207.50	24.82	202.19	24.33	203.56	18.77
201.61	16.46	210.73	27.18	207.51	20.54	202.19	24.67	203.57	19.92
201.67	21.36	210.78	29.21	207.53	19.69	202.34	15.98	203.69	20.34
201.71	19.64	210.85	28.32	207.63	29.63	202.40	22.90	203.71	20.11
201.79	14.84	210.87	34.18	207.64	22.66	202.44	28.45	203.73	22.92
201.85	20.97	210.90	31.73	207.68	19.73	202.46	23.97	203.79	18.11
201.87	16.02	211.01	28.30	207.90	24.97	202.55	16.78	203.86	20.74
201.89	18.10	211.02	34.81	207.95	29.89	202.55	20.33	204.01	30.77
202.10	14.91	211.10	34.94	208.18	25.06	202.58	22.97	204.09	22.96
202.15	14.21	211.19	27.15	208.20	27.13	202.66	26.76	204.14	26.49
202.23	14.79	211.26	27.92	208.24	28.02	202.66	18.61	204.30	18.84
202.29	14.64	211.34	24.57	208.30	26.05	202.76	13.03	204.40	25.07
202.29	15.77	211.38	32.14	208.35	22.74	202.83	18.42	204.43	22.42
202.30	12.28	211.49	30.28	208.40	22.12	202.85	17.69	204.43	14.69
202.38	16.68	211.50	34.24	208.41	27.53	202.86	24.57	204.58	18.68
202.40	16.21	211.62	24.94	208.44	21.96	202.89	24.53	204.62	25.00
202.41	20.81	211.68	30.28	208.48	21.45	203.24	22.21	204.67	21.92
202.56	14.92	211.83	26.70	208.51	26.51	203.25	23.05	204.69	26.29
202.60	14.26	211.88	24.98	208.58	30.78	203.25	18.92	204.73	19.49
202.70	15.05	211.96	32.65	208.63	27.99	203.35	24.50	204.74	22.80
202.75	21.43	211.99	28.41	208.73	30.14	203.35	24.68	204.82	24.68
202.76	20.24	212.10	28.89	208.76	24.53	203.36	21.92	204.83	26.41
202.84	15.71	212.26	29.76	208.92	23.93	203.37	17.70	204.93	22.24
202.94	19.34	212.42	35.15	208.97	22.62	203.51	21.34	204.93	28.62
202.94	18.97	212.51	26.11	208.97	29.12	203.64	23.57	204.94	23.62
202.94	15.78	212.58	30.96	208.98	29.21	203.74	24.53	204.97	22.96
203.15	13.54	212.59	23.92	209.09	22.87	203.74	26.64	204.98	17.02
203.22	19.08	212.60	29.55	209.11	25.67	203.77	25.81	204.99	26.78
203.27	13.65	212.68	32.58	209.15	22.71	203.79	21.96	205.02	23.82
203.35	16.64	212.71	26.35	209.16	21.05	203.96	29.23	205.05	24.99
203.35	15.97	212.75	37.55	209.17	25.51	203.98	22.03	205.05	26.29
203.35	14.26	212.78	37.12	209.24	22.16	204.04	24.93	205.16	24.27
203.45	14.42	212.82	22.97	209.31	28.35	204.15	27.13	205.17	15.23
203.45	15.97	212.82	27.91	209.34	27.05	204.20	25.17	205.39	22.64
203.49	20.31	212.87	28.71	209.60	22.88	204.22	19.07	205.39	24.12
203.62	17.10	212.92	26.55	209.60	22.29	204.25	26.96	205.51	19.48

203.65	15.09	212.94	33.35	209.60	24.79	204.25	24.94	205.52	15.91
203.75	18.20	213.01	33.33	209.71	26.99	204.26	24.84	205.53	23.45
203.78	21.48	213.09	39.15	209.72	24.92	204.42	15.47	205.63	20.81
203.84	21.02	213.10	32.81	209.78	23.55	204.47	24.63	205.66	24.71
203.89	15.48	213.18	35.13	209.96	24.87	204.51	28.57	205.75	19.08
203.99	19.97	213.27	25.61	210.03	27.08	204.54	22.69	205.78	21.29
203.99	15.79	213.35	29.13	210.28	26.93	204.62	22.79	205.83	24.20
204.04	21.40	213.43	28.90	210.28	25.22	204.62	16.14	205.86	15.88
204.21	15.94	213.49	33.38	210.33	29.10	204.68	23.12	205.94	23.93
204.27	17.88	213.56	31.93	210.38	26.01	204.74	18.17	206.08	29.29
204.35	13.90	213.58	35.26	210.42	23.44	204.76	27.13	206.17	24.45
204.40	14.62	213.71	24.68	210.45	25.79	204.82	14.51	206.21	27.00
204.41	14.81	213.75	32.08	210.48	28.78	204.89	19.60	206.38	20.36
204.41	15.99	213.92	25.56	210.52	24.66	204.92	18.60	206.48	20.44
204.52	19.07	213.95	26.33	210.56	23.20	204.94	24.03	206.49	24.80
204.53	22.78	214.05	35.29	210.56	27.58	204.95	21.98	206.52	16.62
204.54	21.30	214.05	31.38	210.65	28.96	205.30	20.69	206.65	22.48
204.68	16.08	214.16	29.79	210.68	26.80	205.32	23.56	206.70	24.95
204.73	14.25	214.34	28.37	210.80	31.26	205.34	18.82	206.75	23.14
204.79	17.77	214.50	34.38	210.86	24.95	205.41	22.69	206.79	27.64
204.83	21.71	214.62	29.47	210.97	24.98	205.43	24.92	206.80	18.37
204.88	24.74	214.66	25.11	211.04	21.37	205.45	15.67	206.83	25.12
204.95	14.72	214.68	28.99	211.04	27.17	205.45	24.61	206.87	28.18
205.02	19.94	214.68	31.21	211.07	29.02	205.56	19.68	206.89	29.24
205.03	16.58	214.76	33.17	211.14	25.88	205.71	27.27	206.99	28.01
205.08	21.54	214.78	24.69	211.20	24.93	205.81	24.97	207.03	23.90
205.29	17.92	214.80	38.01	211.25	23.13	205.82	26.72	207.03	24.63
205.34	19.32	214.86	35.41	211.25	27.12	205.87	25.98	207.04	22.58
205.40	17.15	214.87	24.66	211.26	24.31	205.87	21.51	207.05	25.75
205.46	16.68	214.88	28.78	211.32	23.84	206.03	29.18	207.06	20.44
205.48	17.42	214.94	28.61	211.38	24.20	206.06	21.23	207.09	27.13
205.49	15.54	215.01	27.83	211.42	27.23	206.13	24.80	207.12	22.89
205.57	15.93	215.02	36.90	211.67	23.50	206.21	26.93	207.12	26.88
205.58	20.08	215.06	33.39	211.67	26.45	206.27	26.28	207.24	23.03
205.58	17.17	215.16	31.88	211.68	24.78	206.32	28.02	207.24	19.73
205.72	15.54	215.19	37.10	211.77	31.36	206.33	19.55	207.46	24.91
205.77	18.30	215.25	37.02	211.80	25.03	206.33	26.03	207.47	22.51
205.85	18.09	215.35	27.14	211.85	21.91	206.34	29.78	207.59	17.67
205.88	22.63	215.41	29.03	212.04	29.99	206.48	18.56	207.60	27.50
205.93	22.41	215.49	26.67	212.11	30.10	206.56	24.62	207.61	19.85
206.00	16.74	215.54	35.46	212.33	27.14	206.61	33.35	207.70	24.72
206.08	19.08	215.67	32.41	212.37	29.28	206.62	27.02	207.72	21.43

206.09	24.38	215.67	34.78	212.41	29.29	206.70	18.78	207.86	21.85
206.12	23.58	215.80	26.16	212.45	27.80	206.72	27.46	207.86	20.17
206.35	18.55	215.83	31.52	212.49	24.31	206.78	26.01	207.89	24.66
206.39	17.61	215.99	27.05	212.53	22.34	206.81	18.48	207.93	16.64
206.45	16.41	216.03	26.04	212.57	26.90	206.85	28.50	208.01	26.29
206.52	14.96	216.13	39.28	212.59	24.81	206.90	13.47	208.15	30.44
206.53	18.11	216.13	31.35	212.63	24.49	206.96	21.07	208.27	28.65
206.54	15.72	216.23	29.92	212.67	27.93	207.00	18.48	208.30	27.18
206.62	18.28	216.39	29.08	212.75	29.41	207.04	26.60	208.45	20.65
206.62	18.65	216.57	35.37	212.77	29.43	207.06	24.09	208.55	28.42
206.63	21.63	216.68	29.11	212.88	32.50	207.39	24.79	208.56	20.48
206.79	18.92	216.75	25.59	212.94	24.94	207.40	22.00	208.59	19.14
206.83	17.58	216.75	29.22	213.04	25.05	207.41	20.53	208.72	20.02
206.89	16.09	216.77	29.93	213.12	23.17	207.50	23.29	208.77	27.93
206.94	23.15	216.84	34.83	213.13	26.78	207.51	22.58	208.84	23.27
207.01	22.41	216.86	26.13	213.14	33.21	207.52	17.00	208.86	29.07
207.05	19.18	216.90	39.64	213.22	26.49	207.53	29.23	208.89	22.60
207.14	24.48	216.92	38.92	213.28	26.39	207.64	20.17	208.89	25.02
207.14	17.17	216.97	27.38	213.31	26.41	207.80	25.81	208.95	24.55
207.17	22.10	216.97	30.56	213.32	27.13	207.88	24.94	208.98	28.91
207.38	17.22	217.02	29.35	213.33	22.89	207.91	28.80	209.05	29.03
207.44	18.31	217.08	29.29	213.39	26.64	207.94	26.91	209.10	25.36
207.53	20.33	217.12	37.00	213.45	26.93	207.95	22.21	209.11	28.22
207.57	17.16	217.14	35.36	213.51	29.11	208.10	29.78	209.14	25.11
207.59	19.43	217.23	31.03	213.75	22.76	208.14	23.78	209.14	18.80
207.59	16.62	217.25	41.67	213.76	26.83	208.20	25.10	209.16	28.53
207.68	20.12	217.34	41.61	213.77	24.87	208.27	27.22	209.17	27.00
207.69	21.27	217.43	31.13	213.84	29.80	208.35	26.82	209.20	29.23
207.70	22.18	217.51	32.54	213.89	26.40	208.40	25.95	209.21	26.01
207.83	19.17	217.56	26.24	213.92	23.19	208.40	28.30	209.31	24.83
207.88	18.13	217.61	34.85	214.11	27.80	208.41	20.83	209.32	18.56
207.95	16.93	217.74	36.83	214.20	30.95	208.41	26.82	209.55	29.12
208.02	23.81	217.75	34.45	214.41	27.13	208.56	20.73	209.57	23.41
208.04	22.47	217.87	26.92	214.43	27.21	208.63	23.82	209.67	18.32
208.10	17.24	217.90	33.31	214.50	33.67	208.67	31.09	209.68	19.06
208.19	22.46	218.07	31.28	214.53	28.97	208.69	25.55	209.68	24.95
208.20	17.95	218.11	28.66	214.59	26.82	208.77	18.18	209.80	20.90
208.24	22.10	218.18	36.15	214.62	24.99	208.78	22.54	209.81	22.96
208.43	18.13	218.21	29.30	214.63	27.13	208.83	24.50	209.91	19.78
208.48	20.40	218.30	29.14	214.68	27.44	208.90	20.90	209.94	22.72
208.56	17.33	218.50	30.04	214.73	28.69	208.91	26.76	209.96	26.99
208.64	16.92	218.65	36.75	214.73	26.22	209.00	18.99	210.03	21.55

208.64	19.49	218.75	31.40	214.82	30.85	209.04	20.21	210.11	25.34
208.65	17.78	218.82	32.64	214.84	28.45	209.10	20.79	210.23	31.15
208.73	17.97	218.83	29.57	214.95	33.42	209.11	24.18	210.33	27.18
208.73	19.70	218.84	26.58	215.02	28.96	209.12	27.44	210.40	26.30
208.75	21.41	218.91	34.16	215.13	27.90	209.46	22.15	210.54	22.50
208.89	19.65	218.94	30.93	215.19	31.38	209.50	30.88	210.65	28.32
208.96	17.23	218.99	46.23	215.21	31.83	209.51	19.62	210.65	24.81
209.01	20.28	219.03	25.97	215.22	28.15	209.57	23.84	210.67	18.54
209.05	26.86	219.03	38.41	215.30	28.02	209.59	26.49	210.80	20.09
209.11	23.11	219.06	29.22	215.34	30.07	209.60	24.92	210.86	26.90
209.15	20.39	219.10	30.69	215.39	25.64	209.61	18.52	210.90	26.20
209.26	22.09	219.15	30.81	215.40	22.68	209.74	19.80	210.94	29.58
209.27	20.30	219.18	34.74	215.40	29.71	209.86	26.82	210.97	19.23
209.29	23.10	219.22	35.37	215.47	27.16	209.97	28.16	210.99	25.00
209.49	18.38	219.32	34.56	215.54	27.36	209.97	28.47	211.03	27.64
209.56	20.00	219.35	38.96	215.58	29.86	210.00	27.34	211.07	31.65
209.64	16.89	219.40	38.12	215.82	25.37	210.02	23.68	211.14	29.17
209.68	16.58	219.51	29.29	215.82	28.44	210.18	31.21	211.17	26.04
209.69	18.02	219.57	31.60	215.83	25.50	210.21	21.18	211.17	24.19
209.69	18.66	219.64	29.11	215.92	31.04	210.29	23.61	211.20	25.05
209.80	21.39	219.72	36.78	215.96	26.83	210.35	29.04	211.21	22.91
209.81	20.42	219.80	32.97	216.00	21.46	210.42	27.21	211.22	27.68
209.81	18.45	219.81	36.94	216.18	28.78	210.47	22.11	211.27	27.58
209.94	17.69	219.94	28.43	216.29	30.13	210.47	28.11	211.27	29.07
209.99	18.67	219.98	31.88	216.51	28.88	210.49	30.30	211.27	25.46
210.06	20.62	220.14	30.70	216.53	28.90	210.49	26.69	211.41	28.71
210.10	24.01	220.19	29.04	216.56	31.34	210.64	20.42	211.41	18.19
210.17	23.74	220.27	36.53	216.64	29.79	210.70	24.49	211.64	28.33
210.21	18.28	220.28	33.94	216.65	25.80	210.76	32.05	211.65	24.91
210.31	19.27	220.39	32.39	216.69	27.94	210.76	26.94	211.75	29.10
210.32	26.70	220.56	30.17	216.70	31.44	210.85	22.96	211.76	17.79
210.35	23.35	220.72	37.50	216.76	26.96	210.86	20.95	211.77	22.21
210.54	17.06	220.82	32.59	216.81	32.26	210.93	25.72	211.87	23.52
210.62	18.02	220.90	31.31	216.81	26.85	210.97	20.60	211.88	27.09
210.67	20.27	220.92	33.01	216.91	31.12	211.00	31.08	211.99	22.29
210.75	16.00	220.92	27.70	216.91	29.00	211.08	16.06	212.02	22.80
210.75	20.03	220.98	35.10	217.03	32.67	211.12	20.82	212.03	28.17
210.76	16.02	221.02	31.77	217.10	29.59	211.18	20.90	212.09	20.19
210.85	20.53	221.07	41.81	217.21	29.16	211.19	26.38	212.18	28.51
210.86	24.69	221.08	38.91	217.27	30.32	211.21	24.60	212.30	30.97
210.86	19.19	221.12	33.46	217.27	24.42	211.53	20.89	212.40	25.31
210.99	20.12	221.14	32.03	217.29	33.01	211.57	31.10	212.47	32.16

211.04	20.83	221.16	31.41	217.37	26.56	211.57	20.71	212.61	23.00
211.14	21.24	221.22	32.58	217.43	30.06	211.65	22.94	212.72	24.90
211.15	24.76	221.28	39.68	217.46	27.06	211.66	27.02	212.73	29.10
211.21	27.01	221.31	37.22	217.48	27.07	211.67	29.09	212.74	22.27
211.27	18.40	221.40	36.25	217.50	35.39	211.70	18.19	212.87	20.84
211.36	20.72	221.42	43.08	217.58	28.92	211.81	24.39	212.92	29.63
211.36	23.77	221.48	41.44	217.62	27.77	211.94	25.73	213.00	30.91
211.39	25.76	221.59	31.27	217.67	35.99	212.03	28.92	213.01	25.75
211.61	20.31	221.65	33.42	217.89	28.88	212.06	29.07	213.04	22.90
211.66	21.24	221.74	32.57	217.91	26.40	212.08	28.08	213.06	24.90
211.73	18.16	221.80	35.41	217.91	28.37	212.09	24.47	213.10	27.18
211.80	16.98	221.90	35.11	218.00	30.23	212.25	31.23	213.15	31.18
211.81	19.90	221.90	38.71	218.05	29.35	212.29	22.55	213.21	32.54
211.83	20.68	222.01	29.00	218.07	23.53	212.37	25.04	213.25	27.62
211.90	24.38	222.07	35.24	218.26	30.22	212.43	29.86	213.26	25.87
211.91	22.33	222.22	29.29	218.34	32.89	212.52	28.92	213.27	24.33
211.91	18.82	222.27	30.74	218.60	28.77	212.55	22.00	213.28	19.93
212.06	18.62	222.34	37.21	218.60	30.22	212.55	28.45	213.31	31.24
212.10	19.98	222.37	35.44	218.64	35.30	212.56	28.83	213.33	28.88
212.17	18.91	222.47	34.00	218.69	30.82	212.58	28.06	213.35	26.86
212.21	25.60	222.63	31.20	218.74	28.17	212.73	21.68	213.37	28.08
212.26	24.55	222.79	38.36	218.77	29.18	212.77	24.78	213.47	26.23
212.32	22.38	222.90	34.35	218.79	31.82	212.82	31.10	213.49	20.09
212.41	24.59	222.97	31.64	218.84	24.80	212.85	27.83	213.70	28.33
212.45	20.40	222.99	28.24	218.87	27.70	212.94	17.39	213.72	25.04
212.45	24.24	223.00	32.59	218.88	31.50	212.95	25.14	213.83	28.63
212.65	17.76	223.06	35.27	218.97	32.40	213.02	30.75	213.84	23.25
212.73	21.10	223.10	33.03	218.99	33.24	213.06	22.97	213.85	22.29
212.78	21.38	223.13	44.77	219.13	35.71	213.06	31.74	213.94	23.58
212.85	16.93	223.17	38.01	219.16	27.11	213.14	17.94	213.95	23.02
212.87	17.80	223.21	31.90	219.29	30.53	213.19	22.13	214.08	22.38
212.88	20.67	223.23	32.43	219.35	31.86	213.25	22.51	214.11	23.05
212.95	22.36	223.24	32.43	219.35	26.48	213.26	27.59	214.13	28.78
212.96	22.44	223.32	35.37	219.37	31.77	213.27	28.74	214.21	18.76
212.96	19.44	223.36	41.40	219.48	30.58	213.62	24.94	214.25	27.08
213.11	22.01	223.37	35.37	219.49	28.60	213.66	27.05	214.39	31.21
213.15	19.30	223.47	32.82	219.55	28.52	213.67	20.89	214.48	28.74
213.23	19.21	223.49	40.31	219.55	31.29	213.73	26.88	214.53	31.21
213.27	28.76	223.55	39.12	219.59	27.05	213.74	29.05	214.70	22.86
213.34	29.64	223.65	32.01	219.64	27.17	213.75	26.18	214.79	24.97
213.37	22.78	223.72	33.23	219.69	29.22	213.76	18.28	214.79	30.79
213.46	27.74	223.83	33.59	219.73	33.19	213.91	23.20	214.84	22.65

213.49	21.34	223.87	38.86	219.98	27.80	214.04	26.92	214.96	24.65
213.54	25.96	223.96	37.49	219.99	30.27	214.13	30.86	214.99	31.26
213.71	20.91	223.99	38.86	219.99	29.06	214.13	27.11	215.08	26.96
213.80	19.10	224.09	30.06	220.07	29.93	214.16	28.03	215.09	31.27
213.83	21.42	224.16	33.65	220.12	28.90	214.17	25.87	215.10	22.44
213.90	16.54	224.30	34.06	220.17	27.88	214.33	30.18	215.12	28.23
213.92	20.61	224.34	31.31	220.35	29.16	214.38	27.95	215.18	26.78
213.92	20.22	224.42	39.38	220.42	33.31	214.43	25.02	215.23	32.98
214.01	21.18	224.45	35.65	220.65	31.18	214.51	29.59	215.31	29.22
214.03	20.23	224.54	34.16	220.66	29.24	214.58	28.89	215.34	28.52
214.04	27.08	224.71	35.04	220.72	33.45	214.64	29.85	215.36	30.41
214.16	18.08	224.88	39.38	220.76	31.70	214.64	24.53	215.37	24.93
214.21	23.55	224.98	35.98	220.81	29.03	214.65	28.60	215.37	24.55
214.29	21.98	225.04	34.27	220.84	32.57	214.66	31.42	215.39	30.90
214.32	28.98	225.06	31.11	220.85	31.42	214.80	22.44	215.40	29.19
214.38	26.27	225.06	31.63	220.92	28.86	214.85	26.52	215.42	28.70
214.44	23.10	225.14	36.84	220.95	29.53	214.90	35.03	215.43	27.41
214.51	28.30	225.17	32.87	220.97	29.06	214.95	28.32	215.56	24.92
214.56	25.16	225.23	43.65	221.04	32.28	215.02	23.96	215.57	28.44
214.59	25.89	225.24	41.14	221.06	32.91	215.03	22.70	215.78	30.06
214.78	22.36	225.27	31.75	221.21	34.55	215.07	30.29	215.78	24.82
214.84	21.48	225.30	37.50	221.25	30.59	215.15	20.57	215.91	20.23
214.89	20.31	225.31	31.63	221.36	31.13	215.16	31.25	215.91	21.56
214.97	18.68	225.38	34.45	221.43	29.98	215.22	17.87	215.92	31.92
214.98	20.64	225.42	41.62	221.44	35.42	215.30	26.95	216.02	24.28
214.99	22.40	225.45	39.26	221.44	30.01	215.32	20.41	216.03	27.81
215.06	21.12	225.56	36.23	221.53	29.97	215.35	26.86	216.17	25.40
215.07	22.21	225.56	43.68	221.59	32.21	215.37	32.95	216.17	24.78
215.07	22.96	225.63	39.14	221.62	29.17	215.70	27.21	216.19	28.79
215.22	20.23	225.75	32.85	221.65	32.99	215.72	31.69	216.27	20.22
215.27	22.50	225.80	35.00	221.67	30.85	215.73	20.55	216.32	31.22
215.33	22.47	225.88	30.95	221.71	30.95	215.80	27.24	216.46	34.98
215.37	25.70	225.94	37.46	221.77	28.81	215.82	27.66	216.56	28.88
215.43	28.10	226.05	36.01	221.81	33.40	215.82	30.77	216.61	34.28
215.48	20.43	226.05	40.82	222.05	29.04	215.83	20.67	216.79	25.38
215.58	26.56	226.17	31.32	222.06	31.14	215.96	25.81	216.86	30.91
215.59	22.39	226.23	35.03	222.06	28.42	216.10	27.57	216.90	20.67
215.65	26.26	226.38	33.23	222.18	32.75	216.20	27.08	216.90	25.26
215.82	22.50	226.44	31.39	222.22	29.23	216.21	30.84	217.04	24.33
215.89	20.60	226.51	39.55	222.26	30.01	216.23	29.14	217.08	29.06
215.95	24.09	226.53	33.44	222.42	33.13	216.24	26.36	217.16	28.37
216.01	17.73	226.62	36.81	222.51	35.09	216.41	31.33	217.17	32.29

216.02	18.63	226.79	37.52	222.73	31.30	216.46	29.35	217.18	20.71
216.03	22.35	226.94	38.44	222.75	32.70	216.52	26.35	217.21	26.91
216.12	20.83	227.05	35.38	222.79	35.57	216.59	33.24	217.25	30.75
216.14	27.69	227.12	35.23	222.85	32.62	216.66	29.81	217.29	32.83
216.14	23.92	227.14	33.50	222.89	29.63	216.70	25.00	217.37	30.39
216.27	21.04	227.15	33.17	222.92	30.93	216.72	27.98	217.40	27.39
216.34	21.40	227.21	33.35	222.95	31.52	216.72	33.19	217.41	28.67
216.39	23.45	227.26	33.33	223.00	31.52	216.74	30.96	217.44	27.12
216.44	26.84	227.29	43.59	223.03	31.04	216.87	22.28	217.46	30.87
216.49	26.87	227.34	40.97	223.06	34.58	216.92	28.94	217.47	24.06
216.56	24.43	227.35	31.82	223.12	32.93	216.97	33.33	217.50	33.96
216.63	27.02	227.37	35.97	223.14	33.42	217.01	26.81	217.51	31.19
216.65	25.25	227.39	35.23	223.26	37.49	217.09	20.06	217.51	26.77
216.72	25.62	227.48	38.00	223.31	29.56	217.09	25.02	217.63	29.09
216.89	23.88	227.49	41.61	223.44	31.97	217.15	30.67	217.64	20.75
216.96	21.35	227.54	40.26	223.50	28.63	217.22	32.22	217.87	30.70
216.99	21.28	227.63	35.90	223.52	37.14	217.24	25.85	217.88	26.49
217.07	20.84	227.65	41.52	223.52	34.07	217.31	19.59	217.99	20.15
217.07	18.92	227.71	41.61	223.61	30.84	217.36	24.10	217.99	22.70
217.09	20.52	227.82	34.16	223.67	32.08	217.39	24.48	218.01	31.16
217.18	27.45	227.88	38.23	223.69	29.98	217.42	32.86	218.10	29.07
217.19	22.49	227.97	34.73	223.73	32.65	217.43	27.10	218.10	27.08
217.21	24.48	228.02	38.68	223.74	29.09	217.76	26.75	218.22	23.37
217.33	18.96	228.12	37.78	223.78	32.43	217.81	29.17	218.27	23.86
217.38	21.53	228.12	37.11	223.85	32.40	217.81	24.75	218.27	29.23
217.44	22.17	228.26	34.73	223.88	35.15	217.88	26.97	218.35	20.47
217.48	30.00	228.30	34.26	224.13	28.94	217.88	30.90	218.42	29.86
217.54	27.38	228.45	36.74	224.14	33.89	217.91	19.81	218.56	33.19
217.59	21.20	228.50	34.28	224.15	30.67	217.92	29.37	218.63	28.70
217.68	27.66	228.60	41.62	224.25	33.37	218.05	25.93	218.71	33.30
217.72	23.25	228.61	38.62	224.31	32.40	218.18	29.16	218.86	24.84
217.76	25.64	228.70	36.86	224.32	28.97	218.27	28.73	218.95	25.94
217.93	23.72	228.87	35.50	224.49	30.67	218.27	30.66	218.96	31.35
218.00	21.43	229.02	41.25	224.58	35.34	218.32	33.60	218.98	22.77
218.05	22.20	229.12	39.06	224.82	32.76	218.33	28.83	219.12	24.80
218.13	22.05	229.19	34.88	224.83	33.36	218.48	33.14	219.18	33.03
218.13	19.20	229.21	32.35	224.87	35.61	218.55	25.68	219.23	28.81
218.16	20.73	229.22	33.00	224.93	32.21	218.60	30.41	219.26	22.60
218.23	19.41	229.31	38.02	224.99	30.62	218.69	32.58	219.26	31.81
218.24	28.03	229.33	35.09	225.01	33.17	218.75	31.04	219.30	27.38
218.27	22.19	229.36	46.09	225.02	33.13	218.77	27.03	219.32	28.55
218.38	19.16	229.41	42.02	225.06	30.19	218.80	32.24	219.36	34.37

218.43	21.81	229.43	34.51	225.10	31.28	218.80	31.74	219.47	28.59
218.53	26.43	229.47	37.44	225.13	35.86	218.82	32.37	219.48	34.14
218.53	27.84	229.48	37.44	225.21	37.23	218.96	21.49	219.49	29.05
218.60	27.59	229.57	37.30	225.22	33.40	219.00	28.04	219.51	27.74
218.64	21.78	229.60	41.70	225.34	37.61	219.06	34.91	219.53	30.88
218.74	27.74	229.63	39.55	225.40	30.53	219.08	30.12	219.56	22.67
218.76	22.71	229.71	43.20	225.53	32.97	219.17	21.00	219.56	35.24
218.80	28.78	229.71	35.71	225.58	31.55	219.20	29.06	219.58	30.16
218.99	23.39	229.79	46.68	225.58	33.87	219.22	31.92	219.61	28.22
219.05	21.43	229.89	35.47	225.59	37.44	219.31	36.22	219.71	22.15
219.10	20.26	229.95	37.38	225.70	32.55	219.31	22.02	219.73	30.56
219.18	21.09	230.03	35.20	225.75	30.69	219.38	19.80	219.93	29.81
219.18	20.85	230.09	38.06	225.77	29.80	219.43	25.17	219.94	26.98
219.20	23.46	230.19	41.29	225.81	33.67	219.47	23.83	220.06	23.98
219.29	19.89	230.20	38.43	225.82	31.17	219.49	32.69	220.07	31.23
219.29	24.64	230.34	34.99	225.86	33.13	219.50	29.62	220.10	23.67
219.31	25.00	230.37	36.92	225.93	30.24	219.84	27.85	220.18	27.16
219.46	22.83	230.55	39.59	225.96	35.15	219.89	20.73	220.18	24.38
219.51	26.77	230.58	36.93	226.20	30.42	219.89	30.13	220.31	24.59
219.57	25.93	230.68	36.81	226.20	34.30	219.95	28.93	220.34	24.86
219.58	30.99	230.69	41.35	226.22	30.95	219.97	31.08	220.37	33.25
219.65	26.98	230.77	39.47	226.31	33.47	219.98	19.97	220.41	22.67
219.70	23.78	230.94	39.12	226.36	31.40	219.99	32.48	220.50	31.31
219.79	27.76	231.12	39.67	226.39	28.64	220.11	29.08	220.62	32.84
219.81	23.64	231.23	39.46	226.57	31.34	220.26	32.21	220.70	29.00
219.85	27.35	231.27	35.51	226.65	35.01	220.36	32.19	220.77	34.37
220.04	23.79	231.28	33.99	226.88	32.54	220.37	29.24	220.94	23.02
220.10	22.37	231.30	37.41	226.90	33.38	220.38	30.81	221.03	35.25
220.15	23.55	231.38	39.47	226.94	33.39	220.39	28.52	221.04	26.19
220.23	19.58	231.40	39.31	227.02	35.90	220.58	37.01	221.05	22.04
220.26	20.34	231.43	44.51	227.04	32.35	220.61	25.92	221.19	23.33
220.27	23.94	231.49	42.60	227.08	37.35	220.67	26.90	221.23	33.69
220.35	25.40	231.50	33.15	227.10	32.84	220.74	35.36	221.30	30.71
220.36	24.48	231.52	37.20	227.14	30.96	220.81	31.34	221.34	26.33
220.36	25.44	231.54	36.82	227.18	29.90	220.86	24.76	221.35	35.52
220.51	22.33	231.63	38.65	227.19	36.63	220.87	31.14	221.36	27.07
220.54	24.17	231.67	42.46	227.28	35.33	220.88	33.27	221.41	29.75
220.61	25.93	231.68	39.85	227.29	32.98	220.89	31.23	221.44	34.98
220.64	32.50	231.78	38.81	227.43	39.68	221.02	22.44	221.54	28.72
220.73	28.47	231.79	47.04	227.49	31.68	221.08	31.25	221.55	29.23
220.77	27.41	231.87	43.32	227.59	34.73	221.14	35.43	221.59	32.65
220.85	28.61	231.96	35.61	227.66	32.33	221.18	28.71	221.59	29.27

220.87	25.19	232.02	39.64	227.69	35.50	221.25	28.45	221.61	24.72
220.91	27.57	232.11	36.46	227.69	36.84	221.26	27.15	221.61	34.37
221.12	26.16	232.16	37.68	227.77	32.78	221.30	32.60	221.64	33.88
221.15	22.78	232.28	39.16	227.81	35.00	221.38	25.94	221.65	30.67
221.21	23.73	232.30	39.91	227.84	31.05	221.38	35.37	221.66	28.62
221.29	22.59	232.42	35.27	227.88	35.07	221.46	21.45	221.79	28.63
221.30	20.18	232.45	37.04	227.90	32.10	221.51	25.20	221.80	22.24
221.35	22.68	232.61	37.07	227.94	33.38	221.55	22.84	222.01	29.00
221.39	24.05	232.64	36.35	228.02	34.16	221.58	33.77	222.02	26.63
221.40	28.97	232.76	42.18	228.04	36.75	221.58	28.40	222.15	24.41
221.42	26.13	232.77	40.78	228.28	29.14	221.92	27.11	222.15	33.33
221.57	24.10	232.85	38.05	228.29	33.61	221.96	21.72	222.16	23.84
221.63	23.33	233.03	38.48	228.31	31.13	221.97	31.50	222.26	27.04
221.68	23.55	233.17	40.35	228.41	33.31	222.02	29.99	222.26	29.28
221.69	29.76	233.28	39.60	228.43	34.87	222.06	24.46	222.38	25.73
221.78	32.39	233.35	38.30	228.49	33.36	222.06	32.86	222.42	32.83
221.84	27.60	233.36	33.95	228.64	32.76	222.07	33.16	222.44	29.04
221.90	29.33	233.39	37.89	228.74	37.90	222.20	28.78	222.49	20.51
221.94	28.51	233.44	37.84	228.98	35.50	222.34	30.66	222.56	30.79
221.96	28.50	233.50	37.69	228.99	34.71	222.44	31.57	222.72	32.42
222.15	23.13	233.52	44.26	229.04	39.54	222.44	30.47	222.80	30.83
222.21	22.61	233.55	43.63	229.12	36.25	222.47	31.52	222.84	33.68
222.28	25.94	233.59	35.95	229.12	32.64	222.47	32.57	223.00	24.51
222.36	20.94	233.61	39.67	229.15	38.17	222.64	34.36	223.10	24.57
222.37	23.60	233.62	38.56	229.19	31.28	222.69	30.28	223.12	34.20
222.39	22.64	233.71	38.95	229.23	36.16	222.74	30.82	223.15	24.80
222.45	29.65	233.74	43.84	229.27	35.06	222.82	34.70	223.26	26.37
222.45	22.64	233.77	41.18	229.28	32.62	222.89	31.82	223.31	33.70
222.48	25.44	233.86	40.73	229.35	34.53	222.93	26.80	223.37	29.94
222.61	23.12	233.86	45.80	229.38	34.59	222.94	32.14	223.40	33.65
222.68	23.75	233.93	45.00	229.50	39.61	222.95	32.81	223.41	24.85
222.74	24.42	234.06	39.45	229.55	34.30	222.96	34.85	223.45	31.22
222.74	30.47	234.11	39.32	229.66	35.05	223.13	26.78	223.48	29.85
222.82	28.45	234.20	34.94	229.73	32.11	223.16	33.10	223.51	35.22
222.87	26.77	234.25	41.50	229.75	37.29	223.21	37.45	223.61	33.41
222.95	29.88	234.34	39.07	229.75	36.46	223.24	32.58	223.63	29.80
222.98	26.44	234.37	41.40	229.85	35.32	223.32	23.09	223.66	30.21
223.05	32.50	234.49	37.04	229.88	36.67	223.34	33.17	223.67	26.61
223.21	26.45	234.52	38.97	229.93	34.51	223.37	34.10	223.68	29.73
223.27	22.70	234.69	40.39	229.95	39.56	223.47	25.82	223.69	23.90
223.32	24.47	234.72	37.24	229.97	33.19	223.48	35.41	223.71	35.15
223.40	23.42	234.83	44.89	230.02	33.30	223.53	22.08	223.73	30.50

223.43	24.49	234.84	39.70	230.08	33.29	223.62	27.64	223.75	30.25
223.43	23.64	234.92	41.67	230.13	37.90	223.62	24.42	223.88	27.07
223.50	30.60	235.11	41.57	230.35	35.01	223.64	34.85	223.88	31.69
223.51	25.68	235.28	45.49	230.37	31.79	223.65	31.24	224.09	30.89
223.52	25.57	235.36	40.09	230.40	31.27	224.00	27.86	224.11	26.52
223.66	23.51	235.42	39.08	230.50	38.71	224.05	22.91	224.22	24.13
223.73	27.84	235.44	36.51	230.53	35.45	224.06	33.43	224.23	22.20
223.79	31.06	235.48	39.29	230.58	33.03	224.12	29.19	224.23	32.37
223.80	28.27	235.52	41.10	230.73	33.98	224.13	31.41	224.33	27.01
223.87	31.99	235.56	39.00	230.81	37.56	224.14	33.31	224.33	27.59
223.94	25.47	235.59	45.75	231.04	35.92	224.16	24.26	224.46	24.92
224.01	29.83	235.63	43.56	231.05	35.30	224.30	27.71	224.49	27.01
224.05	25.95	235.67	37.31	231.10	35.54	224.42	32.33	224.50	33.38
224.10	28.58	235.69	39.39	231.20	33.63	224.50	34.29	224.58	22.64
224.28	24.62	235.69	39.72	231.20	37.02	224.51	35.33	224.63	32.30
224.32	25.73	235.79	39.50	231.22	35.87	224.53	33.01	224.79	37.27
224.38	23.44	235.81	42.88	231.27	33.00	224.56	32.05	224.87	31.29
224.48	25.02	235.85	42.42	231.30	35.73	224.71	35.44	224.92	33.46
224.48	26.34	235.93	40.17	231.33	31.35	224.76	29.13	225.08	28.81
224.48	22.62	235.93	46.83	231.34	38.57	224.83	33.62	225.18	27.75
224.55	28.08	236.01	45.77	231.43	37.03	224.89	37.29	225.21	34.95
224.57	26.07	236.12	39.59	231.44	35.43	224.97	33.16	225.21	23.34
224.58	28.04	236.20	39.76	231.57	38.96	225.00	25.85	225.34	26.61
224.74	25.41	236.27	38.52	231.62	32.93	225.03	32.79	225.40	33.87
224.77	24.89	236.35	41.21	231.75	33.77	225.03	31.98	225.45	30.49
224.85	30.06	236.43	41.20	231.81	33.61	225.03	35.42	225.49	35.52
224.87	28.78	236.45	43.13	231.82	36.70	225.18	24.41	225.50	26.39
224.95	29.68	236.56	37.08	231.83	41.69	225.23	33.29	225.53	29.60
224.99	27.23	236.60	38.96	231.92	36.28	225.28	36.97	225.56	32.48
225.06	29.85	236.77	39.88	231.96	35.97	225.31	31.19	225.58	35.54
225.11	26.46	236.79	39.64	231.99	31.18	225.40	24.93	225.70	35.89
225.14	27.65	236.92	43.82	232.04	34.20	225.41	31.12	225.70	30.49
225.32	26.88	236.93	45.93	232.05	42.28	225.45	33.25	225.74	29.81
225.38	25.65	236.99	43.42	232.09	34.21	225.53	26.75	225.75	35.03
225.46	23.52	237.18	41.47	232.15	34.61	225.55	39.30	225.76	28.06
225.53	22.97	237.35	43.80	232.19	39.26	225.62	23.73	225.76	33.13
225.53	26.09	237.43	39.96	232.44	32.85	225.66	26.18	225.79	35.88
225.54	24.61	237.49	39.36	232.44	34.42	225.69	28.56	225.82	31.77
225.61	29.83	237.51	34.82	232.47	31.88	225.72	32.45	225.83	32.17
225.61	23.66	237.54	38.48	232.55	38.13	225.74	31.10	225.94	26.25
225.66	27.16	237.59	41.45	232.59	35.50	226.06	27.10	225.96	32.79
225.77	23.07	237.64	41.05	232.67	34.39	226.11	24.77	226.16	32.32

225.85	28.20	237.69	52.21	232.81	39.42	226.12	34.11	226.19	30.64
225.90	28.82	237.71	43.22	232.90	41.53	226.18	29.98	226.29	25.03
225.90	30.58	237.74	36.40	233.12	37.40	226.20	33.32	226.30	33.88
225.99	29.84	237.76	39.55	233.12	34.81	226.23	35.64	226.31	26.44
226.04	26.43	237.80	39.70	233.19	41.18	226.24	24.44	226.40	27.85
226.13	30.93	237.86	40.51	233.27	39.43	226.38	32.16	226.41	28.24
226.14	26.75	237.88	45.77	233.27	35.25	226.52	36.06	226.53	28.73
226.19	31.24	237.92	43.24	233.31	37.07	226.58	33.45	226.57	28.47
226.39	28.69	238.03	42.94	233.35	35.74	226.61	38.05	226.58	35.28
226.43	24.62	238.04	47.30	233.37	35.38	226.61	33.82	226.65	26.68
226.49	26.71	238.09	45.73	233.41	33.28	226.62	32.18	226.71	31.52
226.58	26.29	238.21	39.90	233.44	40.37	226.79	36.31	226.88	35.54
226.60	26.21	238.28	42.76	233.51	37.94	226.87	31.21	226.95	30.22
226.63	25.26	238.34	39.15	233.54	36.52	226.91	31.05	227.02	35.53
226.67	28.23	238.40	42.62	233.67	42.63	226.98	36.93	227.17	30.08
226.69	28.47	238.50	43.73	233.72	37.19	227.04	33.15	227.26	33.25
226.69	28.96	238.51	42.55	233.83	36.74	227.08	28.65	227.27	30.48
226.83	25.35	238.63	39.48	233.88	34.29	227.10	35.07	227.28	26.05
226.89	27.82	238.69	41.04	233.89	39.43	227.11	34.44	227.43	28.72
226.97	30.23	238.86	40.82	233.92	41.85	227.14	35.50	227.46	37.25
226.97	30.71	238.87	39.64	234.01	35.80	227.26	24.62	227.54	33.56
227.05	34.08	238.99	45.34	234.03	39.66	227.31	34.73	227.56	26.77
227.09	25.99	239.02	46.94	234.08	33.36	227.36	37.56	227.57	33.98
227.18	30.74	239.07	43.27	234.11	38.40	227.39	34.21	227.61	31.18
227.20	30.13	239.25	40.39	234.13	35.15	227.48	33.40	227.63	33.50
227.26	29.52	239.42	45.78	234.17	34.58	227.50	29.12	227.67	37.75
227.45	29.63	239.51	42.36	234.24	34.99	227.52	34.32	227.78	34.31
227.48	26.59	239.58	40.08	234.27	44.43	227.60	25.44	227.78	32.30
227.57	29.31	239.58	36.98	234.51	32.87	227.62	39.43	227.82	32.89
227.64	26.17	239.61	41.24	234.53	36.12	227.70	24.65	227.83	31.38
227.64	22.99	239.70	41.91	234.53	34.89	227.74	26.51	227.84	32.99
227.65	25.41	239.71	40.98	234.64	37.55	227.77	26.86	227.84	29.17
227.71	28.39	239.74	51.61	234.66	37.08	227.82	36.78	227.87	37.58
227.73	27.12	239.80	48.94	234.74	37.29	227.84	33.07	227.89	31.20
227.74	27.92	239.82	36.67	234.87	36.87	228.14	31.14	227.90	33.75
227.88	26.62	239.85	43.42	234.96	41.39	228.22	24.57	228.02	24.90
227.95	25.72	239.87	43.18	235.19	37.66	228.22	35.52	228.02	30.50
228.01	28.82	239.94	42.42	235.20	35.48	228.26	31.07	228.23	32.85
228.03	35.25	239.96	45.90	235.27	40.40	228.27	32.87	228.25	30.09
228.09	31.05	239.99	44.65	235.34	38.96	228.30	24.94	228.38	35.34
228.16	25.68	240.09	42.49	235.35	38.01	228.31	36.21	228.38	27.98
228.23	30.26	240.09	48.79	235.39	35.89	228.43	30.94	228.41	29.21

228.25	28.58	240.16	47.37	235.41	36.44	228.58	35.46	228.48	29.14
228.31	29.84	240.28	41.53	235.47	37.27	228.67	36.46	228.48	27.29
228.49	27.82	240.35	43.29	235.48	36.08	228.67	33.33	228.60	27.70
228.55	29.21	240.45	39.22	235.52	41.64	228.69	35.59	228.65	35.01
228.63	28.76	240.48	42.23	235.58	39.46	228.71	33.28	228.65	29.20
228.68	25.51	240.59	42.67	235.60	39.43	228.86	35.44	228.74	28.41
228.69	26.51	240.60	45.74	235.72	41.95	228.94	34.92	228.79	33.32
228.72	26.37	240.71	39.57	235.78	39.23	228.99	34.62	228.93	35.52
228.79	29.62	240.75	41.69	235.92	36.31	229.05	36.92	229.04	33.11
228.80	29.56	240.94	45.00	235.97	36.26	229.13	33.42	229.11	41.18
228.81	28.96	240.95	40.98	235.99	42.34	229.16	28.91	229.23	28.74
228.96	28.46	241.06	48.61	236.00	39.61	229.19	35.49	229.33	30.99
229.03	26.77	241.08	46.11	236.08	39.08	229.19	36.36	229.35	37.44
229.06	29.49	241.14	44.83	236.11	37.51	229.19	34.42	229.36	25.11
229.07	31.80	241.33	44.37	236.16	36.92	229.33	24.57	229.49	28.72
229.15	31.92	241.51	46.10	236.19	37.37	229.40	35.18	229.57	35.92
229.24	26.59	241.61	43.69	236.22	38.66	229.44	38.75	229.61	31.81
229.30	28.57	241.65	40.23	236.24	35.08	229.48	33.29	229.65	27.86
229.30	30.75	241.67	38.60	236.31	35.47	229.56	32.27	229.65	34.71
229.38	29.82	241.72	42.04	236.35	40.61	229.58	25.85	229.68	31.45
229.54	29.75	241.78	43.26	236.59	35.81	229.61	34.15	229.70	35.21
229.59	26.81	241.79	40.82	236.59	37.48	229.68	25.81	229.75	36.15
229.67	28.76	241.82	50.26	236.63	35.42	229.71	38.83	229.84	35.92
229.74	26.27	241.87	46.06	236.72	36.31	229.77	22.79	229.86	32.55
229.74	26.28	241.90	38.44	236.74	38.67	229.82	27.26	229.89	34.84
229.77	28.49	241.91	41.40	236.80	36.08	229.85	26.10	229.90	28.67
229.83	32.21	241.94	41.38	236.95	41.66	229.90	37.19	229.91	36.36
229.84	26.84	242.02	43.17	237.04	42.53	229.91	34.24	229.93	25.20
229.86	29.74	242.04	45.94	237.27	39.59	230.24	30.97	229.94	36.13
229.99	26.59	242.07	45.81	237.29	39.43	230.27	35.26	229.98	37.36
230.06	29.94	242.17	42.66	237.36	41.62	230.29	26.42	229.99	34.08
230.11	28.60	242.18	49.78	237.41	41.89	230.34	31.36	230.10	25.39
230.13	32.18	242.23	51.17	237.43	38.44	230.35	34.38	230.10	33.81
230.21	31.45	242.35	41.79	237.47	39.23	230.37	26.77	230.31	34.09
230.28	31.21	242.42	43.76	237.48	36.16	230.39	37.18	230.34	30.82
230.34	32.75	242.51	41.12	237.53	37.58	230.54	33.40	230.45	28.11
230.37	28.76	242.58	45.46	237.56	35.87	230.67	37.94	230.46	29.07
230.42	30.75	242.66	45.13	237.58	40.13	230.74	37.46	230.48	33.32
230.59	29.77	242.69	46.74	237.65	41.45	230.74	39.08	230.55	33.10
230.65	29.05	242.81	41.25	237.70	42.21	230.77	34.52	230.56	30.74
230.74	27.77	242.83	43.73	237.80	45.76	230.79	37.46	230.68	28.85
230.80	27.59	243.00	43.03	237.86	38.09	230.94	38.01	230.72	29.77

230.82	28.44	243.02	41.72	237.97	37.98	231.00	32.43	230.73	34.92
230.85	29.95	243.13	47.78	238.05	38.89	231.06	33.37	230.83	26.97
230.89	33.43	243.17	46.68	238.07	36.81	231.12	37.73	230.86	34.20
230.90	29.07	243.25	44.31	238.08	43.80	231.22	38.04	231.04	37.55
230.91	30.39	243.40	45.00	238.15	37.94	231.23	27.22	231.10	33.34
231.05	27.50	243.58	47.98	238.20	41.00	231.26	37.26	231.17	38.40
231.11	29.84	243.70	45.69	238.23	38.50	231.26	35.82	231.31	28.86
231.17	31.03	243.72	41.92	238.27	39.43	231.29	36.62	231.41	29.95
231.19	36.68	243.73	39.64	238.29	39.93	231.42	27.73	231.41	38.64
231.29	36.15	243.78	45.39	238.32	38.33	231.47	35.96	231.43	27.07
231.33	31.13	243.83	44.60	238.38	37.48	231.51	38.50	231.59	31.17
231.41	31.75	243.89	45.20	238.43	40.92	231.55	36.57	231.62	37.22
231.44	29.99	243.91	50.83	238.66	37.22	231.65	33.80	231.68	34.46
231.48	35.19	243.95	46.89	238.68	37.11	231.66	26.56	231.71	35.54
231.65	31.26	243.98	43.11	238.69	35.11	231.67	34.39	231.71	27.88
231.70	26.20	243.99	42.50	238.81	40.25	231.75	28.97	231.77	33.37
231.78	29.52	244.04	45.62	238.81	41.39	231.80	39.60	231.78	35.59
231.85	24.50	244.09	43.20	238.88	37.83	231.88	25.67	231.82	37.34
231.86	24.53	244.14	45.77	239.02	40.16	231.92	33.59	231.92	37.52
231.88	29.83	244.14	50.43	239.11	43.63	231.95	30.92	231.93	33.93
231.94	30.15	244.24	44.92	239.35	41.25	231.97	35.14	231.97	34.68
231.97	30.87	244.25	51.32	239.35	39.08	231.97	35.92	231.98	35.67
231.99	29.18	244.31	47.09	239.44	42.93	232.30	28.88	231.98	33.45
232.11	26.35	244.43	43.73	239.49	41.04	232.35	36.87	231.99	28.24
232.16	31.13	244.52	44.64	239.52	41.62	232.35	28.84	232.03	38.65
232.22	29.40	244.59	42.79	239.54	41.07	232.42	30.97	232.05	34.77
232.25	33.20	244.64	45.81	239.59	37.18	232.43	34.87	232.06	35.84
232.32	31.86	244.75	46.39	239.60	39.55	232.45	26.07	232.18	33.58
232.38	30.12	244.76	45.34	239.65	37.40	232.45	39.48	232.20	26.53
232.45	32.01	244.90	41.77	239.68	43.38	232.62	32.84	232.41	33.37
232.49	30.22	244.91	46.51	239.73	40.61	232.74	37.11	232.42	34.39
232.54	36.00	245.11	46.26	239.77	40.74	232.82	34.81	232.53	37.27
232.70	29.16	245.11	43.22	239.89	44.86	232.83	39.11	232.54	25.47
232.75	26.94	245.21	47.18	239.93	41.28	232.84	37.94	232.54	28.44
232.83	28.31	245.23	46.03	240.08	39.71	232.87	38.76	232.64	29.29
232.90	27.44	245.30	48.22	240.12	37.52	233.04	41.67	232.65	35.86
232.91	27.45	245.51	49.48	240.14	44.09	233.08	36.14	232.75	30.43
232.95	27.71	245.66	46.74	240.15	45.45	233.17	40.10	232.80	33.66
232.99	30.19	245.77	45.65	240.22	41.18	233.20	39.50	232.80	37.32
233.02	29.90	245.81	45.73	240.27	39.08	233.28	38.30	232.89	26.89
233.02	31.42	245.82	41.80	240.30	37.54	233.31	27.48	232.97	34.34
233.18	30.87	245.85	44.70	240.35	40.77	233.33	39.90	233.11	39.11

233.22	29.68	245.91	47.79	240.36	39.48	233.34	36.14	233.20	33.47
233.28	32.70	245.95	43.39	240.40	37.84	233.34	37.11	233.24	37.45
233.30	34.13	245.99	52.14	240.46	40.24	233.51	28.48	233.39	28.63
233.38	32.98	246.05	53.30	240.50	41.66	233.55	37.22	233.49	37.42
233.45	29.34	246.05	41.54	240.74	37.62	233.61	39.72	233.51	31.03
233.51	36.48	246.07	43.48	240.75	41.47	233.62	37.94	233.51	27.01
233.53	31.04	246.10	45.29	240.76	35.10	233.71	33.52	233.65	31.24
233.58	32.08	246.20	47.59	240.87	39.33	233.73	31.39	233.70	37.50
233.75	30.09	246.20	50.50	240.89	41.50	233.75	35.82	233.75	34.43
233.80	29.35	246.23	47.91	240.95	38.82	233.83	28.84	233.79	28.67
233.89	32.39	246.33	52.05	241.09	41.44	233.86	40.15	233.81	39.44
233.97	29.29	246.34	45.21	241.19	43.74	233.94	24.97	233.85	33.90
233.99	26.67	246.38	47.95	241.42	43.98	233.98	33.52	233.87	37.02
233.99	29.49	246.50	44.36	241.43	38.80	234.00	28.62	233.90	38.80
234.06	31.80	246.58	45.08	241.53	43.93	234.05	36.58	233.99	38.63
234.06	28.51	246.68	42.96	241.58	40.07	234.06	37.05	234.00	33.03
234.08	32.81	246.71	46.17	241.61	39.93	234.38	32.99	234.04	34.71
234.22	27.74	246.81	45.81	241.61	40.09	234.43	41.06	234.06	35.99
234.30	32.74	246.85	47.30	241.64	39.23	234.44	31.76	234.07	31.15
234.34	34.18	246.98	43.79	241.67	39.99	234.49	34.49	234.08	28.64
234.35	34.10	246.98	47.19	241.73	36.69	234.51	36.00	234.11	39.64
234.43	33.01	247.18	43.74	241.74	43.22	234.52	27.27	234.12	39.30
234.51	34.13	247.19	47.34	241.80	43.37	234.53	39.40	234.12	38.12
234.56	32.55	247.31	49.03	241.83	43.66	234.71	33.93	234.25	33.25
234.60	31.82	247.33	49.91	241.96	45.87	234.82	38.30	234.28	29.06
234.64	32.71	247.39	49.97	242.02	41.23	234.89	39.69	234.47	37.14
234.80	32.14	247.56	47.68	242.14	39.62	234.90	40.82	234.48	33.41
234.86	31.81	247.73	49.84	242.19	37.16	234.93	37.93	234.61	29.05
234.94	32.35	247.83	45.89	242.21	43.52	234.94	38.13	234.63	37.78
235.04	27.38	247.88	45.80	242.25	43.80	235.10	41.08	234.65	29.96
235.05	27.64	247.92	46.94	242.30	41.59	235.15	35.12	234.71	31.08
235.05	29.00	247.93	46.25	242.35	43.20	235.22	37.23	234.74	33.36
235.13	32.89	248.00	47.50	242.37	38.97	235.31	39.54	234.85	30.14
235.14	31.52	248.04	45.50	242.44	40.95	235.35	38.23	234.88	31.96
235.14	27.86	248.05	56.20	242.45	45.88	235.39	31.21	234.89	35.41
235.28	28.40	248.13	49.38	242.49	39.41	235.40	40.39	234.97	28.86
235.33	29.97	248.13	45.05	242.56	40.04	235.43	41.43	235.04	36.66
235.39	32.33	248.14	46.57	242.60	43.72	235.45	38.67	235.18	39.65
235.40	34.63	248.18	45.92	242.82	38.38	235.58	27.07	235.26	36.77
235.48	33.04	248.26	44.31	242.83	39.43	235.64	39.58	235.33	41.59
235.55	33.99	248.27	47.57	242.85	37.53	235.70	43.82	235.46	29.59
235.64	31.84	248.29	48.73	242.94	43.84	235.72	37.31	235.56	38.34

235.64	33.88	248.42	46.00	242.98	43.66	235.78	35.12	235.57	31.11
235.70	33.16	248.43	52.12	243.02	40.32	235.80	29.07	235.58	28.75
235.86	32.94	248.46	49.66	243.18	43.18	235.82	37.34	235.73	31.42
235.91	29.85	248.59	45.94	243.26	43.81	235.92	28.96	235.79	39.34
235.99	28.43	248.66	47.83	243.49	43.78	235.95	41.66	235.83	37.03
236.08	29.77	248.74	43.67	243.53	42.54	236.00	29.06	235.88	39.01
236.08	28.35	248.79	49.87	243.58	45.95	236.05	29.42	235.90	30.03
236.11	31.83	248.90	49.89	243.68	44.55	236.08	33.04	235.92	34.75
236.18	32.77	248.91	47.89	243.68	43.50	236.13	37.45	235.94	37.24
236.21	31.57	249.04	46.31	243.69	40.28	236.13	40.56	235.96	39.69
236.21	32.73	249.07	47.20	243.72	38.45	236.45	31.31	236.08	35.02
236.32	31.34	249.25	46.50	243.76	39.11	236.50	31.04	236.10	39.83
236.39	32.56	249.25	47.76	243.80	38.43	236.53	39.51	236.12	37.80
236.44	32.97	249.37	49.82	243.82	44.51	236.56	33.13	236.14	35.50
236.46	35.24	249.39	52.05	243.88	42.29	236.59	39.50	236.14	30.42
236.55	34.39	249.47	49.22	243.92	43.50	236.60	40.81	236.16	39.57
236.61	35.27	249.64	49.53	244.04	49.86	236.62	27.37	236.17	39.48
236.67	34.13	249.82	49.13	244.12	42.09	236.76	34.63	236.22	37.92
236.69	32.50	249.94	50.27	244.21	41.52	236.92	41.74	236.22	37.43
236.74	35.12	249.95	45.71	244.28	39.06	236.96	39.66	236.33	33.46
236.91	31.84	250.00	48.71	244.30	41.71	236.98	41.67	236.37	27.08
236.99	32.08	250.00	48.54	244.33	47.96	237.00	39.54	236.55	35.29
237.08	34.02	250.10	49.56	244.39	41.54	237.02	38.60	236.57	35.57
237.14	31.42	250.10	48.94	244.43	43.77	237.19	41.41	236.69	29.97
237.14	31.58	250.14	53.88	244.45	41.93	237.24	39.85	236.69	37.14
237.17	34.19	250.19	49.52	244.50	42.34	237.31	36.09	236.70	28.92
237.24	34.77	250.20	44.86	244.54	42.38	237.36	41.13	236.79	33.89
237.25	33.96	250.22	50.43	244.56	39.50	237.46	41.14	236.79	31.99
237.26	31.84	250.27	47.81	244.63	40.50	237.49	34.45	236.92	29.17
237.38	29.91	250.33	45.74	244.68	44.14	237.50	38.09	236.95	33.18
237.45	34.81	250.35	52.06	244.90	39.60	237.51	40.83	236.96	39.27
237.50	35.01	250.37	49.83	244.92	41.53	237.51	41.69	237.05	29.91
237.53	40.62	250.49	47.31	244.94	41.29	237.65	30.96	237.11	35.27
237.59	34.97	250.49	52.00	245.01	42.32	237.70	39.38	237.28	41.48
237.66	33.90	250.56	55.90	245.04	43.43	237.77	43.60	237.34	36.00
237.75	35.24	250.65	46.97	245.11	41.88	237.80	40.74	237.40	40.13
237.75	36.50	250.76	47.65	245.25	43.15	237.89	35.02	237.53	31.26
237.82	34.13	250.82	47.36	245.36	46.36	237.90	30.29	237.63	37.24
238.00	35.57	250.86	49.79	245.57	43.96	237.93	41.95	237.66	27.12
238.03	28.90	250.98	49.33	245.58	43.48	238.02	32.39	237.66	31.31
238.13	32.81	251.00	52.12	245.65	45.94	238.02	41.22	237.83	35.99
238.20	31.87	251.12	47.03	245.73	43.62	238.12	29.75	237.88	38.74

238.21	31.70	251.13	49.98	245.75	43.53	238.13	33.64	237.90	37.05
238.21	30.68	251.32	48.58	245.76	41.27	238.15	31.31	237.96	39.78
238.29	37.38	251.34	47.10	245.79	39.41	238.20	38.42	237.98	30.98
238.31	30.12	251.45	50.41	245.84	43.03	238.22	39.11	238.02	37.34
238.33	34.47	251.46	50.74	245.89	39.86	238.54	34.34	238.02	39.01
238.44	30.64	251.53	49.48	245.89	43.98	238.58	38.84	238.06	39.87
238.50	31.80	251.71	49.84	245.95	45.56	238.60	33.00	238.16	34.76
238.56	36.34	251.88	51.85	245.98	45.93	238.65	34.07	238.17	40.90
238.57	36.84	252.00	47.09	246.13	47.68	238.66	39.02	238.20	37.37
238.66	40.30	252.03	46.60	246.18	45.17	238.68	28.34	238.21	33.45
238.73	34.16	252.06	47.59	246.28	40.69	238.69	42.07	238.23	28.82
238.79	38.93	252.08	48.20	246.37	45.89	238.86	36.58	238.23	36.89
238.84	38.59	252.16	50.82	246.38	44.79	238.97	41.66	238.24	41.32
238.85	36.11	252.20	52.24	246.39	47.37	239.04	39.62	238.28	38.85
239.05	33.82	252.22	54.20	246.48	44.69	239.05	43.09	238.30	38.52
239.08	31.91	252.28	45.31	246.50	44.41	239.09	39.92	238.42	35.37
239.16	32.58	252.29	52.45	246.52	41.63	239.11	42.59	238.44	29.06
239.25	30.86	252.29	48.33	246.58	43.82	239.25	43.77	238.62	37.38
239.27	32.61	252.34	49.31	246.61	43.84	239.31	39.56	238.64	35.47
239.28	33.83	252.40	46.87	246.63	41.12	239.37	38.61	238.75	31.29
239.33	34.40	252.45	53.18	246.69	43.58	239.45	41.61	238.77	37.52
239.37	33.47	252.46	48.90	246.77	44.39	239.52	41.49	238.80	32.78
239.38	34.46	252.56	55.17	246.97	43.60	239.56	40.33	238.86	34.04
239.52	34.03	252.58	51.64	247.00	40.82	239.57	31.31	238.87	32.53
239.55	33.81	252.61	55.72	247.01	39.72	239.57	41.41	238.99	32.84
239.63	37.51	252.73	49.93	247.09	45.55	239.59	39.21	239.04	34.65
239.64	34.79	252.83	47.78	247.13	45.80	239.74	31.56	239.06	40.24
239.72	40.40	252.91	47.56	247.19	45.71	239.78	41.27	239.12	30.44
239.78	33.86	252.94	51.35	247.32	45.65	239.83	42.45	239.19	38.36
239.84	36.72	253.06	48.70	247.42	47.82	239.86	39.69	239.34	41.63
239.88	34.93	253.07	53.40	247.66	43.69	239.94	39.07	239.41	39.33
239.91	37.08	253.21	48.53	247.67	47.71	239.96	30.51	239.47	41.13
240.10	37.17	253.22	51.91	247.73	47.00	239.98	40.32	239.63	31.35
240.14	32.62	253.43	52.25	247.83	45.05	240.09	43.58	239.71	39.24
240.22	34.76	253.43	49.94	247.83	41.60	240.10	30.98	239.74	29.85
240.31	31.92	253.51	54.10	247.84	42.90	240.20	34.26	239.74	34.96
240.31	32.00	253.54	53.92	247.87	41.35	240.20	29.88	239.88	32.71
240.32	32.97	253.62	54.07	247.91	43.46	240.25	32.19	239.94	41.71
240.39	35.36	253.80	52.11	247.95	40.03	240.27	42.15	239.98	39.73
240.41	34.26	253.97	52.05	247.97	45.41	240.29	40.18	240.02	39.50
240.45	37.52	254.07	46.60	248.05	50.55	240.60	34.77	240.03	31.23
240.58	33.15	254.10	50.21	248.06	46.89	240.67	34.28	240.07	37.50

240.63	36.09	254.13	47.49	248.21	46.79	240.67	41.50	240.11	40.52
240.68	38.06	254.15	49.89	248.25	45.56	240.72	35.30	240.14	43.00
240.69	37.07	254.25	52.00	248.37	41.59	240.73	41.08	240.23	36.96
240.76	36.01	254.26	50.91	248.44	47.23	240.76	43.80	240.24	42.35
240.84	35.30	254.29	56.45	248.45	44.56	240.78	33.18	240.29	35.37
240.90	37.19	254.34	53.12	248.47	48.42	240.92	37.21	240.30	29.69
240.92	35.22	254.36	49.54	248.54	43.66	241.05	42.48	240.30	41.48
240.96	37.20	254.36	49.95	248.59	43.66	241.12	39.26	240.30	39.44
241.14	36.56	254.42	50.50	248.60	42.10	241.13	44.27	240.32	41.73
241.21	34.07	254.48	45.44	248.67	44.66	241.16	40.68	240.36	41.51
241.27	34.13	254.52	52.14	248.68	45.12	241.16	40.14	240.37	43.38
241.36	32.76	254.52	52.13	248.70	42.49	241.34	44.27	240.50	39.66
241.38	32.32	254.64	52.11	248.77	42.78	241.40	38.50	240.50	33.06
241.40	32.37	254.66	53.73	248.84	44.75	241.45	38.47	240.70	37.33
241.47	40.44	254.69	54.83	249.04	42.39	241.52	43.34	240.74	35.28
241.47	34.18	254.82	50.48	249.06	39.39	241.59	41.75	240.85	33.02
241.51	35.06	254.89	52.08	249.08	41.47	241.62	33.89	240.85	41.78
241.62	33.09	254.97	47.51	249.19	45.87	241.64	44.85	240.88	29.07
241.66	34.22	255.04	55.76	249.21	46.37	241.65	41.66	240.93	35.50
241.73	37.19	255.13	54.04	249.27	45.80	241.65	40.98	240.95	33.35
241.74	38.50	255.13	52.05	249.39	48.36	241.80	31.37	241.06	30.74
241.82	36.21	255.27	49.62	249.51	46.88	241.85	42.67	241.11	39.12
241.91	35.03	255.29	51.17	249.72	47.78	241.91	45.79	241.13	39.35
241.94	36.29	255.48	49.19	249.75	43.62	241.94	42.71	241.20	32.55
242.00	33.91	255.49	50.03	249.81	47.81	242.03	39.64	241.28	39.33
242.01	35.03	255.60	53.51	249.90	47.79	242.03	31.43	241.42	42.12
242.20	36.05	255.61	54.25	249.92	44.33	242.05	43.03	241.48	37.31
242.25	34.08	255.70	54.05	249.94	47.86	242.16	43.90	241.55	41.15
242.33	32.80	255.87	52.98	249.95	41.96	242.17	31.16	241.72	37.47
242.42	30.04	256.04	54.03	249.98	44.74	242.25	30.05	241.81	30.19
242.43	33.00	256.16	49.67	250.02	41.39	242.27	32.33	241.81	43.85
242.44	30.32	256.19	51.36	250.04	46.87	242.32	33.39	241.81	35.73
242.51	37.06	256.21	49.65	250.14	47.15	242.35	43.64	241.96	36.48
242.52	34.96	256.25	49.70	250.14	49.49	242.36	41.20	242.03	41.97
242.55	37.85	256.33	52.07	250.29	51.26	242.68	34.80	242.05	40.03
242.67	32.70	256.33	50.06	250.33	45.11	242.74	41.78	242.10	40.66
242.72	33.88	256.37	57.05	250.44	45.23	242.76	32.01	242.11	35.40
242.79	37.44	256.43	58.22	250.51	48.11	242.81	40.57	242.14	36.98
242.79	39.60	256.44	52.12	250.52	44.55	242.82	36.90	242.17	44.80
242.88	36.25	256.44	48.33	250.55	49.71	242.83	44.19	242.23	41.41
242.96	35.18	256.49	52.22	250.62	45.24	242.84	32.85	242.32	36.96
243.00	39.22	256.57	49.71	250.67	43.79	243.03	35.76	242.34	43.05

243.05	34.52	256.60	54.63	250.68	47.48	243.13	43.73	242.37	34.12
243.07	34.50	256.61	56.09	250.73	43.83	243.20	41.97	242.38	39.46
243.25	37.87	256.72	50.47	250.75	45.53	243.20	45.08	242.39	41.38
243.33	35.39	256.72	55.16	250.77	42.62	243.23	40.81	242.39	35.57
243.38	31.96	256.76	55.98	250.85	43.86	243.24	42.40	242.40	41.58
243.48	31.73	256.88	51.97	250.90	45.77	243.40	45.81	242.43	41.66
243.50	33.60	256.97	52.84	251.12	43.37	243.46	38.90	242.44	41.11
243.51	34.87	257.06	52.30	251.14	43.01	243.52	41.70	242.57	41.29
243.58	37.13	257.09	53.66	251.17	42.93	243.59	44.38	242.60	32.05
243.59	33.22	257.22	55.62	251.26	46.97	243.66	44.15	242.79	38.94
243.61	38.27	257.23	54.68	251.30	47.63	243.72	43.70	242.82	39.53
243.75	35.14	257.34	50.33	251.33	46.81	243.72	35.02	242.91	33.60
243.77	36.18	257.38	50.83	251.47	48.58	243.75	42.48	242.93	40.31
243.86	36.11	257.55	51.83	251.59	48.16	243.75	46.93	242.94	32.83
243.87	39.39	257.57	51.86	251.83	47.70	243.88	30.59	243.01	36.83
243.93	36.75	257.68	54.35	251.83	48.96	243.93	43.08	243.03	32.51
244.03	35.09	257.68	55.71	251.90	50.27	244.00	47.80	243.14	34.76
244.05	37.08	257.76	54.61	251.97	48.35	244.02	43.38	243.19	42.13
244.09	35.15	257.94	52.07	251.99	45.18	244.09	38.81	243.20	37.28
244.13	38.03	258.12	54.05	252.00	49.04	244.11	33.70	243.30	33.07
244.32	39.46	258.22	48.62	252.04	43.45	244.13	43.04	243.34	39.81
244.37	35.54	258.25	50.78	252.06	45.45	244.24	45.76	243.49	43.51
244.44	35.26	258.29	49.72	252.10	44.96	244.25	35.56	243.57	40.13
244.53	32.96	258.31	51.41	252.12	47.10	244.33	32.72	243.63	40.92
244.56	32.55	258.41	54.13	252.21	49.16	244.37	33.19	243.77	33.80
244.56	34.30	258.42	56.36	252.23	50.13	244.39	33.77	243.88	41.22
244.61	36.68	258.45	58.30	252.38	52.13	244.43	39.12	243.88	33.78
244.63	36.38	258.49	55.73	252.40	49.66	244.45	45.35	243.89	30.37
244.67	39.33	258.51	51.43	252.52	44.34	244.75	36.01	244.04	38.12
244.80	31.91	258.51	52.98	252.59	43.69	244.81	41.74	244.10	43.71
244.83	35.22	258.56	54.10	252.61	47.65	244.82	33.76	244.13	39.07
244.91	40.13	258.63	48.43	252.63	49.97	244.87	36.86	244.20	36.15
244.92	39.90	258.67	54.17	252.71	47.93	244.88	42.67	244.21	41.70
245.00	41.76	258.68	55.92	252.74	48.01	244.90	45.06	244.22	39.36
245.06	33.56	258.80	54.52	252.75	41.52	244.93	32.91	244.25	43.68
245.11	38.06	258.80	59.92	252.83	45.91	245.08	40.06	244.30	41.62
245.15	39.13	258.86	57.43	252.86	49.93	245.19	43.44	244.38	38.61
245.18	35.61	258.95	52.76	252.88	45.62	245.28	41.64	244.40	44.58
245.36	38.91	259.08	52.98	252.94	44.96	245.29	46.13	244.44	41.36
245.42	35.23	259.13	52.09	253.00	49.89	245.31	43.49	244.44	33.93
245.50	34.04	259.17	56.89	253.21	45.19	245.34	45.87	244.45	33.32
245.60	32.59	259.30	53.91	253.21	44.68	245.48	45.69	244.47	45.32

245.60	33.02	259.30	56.68	253.23	43.69	245.54	42.27	244.47	40.46
245.61	35.70	259.43	50.11	253.32	47.99	245.60	40.68	244.51	42.98
245.66	37.30	259.44	53.73	253.36	50.81	245.69	44.34	244.53	46.72
245.68	36.67	259.64	52.45	253.42	47.94	245.76	42.00	244.64	39.62
245.71	39.73	259.65	55.67	253.57	48.04	245.78	34.49	244.67	33.15
245.86	36.18	259.76	56.11	253.65	47.46	245.79	44.76	244.86	39.43
245.89	34.42	259.77	55.85	253.89	49.93	245.81	44.76	244.88	37.38
245.96	40.62	259.86	53.95	253.90	45.87	245.82	43.70	244.99	35.06
245.97	39.98	260.01	55.98	253.97	54.49	245.98	35.39	245.00	40.51
246.05	41.50	260.19	55.57	254.07	49.48	246.03	43.41	245.02	31.29
246.11	34.12	260.32	48.92	254.07	49.66	246.07	45.85	245.08	37.51
246.17	41.49	260.35	53.92	254.08	45.89	246.09	41.63	245.12	36.58
246.20	39.15	260.37	50.51	254.12	45.30	246.17	41.72	245.21	33.03
246.26	41.27	260.40	53.93	254.16	47.94	246.18	37.36	245.26	38.69
246.43	40.52	260.48	53.77	254.17	44.06	246.21	43.50	245.29	45.37
246.48	36.30	260.48	54.75	254.21	48.58	246.31	47.06	245.36	35.82
246.55	37.90	260.51	58.44	254.28	50.28	246.34	35.24	245.43	41.55
246.66	33.06	260.57	57.22	254.29	49.57	246.40	32.64	245.58	49.30
246.67	32.26	260.59	52.58	254.44	50.93	246.46	34.97	245.66	43.85
246.68	37.19	260.59	51.22	254.47	47.76	246.47	36.73	245.70	43.87
246.72	38.26	260.63	54.08	254.59	48.18	246.51	42.96	245.87	35.21
246.75	34.36	260.71	47.56	254.66	44.39	246.51	45.21	245.95	42.26
246.78	40.94	260.74	57.85	254.68	48.79	246.82	36.72	245.95	36.83
246.91	33.73	260.77	56.23	254.71	49.86	246.90	35.82	245.96	32.48
246.93	34.65	260.87	57.63	254.77	47.11	246.90	45.57	246.14	38.11
247.01	40.57	260.88	55.74	254.81	47.31	246.94	38.20	246.20	44.98
247.03	41.51	260.92	58.04	254.83	43.02	246.96	41.62	246.23	43.17
247.09	41.25	261.04	54.14	254.91	46.77	246.98	46.06	246.27	36.83
247.18	34.90	261.12	52.53	254.91	50.22	247.00	33.33	246.28	40.20
247.23	39.19	261.20	51.99	254.94	45.85	247.16	37.60	246.30	42.90
247.25	37.59	261.24	54.51	255.02	43.70	247.29	46.42	246.32	42.45
247.32	41.84	261.38	58.02	255.06	47.53	247.35	44.17	246.37	44.64
247.47	39.53	261.39	56.00	255.27	45.34	247.38	47.12	246.45	39.37
247.56	34.36	261.50	53.57	255.30	44.58	247.39	43.73	246.47	45.91
247.59	35.47	261.52	53.75	255.31	46.30	247.41	44.79	246.52	44.23
247.70	34.54	261.71	52.11	255.40	48.18	247.58	46.44	246.53	40.45
247.72	37.02	261.73	57.20	255.44	52.00	247.62	40.80	246.54	34.35
247.72	32.96	261.82	57.57	255.49	49.94	247.69	42.05	246.54	46.38
247.79	38.49	261.84	56.25	255.63	51.94	247.75	45.62	246.55	36.81
247.81	38.42	261.93	58.32	255.74	50.92	247.83	46.85	246.59	41.59
247.83	39.46	262.08	57.00	255.97	48.97	247.87	48.20	246.60	47.57
247.95	36.13	262.27	59.38	255.97	51.82	247.88	45.85	246.71	41.41

248.02	38.48	262.38	49.65	256.04	53.38	247.89	37.60	246.76	34.97
248.07	42.04	262.41	54.10	256.13	51.41	247.91	40.84	246.95	40.90
248.10	42.20	262.47	51.62	256.14	48.22	248.05	33.09	246.97	42.09
248.18	39.53	262.48	53.14	256.18	45.12	248.10	47.42	247.07	36.60
248.22	37.33	262.55	54.56	256.20	42.25	248.16	49.98	247.08	41.68
248.28	39.71	262.58	55.25	256.22	46.21	248.18	43.18	247.10	35.50
248.33	38.20	262.62	60.71	256.25	47.75	248.26	39.93	247.16	37.39
248.36	41.45	262.65	58.14	256.27	51.57	248.28	45.81	247.18	35.47
248.53	39.14	262.66	55.81	256.35	54.00	248.29	34.36	247.32	34.49
248.59	36.43	262.68	51.95	256.40	53.89	248.40	35.08	247.34	43.43
248.65	35.86	262.71	56.14	256.51	54.08	248.42	47.38	247.35	40.16
248.77	36.73	262.78	48.14	256.56	52.87	248.48	32.45	247.45	35.59
248.78	35.90	262.83	57.35	256.67	48.02	248.54	40.21	247.50	43.42
248.79	36.80	262.84	60.78	256.76	52.14	248.54	35.40	247.65	48.05
248.84	42.66	262.95	55.68	256.77	51.21	248.59	45.42	247.72	42.39
248.85	35.54	262.95	62.55	256.77	47.91	248.60	45.72	247.80	47.15
248.88	39.33	263.00	59.57	256.86	49.46	248.90	37.36	247.93	37.45
249.04	35.33	263.11	55.82	256.91	51.11	248.96	43.81	248.02	45.47
249.05	36.27	263.22	58.43	256.93	48.08	248.98	37.85	248.04	33.29
249.12	41.64	263.28	52.44	256.97	47.58	249.02	37.56	248.06	37.53
249.14	41.25	263.32	57.94	256.99	51.42	249.05	44.59	248.20	41.67
249.24	45.51	263.45	59.81	257.03	48.31	249.08	35.31	248.25	45.55
249.30	36.44	263.46	57.83	257.11	47.76	249.08	49.93	248.29	42.39
249.33	40.52	263.59	55.70	257.14	49.53	249.23	40.01	248.34	43.74
249.37	38.02	263.59	53.68	257.35	45.42	249.39	49.99	248.37	37.03
249.40	41.44	263.80	54.41	257.37	45.66	249.42	43.79	248.38	41.75
249.58	38.51	263.80	58.06	257.41	46.39	249.45	47.76	248.39	43.05
249.65	37.28	263.92	60.18	257.47	49.59	249.47	44.96	248.45	43.38
249.71	39.14	263.92	61.51	257.52	52.73	249.48	47.55	248.54	49.95
249.82	36.13	264.02	57.45	257.58	50.48	249.64	47.73	248.56	42.05
249.83	36.15	264.16	58.38	257.70	53.91	249.69	44.45	248.60	42.66
249.83	36.52	264.37	58.87	257.83	52.54	249.75	43.60	248.60	35.15
249.90	40.39	264.45	50.99	258.05	47.52	249.83	49.04	248.60	37.65
249.93	39.43	264.48	56.21	258.07	55.38	249.93	45.45	248.61	43.41
249.94	40.04	264.55	55.73	258.11	54.17	249.95	47.36	248.63	47.07
250.07	37.94	264.56	54.30	258.20	52.00	249.96	37.25	248.68	42.58
250.13	37.30	264.62	58.29	258.21	49.93	249.97	47.60	248.69	45.19
250.17	42.92	264.66	53.70	258.26	50.12	249.99	42.99	248.78	44.78
250.19	40.24	264.67	63.66	258.26	44.18	250.15	37.99	248.84	37.92
250.27	40.43	264.72	60.80	258.32	49.32	250.16	45.47	249.01	41.45
250.37	42.15	264.74	56.02	258.32	47.90	250.23	49.00	249.03	41.76
250.38	44.86	264.74	56.33	258.37	49.98	250.25	44.94	249.14	37.36

250.42	38.66	264.78	57.21	258.45	55.80	250.32	41.77	249.17	43.70
250.48	40.29	264.87	50.03	258.47	54.47	250.34	37.68	249.17	33.68
250.66	42.43	264.89	59.37	258.59	54.20	250.38	45.38	249.25	38.90
250.69	37.40	264.92	60.42	258.62	53.42	250.48	48.63	249.25	35.54
250.76	38.31	265.03	59.43	258.76	49.99	250.49	37.33	249.40	35.01
250.87	36.24	265.04	61.03	258.83	50.89	250.59	34.35	249.42	46.26
250.88	38.36	265.10	61.13	258.85	48.85	250.61	39.19	249.43	41.46
250.90	34.58	265.19	55.73	258.87	55.43	250.62	41.82	249.51	37.10
250.95	40.46	265.30	56.29	258.93	48.91	250.66	45.73	249.57	44.15
250.96	38.35	265.36	57.16	258.97	51.23	250.69	47.83	249.74	51.66
251.02	43.60	265.39	57.21	259.00	49.03	251.00	37.22	249.82	43.78
251.12	36.27	265.52	58.71	259.08	54.02	251.04	44.21	249.86	44.31
251.19	37.99	265.53	59.19	259.08	52.05	251.05	38.25	250.00	38.81
251.24	41.90	265.66	54.45	259.11	48.42	251.10	41.00	250.09	45.53
251.25	42.80	265.67	55.20	259.17	48.38	251.12	45.84	250.11	34.65
251.33	40.47	265.87	55.69	259.21	51.03	251.14	49.98	250.12	38.90
251.40	38.51	265.87	57.48	259.45	45.44	251.15	34.80	250.29	40.96
251.44	41.37	265.98	58.85	259.45	47.72	251.31	42.89	250.34	46.86
251.48	39.10	265.99	59.98	259.46	47.56	251.45	46.84	250.36	42.65
251.52	42.26	266.07	60.74	259.55	49.98	251.50	45.24	250.42	39.41
251.71	41.26	266.25	59.70	259.59	54.20	251.53	51.70	250.42	45.88
251.77	36.30	266.43	62.73	259.65	50.97	251.55	46.92	250.45	43.33
251.81	37.04	266.53	52.11	259.78	52.80	251.56	44.41	250.49	47.63
251.92	37.00	266.59	55.43	259.91	54.05	251.72	46.56	250.55	45.98
251.93	38.98	266.63	56.16	260.12	49.33	251.76	46.04	250.62	46.91
251.96	38.29	266.66	57.68	260.16	55.28	251.83	43.04	250.64	40.29
251.99	41.43	266.71	58.05	260.19	55.01	251.90	48.26	250.67	45.15
252.02	37.45	266.73	55.65	260.28	52.58	251.99	46.91	250.68	39.53
252.06	41.32	266.76	63.07	260.31	48.29	252.02	35.71	250.68	41.53
252.18	37.17	266.81	58.28	260.32	50.57	252.02	47.27	250.69	42.84
252.24	40.34	266.81	56.02	260.37	45.78	252.05	47.84	250.71	47.07
252.28	43.44	266.82	60.45	260.38	49.49	252.07	43.39	250.75	45.29
252.30	41.56	266.86	58.36	260.41	49.06	252.22	36.18	250.78	43.72
252.38	44.27	266.95	52.11	260.45	52.37	252.25	47.72	250.86	45.23
252.46	42.80	266.97	60.87	260.51	55.65	252.30	50.08	250.91	36.71
252.51	42.15	267.00	60.01	260.55	54.30	252.33	48.68	251.08	43.91
252.53	39.45	267.10	62.44	260.67	54.16	252.42	37.08	251.12	44.51
252.57	40.55	267.12	61.77	260.71	53.54	252.43	43.71	251.22	39.27
252.76	40.27	267.15	62.37	260.82	49.82	252.46	44.66	251.23	47.56
252.81	37.26	267.27	57.03	260.91	53.33	252.55	49.95	251.24	37.25
252.86	37.38	267.37	60.44	260.91	47.30	252.57	36.27	251.33	35.53
252.98	37.76	267.45	56.04	260.93	54.05	252.65	35.04	251.34	39.86

253.00	36.61	267.46	60.22	261.02	51.68	252.68	37.73	251.47	37.49
253.00	37.81	267.60	62.45	261.07	50.30	252.72	38.61	251.50	45.78
253.05	39.81	267.61	60.21	261.07	49.61	252.73	45.75	251.50	43.05
253.10	36.52	267.74	58.44	261.13	48.62	252.75	47.62	251.60	39.11
253.14	40.94	267.77	58.33	261.15	52.44	253.08	41.62	251.64	45.90
253.23	39.31	267.94	59.16	261.17	49.83	253.12	38.79	251.82	49.36
253.30	42.64	267.94	56.71	261.27	49.06	253.14	49.95	251.89	44.75
253.35	43.56	268.08	60.05	261.28	49.96	253.17	41.24	251.94	45.73
253.35	43.87	268.09	60.45	261.51	50.06	253.19	42.96	252.08	39.71
253.45	41.57	268.15	60.36	261.53	48.79	253.21	50.20	252.17	46.65
253.51	43.55	268.32	58.87	261.54	49.78	253.22	35.20	252.22	35.32
253.55	42.90	268.51	62.50	261.65	50.94	253.38	42.11	252.22	41.52
253.58	39.37	268.60	53.88	261.67	54.75	253.53	48.80	252.39	42.70
253.62	41.33	268.64	58.54	261.72	52.04	253.57	45.55	252.40	47.83
253.83	42.37	268.69	56.56	261.88	54.18	253.60	49.81	252.43	45.22
253.86	39.65	268.74	58.32	261.97	51.80	253.62	47.36	252.50	39.21
253.93	40.81	268.77	58.38	262.20	52.00	253.63	45.03	252.52	44.49
254.03	38.43	268.83	64.77	262.21	56.11	253.81	50.81	252.52	44.72
254.04	37.67	268.83	60.34	262.26	58.59	253.85	49.12	252.55	45.45
254.08	37.03	268.88	64.17	262.37	56.68	253.91	45.56	252.61	46.53
254.12	40.14	268.91	57.16	262.37	51.73	253.97	49.82	252.70	48.11
254.15	40.62	268.92	58.71	262.39	46.88	254.07	51.77	252.71	43.24
254.17	41.40	268.93	59.36	262.44	51.08	254.09	37.56	252.76	38.78
254.28	39.04	269.02	53.71	262.45	50.71	254.12	46.83	252.76	45.41
254.35	38.75	269.06	63.26	262.50	50.35	254.12	48.40	252.77	38.05
254.40	43.93	269.06	65.26	262.51	51.82	254.16	45.62	252.79	45.73
254.43	41.66	269.19	63.90	262.60	56.24	254.28	37.08	252.81	50.00
254.49	45.68	269.21	59.67	262.62	56.19	254.33	51.57	252.82	48.76
254.56	40.62	269.24	64.59	262.75	57.17	254.39	51.00	252.86	49.01
254.61	41.83	269.33	60.05	262.78	56.11	254.41	51.20	252.93	45.70
254.63	41.68	269.47	59.22	262.89	52.11	254.49	38.09	252.99	39.50
254.70	42.51	269.51	59.51	262.98	52.14	254.52	44.94	253.18	43.01
254.87	41.75	269.54	60.33	262.99	51.26	254.53	45.53	253.19	43.70
254.92	37.37	269.69	62.09	263.04	54.20	254.62	50.35	253.31	40.80
254.97	41.48	269.70	61.38	263.10	50.04	254.63	37.47	253.32	37.38
255.09	37.83	269.81	55.67	263.13	53.06	254.71	37.30	253.32	49.89
255.09	40.72	269.84	60.47	263.15	50.20	254.75	41.48	253.42	41.81
255.15	39.57	270.02	58.24	263.21	49.96	254.80	38.34	253.43	40.56
255.16	40.58	270.02	59.78	263.23	55.81	254.81	49.92	253.56	37.57
255.19	40.13	270.14	64.23	263.26	51.65	254.82	45.50	253.57	43.32
255.25	44.01	270.18	64.65	263.34	53.03	255.14	39.45	253.58	47.47
255.33	37.27	270.24	64.53	263.36	49.91	255.19	46.01	253.67	40.18

255.40	41.42	270.39	61.45	263.60	49.46	255.22	41.61	253.72	46.86
255.46	44.93	270.61	64.71	263.60	48.85	255.26	40.93	253.88	47.99
255.47	44.12	270.69	55.73	263.61	49.79	255.27	45.49	253.96	45.93
255.54	45.15	270.72	58.17	263.70	52.06	255.30	51.96	254.01	50.25
255.65	41.38	270.77	55.95	263.74	56.31	255.30	37.02	254.15	41.69
255.68	40.44	270.80	59.44	263.80	54.12	255.46	47.20	254.28	49.95
255.69	43.64	270.86	61.22	263.96	58.11	255.60	49.96	254.29	37.10
255.73	42.21	270.91	61.97	264.04	55.80	255.64	45.75	254.30	41.50
255.93	41.43	270.92	62.92	264.27	52.07	255.70	54.53	254.44	42.47
255.99	41.60	270.95	62.86	264.30	57.31	255.71	46.86	254.48	47.75
256.06	42.15	270.97	58.00	264.34	58.34	255.73	49.54	254.51	45.12
256.16	38.42	270.98	58.75	264.45	53.76	255.87	47.77	254.59	48.04
256.17	42.45	271.01	60.49	264.46	55.94	255.94	48.19	254.60	45.94
256.18	38.81	271.11	58.33	264.48	48.00	256.01	45.58	254.60	42.37
256.21	44.00	271.13	66.24	264.53	49.31	256.06	49.23	254.65	47.02
256.26	42.02	271.16	62.39	264.53	51.87	256.14	50.62	254.70	47.85
256.29	41.63	271.25	67.63	264.56	50.41	256.18	41.78	254.78	43.09
256.41	38.42	271.27	62.17	264.60	54.49	256.20	47.54	254.79	47.43
256.46	41.66	271.31	64.38	264.69	58.20	256.20	49.98	254.82	46.77
256.52	42.83	271.41	60.04	264.71	57.71	256.25	46.36	254.84	39.91
256.54	42.64	271.52	60.13	264.82	57.43	256.36	39.30	254.85	39.59
256.59	45.84	271.60	59.66	264.85	55.29	256.42	49.55	254.85	44.31
256.68	41.75	271.62	61.68	264.98	52.20	256.45	51.10	254.86	49.86
256.72	43.19	271.75	62.51	265.06	51.96	256.47	49.80	254.91	48.24
256.76	44.77	271.79	61.81	265.06	54.83	256.58	45.73	254.92	46.26
256.79	46.17	271.90	60.07	265.12	58.11	256.58	39.43	255.02	47.15
256.99	44.60	271.92	60.53	265.20	54.19	256.63	45.66	255.06	38.90
257.02	40.49	272.09	60.02	265.21	55.37	256.71	52.09	255.27	44.91
257.09	40.04	272.11	63.11	265.21	51.87	256.72	39.48	255.27	46.74
257.20	38.61	272.22	62.10	265.29	50.48	256.82	37.25	255.37	41.39
257.21	42.54	272.26	62.16	265.29	54.37	256.83	40.23	255.39	36.79
257.23	40.02	272.32	62.37	265.32	51.15	256.86	39.66	255.40	47.63
257.27	45.28	272.47	62.13	265.42	50.75	256.90	49.89	255.49	40.95
257.31	41.75	272.66	64.79	265.46	55.76	256.91	48.41	255.49	42.18
257.34	44.82	272.75	56.39	265.68	50.23	257.21	42.44	255.63	38.24
257.44	38.69	272.81	58.81	265.69	51.37	257.27	50.08	255.65	47.46
257.52	43.62	272.86	57.60	265.70	51.64	257.28	42.11	255.68	45.62
257.57	43.89	272.89	59.12	265.78	53.18	257.32	42.38	255.74	40.11
257.57	43.36	272.94	62.19	265.82	57.95	257.34	45.67	255.79	47.80
257.64	44.07	272.96	60.13	265.90	55.64	257.38	41.27	255.96	52.22
257.73	44.44	272.98	67.15	266.02	56.32	257.38	52.50	256.04	48.19
257.78	43.22	273.04	63.48	266.13	56.84	257.54	45.61	256.09	51.28

257.83	42.00	273.05	60.04	266.35	53.90	257.69	54.69	256.25	41.71
257.86	42.81	273.06	60.33	266.36	58.39	257.72	47.21	256.33	49.84
258.03	43.40	273.08	61.29	266.42	59.90	257.76	52.65	256.35	36.03
258.09	43.05	273.18	57.00	266.53	57.57	257.78	48.15	256.36	43.08
258.14	40.45	273.20	66.47	266.55	57.68	257.79	46.79	256.54	43.96
258.25	41.17	273.25	65.61	266.56	54.10	257.95	48.55	256.57	50.23
258.29	38.12	273.35	65.57	266.59	49.73	258.00	51.29	256.60	46.50
258.29	41.26	273.37	61.59	266.61	50.72	258.07	48.09	256.66	47.93
258.33	41.96	273.40	65.81	266.63	52.06	258.13	48.75	256.67	41.51
258.36	42.19	273.49	62.44	266.69	57.56	258.21	52.15	256.68	47.78
258.39	44.52	273.59	62.48	266.76	59.63	258.25	43.70	256.71	48.00
258.50	42.25	273.66	60.34	266.77	58.05	258.26	51.79	256.77	48.74
258.56	42.54	273.69	62.04	266.89	58.31	258.27	49.21	256.85	49.98
258.62	43.85	273.84	64.27	266.92	57.69	258.33	47.65	256.86	45.16
258.64	46.43	273.85	64.51	267.06	54.22	258.45	39.26	256.90	47.36
258.73	45.73	273.98	61.78	267.15	52.04	258.48	52.13	256.91	41.57
258.78	43.43	273.98	61.87	267.15	58.31	258.52	50.02	256.92	46.71
258.84	43.73	274.17	63.84	267.17	57.77	258.55	52.15	256.92	43.64
258.87	45.53	274.18	61.84	267.25	55.24	258.64	40.23	256.94	49.87
258.91	43.44	274.29	66.20	267.28	54.21	258.67	46.64	256.99	47.94
259.08	43.43	274.34	67.50	267.30	51.81	258.68	47.96	256.99	49.74
259.16	41.05	274.39	63.98	267.36	52.19	258.78	51.72	257.09	45.69
259.21	44.75	274.55	64.33	267.37	57.77	258.79	43.60	257.13	39.28
259.31	42.96	274.74	66.48	267.40	54.77	258.89	37.19	257.33	43.14
259.33	43.94	274.83	58.40	267.48	53.87	258.91	44.68	257.34	47.02
259.33	40.32	274.87	59.99	267.53	54.62	258.94	43.38	257.46	41.44
259.40	42.42	274.94	61.07	267.74	51.57	258.99	47.64	257.47	51.73
259.41	41.25	274.98	61.90	267.77	52.99	258.99	53.11	257.48	40.14
259.45	45.38	275.02	62.01	267.78	52.88	259.30	41.19	257.57	46.77
259.56	43.05	275.04	64.72	267.86	56.91	259.35	49.93	257.58	40.15
259.61	41.91	275.08	70.87	267.89	58.43	259.38	43.20	257.70	41.75
259.67	48.03	275.11	67.81	267.98	59.76	259.40	43.56	257.72	47.81
259.72	46.87	275.12	60.34	268.09	60.55	259.41	45.78	257.74	45.24
259.77	45.80	275.16	64.52	268.22	58.16	259.46	54.15	257.83	43.54
259.83	44.21	275.16	62.51	268.42	54.21	259.46	39.48	257.87	50.02
259.89	48.89	275.28	58.90	268.45	58.85	259.61	44.59	258.03	50.57
259.92	45.57	275.30	64.50	268.51	61.35	259.76	52.33	258.11	49.07
259.96	43.66	275.30	66.75	268.60	56.04	259.80	50.70	258.19	54.26
260.17	46.55	275.42	66.12	268.62	58.54	259.83	53.90	258.34	43.34
260.19	41.64	275.44	62.82	268.62	53.85	259.86	47.87	258.41	49.81
260.25	43.72	275.46	65.87	268.66	51.81	259.86	51.86	258.44	38.92
260.36	41.22	275.59	62.06	268.69	54.82	260.02	49.46	258.45	43.36

260.39	42.78	275.70	67.67	268.71	56.11	260.08	49.45	258.59	44.58
260.41	41.94	275.73	62.26	268.75	56.85	260.14	46.84	258.66	49.92
260.44	45.58	275.78	64.54	268.83	57.44	260.20	50.04	258.66	46.86
260.46	43.69	275.91	63.96	268.86	60.64	260.31	53.87	258.73	47.44
260.53	45.61	275.94	64.66	268.98	58.52	260.32	42.30	258.75	45.43
260.62	41.43	276.07	60.21	269.00	54.50	260.35	48.91	258.75	47.88
260.67	45.75	276.07	62.38	269.14	57.46	260.35	55.18	258.78	52.43
260.74	49.77	276.25	65.13	269.21	54.88	260.39	47.58	258.84	49.46
260.75	45.12	276.27	60.25	269.23	53.52	260.51	42.54	258.93	44.92
260.81	45.47	276.37	64.52	269.25	58.97	260.56	51.82	258.95	53.29
260.89	43.77	276.39	65.55	269.33	55.38	260.62	52.14	258.98	47.04
260.96	45.76	276.49	64.32	269.35	57.12	260.62	51.94	258.99	47.87
260.97	43.42	276.62	64.49	269.40	54.81	260.71	41.59	258.99	42.63
261.04	44.64	276.82	65.97	269.45	59.70	260.76	47.88	259.00	42.17
261.21	45.92	276.93	61.26	269.46	58.24	260.78	48.89	259.01	51.98
261.25	44.78	276.97	66.37	269.47	54.13	260.85	51.24	259.06	49.73
261.31	42.78	277.03	60.73	269.57	56.30	260.86	42.86	259.06	51.59
261.41	41.86	277.03	61.04	269.59	54.17	260.98	43.93	259.16	47.92
261.44	42.95	277.09	65.67	269.82	53.90	260.99	37.89	259.21	43.49
261.45	40.09	277.12	63.78	269.84	53.86	261.04	42.52	259.41	47.47
261.50	44.07	277.14	70.87	269.84	52.96	261.05	49.83	259.42	46.71
261.52	44.18	277.18	65.74	269.95	55.07	261.07	47.88	259.53	42.77
261.58	46.13	277.19	62.37	269.97	59.76	261.37	44.53	259.55	37.71
261.67	44.40	277.21	63.53	270.04	58.10	261.43	49.76	259.56	50.78
261.72	42.63	277.25	66.81	270.18	60.33	261.45	46.90	259.65	43.63
261.78	45.96	277.34	59.96	270.29	56.97	261.50	44.60	259.65	45.67
261.83	47.12	277.37	68.99	270.51	56.65	261.52	49.99	259.77	40.95
261.87	45.57	277.39	65.29	270.52	62.49	261.54	54.20	259.81	47.12
261.96	44.07	277.48	67.89	270.59	62.47	261.55	41.81	259.82	51.84
261.99	45.75	277.51	63.37	270.68	56.81	261.68	46.14	259.91	42.40
262.04	44.66	277.55	68.26	270.68	60.25	261.83	54.18	259.95	46.95
262.07	47.69	277.64	64.39	270.70	56.20	261.87	47.19	260.10	54.31
262.26	44.28	277.76	64.62	270.73	51.49	261.92	57.46	260.18	49.11
262.30	42.59	277.81	62.93	270.76	54.13	261.94	53.68	260.25	54.23
262.39	46.84	277.87	67.02	270.79	54.59	261.94	52.08	260.42	43.78
262.48	44.82	277.98	63.39	270.82	57.99	262.12	54.51	260.50	54.37
262.49	43.57	278.00	67.05	270.90	62.39	262.15	50.48	260.51	45.88
262.52	44.03	278.14	62.90	270.94	58.29	262.22	49.78	260.51	39.53
262.55	44.71	278.15	62.08	271.06	61.39	262.27	50.89	260.68	45.86
262.59	44.86	278.32	64.11	271.08	58.15	262.37	52.98	260.74	51.96
262.64	46.51	278.34	64.09	271.22	55.87	262.42	45.00	260.77	48.27
262.74	45.60	278.44	64.22	271.29	52.44	262.42	49.95	260.81	50.10

262.78	45.29	278.47	68.87	271.31	58.79	262.43	57.90	260.82	50.35
262.83	47.46	278.57	69.00	271.32	59.99	262.46	49.27	260.83	44.54
262.89	47.79	278.69	64.25	271.40	55.15	262.59	44.34	260.85	51.69
262.93	47.23	278.89	65.07	271.43	57.43	262.64	54.24	260.92	49.45
263.01	44.81	278.98	62.49	271.45	54.05	262.68	53.03	261.00	45.23
263.04	46.60	279.04	67.03	271.52	53.49	262.71	55.70	261.01	49.28
263.08	45.18	279.11	62.60	271.54	59.03	262.81	41.78	261.06	50.73
263.13	45.61	279.12	64.01	271.57	57.83	262.82	49.58	261.08	43.68
263.31	44.29	279.16	64.50	271.67	53.12	262.84	48.99	261.09	51.80
263.36	46.01	279.19	64.62	271.68	53.00	262.93	51.48	261.10	49.11
263.43	44.01	279.22	69.71	271.89	54.86	262.97	44.62	261.10	43.93
263.52	43.17	279.26	67.12	271.91	53.49	263.07	43.42	261.13	51.65
263.55	43.68	279.28	65.57	271.91	54.03	263.08	42.08	261.16	49.39
263.57	41.76	279.28	65.29	272.02	58.43	263.12	51.77	261.24	49.08
263.60	45.67	279.31	65.51	272.06	62.47	263.13	42.33	261.30	43.45
263.63	44.73	279.42	61.70	272.12	59.33	263.14	50.45	261.50	49.80
263.69	44.63	279.46	66.33	272.24	59.03	263.45	45.73	261.50	48.95
263.79	43.34	279.47	68.39	272.38	60.00	263.50	50.71	261.61	45.92
263.85	46.94	279.56	72.48	272.57	57.84	263.52	42.99	261.62	41.14
263.88	51.13	279.60	66.35	272.59	62.36	263.55	45.60	261.62	52.08
263.93	47.17	279.62	67.88	272.65	63.45	263.57	49.97	261.72	45.92
263.98	46.82	279.71	62.98	272.76	61.69	263.61	55.89	261.73	43.78
264.05	47.88	279.83	65.79	272.77	57.09	263.63	41.87	261.86	40.40
264.13	46.71	279.90	64.38	272.77	56.50	263.76	46.37	261.88	47.11
264.13	45.71	279.94	66.71	272.83	56.81	263.90	54.99	261.90	51.34
264.21	46.89	280.06	66.68	272.86	57.72	263.95	51.36	262.01	45.33
264.37	44.59	280.07	66.62	272.86	54.65	264.01	56.20	262.01	49.96
264.40	43.65	280.23	63.60	272.90	57.64	264.01	50.29	262.17	53.53
264.49	46.82	280.23	66.32	273.00	64.26	264.02	54.13	262.26	52.01
264.57	44.07	280.41	63.73	273.00	62.57	264.18	52.74	262.32	51.97
264.61	46.14	280.42	67.01	273.12	59.35	264.25	49.98	262.48	43.64
264.62	45.08	280.52	68.52	273.15	60.62	264.32	52.05	262.58	40.87
264.66	49.14	280.55	68.82	273.28	58.96	264.35	51.85	262.59	51.56
264.68	43.61	280.63	68.58	273.37	60.46	264.47	56.90	262.59	45.48
264.75	45.36	280.79	68.66	273.38	56.68	264.48	45.71	262.77	47.96
264.83	45.28	280.96	68.43	273.42	60.02	264.50	54.98	262.80	52.11
264.90	46.80	281.07	62.39	273.47	58.19	264.50	53.93	262.82	51.12
264.93	49.02	281.11	67.60	273.50	58.07	264.54	50.50	262.90	49.88
264.99	46.39	281.18	64.37	273.53	55.04	264.69	43.25	262.92	45.65
265.06	48.53	281.19	65.97	273.59	58.07	264.71	54.52	262.93	49.13
265.10	45.39	281.24	66.76	273.60	58.83	264.76	52.17	262.93	53.49
265.16	47.11	281.28	64.92	273.63	55.98	264.78	53.24	262.99	49.83

265.18	48.89	281.31	71.55	273.72	56.26	264.87	43.11	263.07	48.35
265.24	49.66	281.34	66.31	273.75	57.02	264.90	49.22	263.11	51.24
265.42	47.23	281.38	65.31	273.96	54.94	264.92	51.80	263.13	51.42
265.46	44.64	281.38	66.57	273.98	53.41	265.01	54.10	263.14	45.18
265.53	45.45	281.39	70.07	273.99	55.86	265.03	45.60	263.17	48.94
265.64	43.32	281.50	64.86	274.12	60.01	265.14	42.83	263.17	45.10
265.65	44.27	281.53	66.48	274.15	62.42	265.16	43.95	263.18	54.35
265.67	43.56	281.54	66.48	274.22	60.40	265.18	45.87	263.21	55.02
265.71	47.07	281.67	68.42	274.32	60.24	265.19	53.10	263.23	50.98
265.74	46.32	281.67	64.16	274.45	59.17	265.24	53.96	263.31	48.71
265.80	47.86	281.69	69.34	274.66	64.61	265.52	47.90	263.39	43.87
265.88	43.38	281.79	65.68	274.67	56.08	265.57	55.03	263.57	50.04
265.97	44.83	281.90	69.55	274.75	64.01	265.60	45.17	263.59	49.30
265.99	49.31	281.96	68.16	274.85	57.67	265.63	47.40	263.69	50.49
266.06	45.69	282.02	67.10	274.85	61.66	265.65	49.24	263.70	41.08
266.10	48.39	282.14	66.60	274.88	55.81	265.70	43.73	263.71	48.51
266.18	48.64	282.15	70.20	274.93	55.91	265.70	56.54	263.79	43.72
266.22	48.57	282.29	65.23	274.94	57.72	265.86	52.64	263.80	46.69
266.25	50.88	282.31	66.24	274.95	58.17	266.01	56.27	263.93	43.64
266.33	47.94	282.48	64.59	274.98	57.67	266.03	51.93	263.96	51.91
266.47	47.22	282.50	66.16	275.09	64.59	266.08	58.13	263.99	49.06
266.52	47.20	282.61	66.65	275.10	60.48	266.08	52.08	264.09	47.40
266.58	45.48	282.62	68.92	275.22	64.60	266.10	53.87	264.09	49.46
266.68	43.99	282.70	67.22	275.24	59.22	266.25	54.09	264.25	54.85
266.71	47.46	282.85	69.43	275.36	58.22	266.31	52.68	264.33	51.83
266.72	45.63	283.04	70.51	275.44	59.75	266.38	50.47	264.39	55.67
266.76	47.91	283.13	63.45	275.44	53.43	266.43	53.18	264.55	47.54
266.80	45.16	283.18	68.69	275.49	62.52	266.54	56.31	264.64	54.10
266.85	48.57	283.25	64.66	275.56	57.50	266.57	43.72	264.66	47.94
266.94	46.39	283.26	66.05	275.58	59.06	266.57	52.72	264.69	43.69
267.01	48.35	283.31	66.55	275.62	56.06	266.58	56.34	264.83	47.63
267.04	50.09	283.35	67.61	275.67	59.12	266.62	50.83	264.87	51.85
267.10	46.40	283.38	72.69	275.69	61.61	266.75	44.14	264.91	51.45
267.14	49.09	283.42	67.16	275.70	59.24	266.79	55.65	264.98	49.42
267.22	48.46	283.44	66.51	275.82	59.35	266.85	54.08	264.99	52.49
267.27	49.00	283.45	68.75	275.83	56.60	266.86	56.26	264.99	49.92
267.29	47.51	283.46	66.72	276.06	55.85	266.96	44.37	265.01	53.21
267.39	49.41	283.59	64.26	276.07	55.92	266.98	51.85	265.08	53.96
267.54	49.81	283.62	71.04	276.07	55.94	266.99	50.42	265.15	50.90
267.58	47.91	283.62	69.85	276.17	58.35	267.10	54.13	265.18	56.71
267.63	47.81	283.72	68.82	276.21	65.10	267.11	43.89	265.20	52.62
267.73	46.33	283.75	68.37	276.29	62.25	267.21	41.71	265.23	45.85

267.76	47.78	283.78	69.15	276.40	63.78	267.23	45.26	265.24	53.71
267.79	47.30	283.88	68.77	276.54	60.57	267.26	45.33	265.24	45.72
267.83	51.89	283.99	68.74	276.74	64.92	267.29	51.90	265.26	50.90
267.85	45.93	284.04	66.18	276.75	59.92	267.30	53.30	265.28	56.52
267.91	49.80	284.09	68.67	276.81	62.85	267.60	46.00	265.32	55.90
267.99	46.68	284.22	69.23	276.92	64.27	267.65	54.15	265.39	49.64
268.08	46.55	284.22	70.70	276.94	59.56	267.67	48.78	265.45	42.24
268.09	50.34	284.36	66.72	276.96	56.67	267.72	50.09	265.66	50.85
268.17	50.08	284.37	68.57	276.97	56.12	267.72	50.16	265.67	50.29
268.20	53.21	284.56	68.48	277.00	57.94	267.77	45.46	265.79	53.70
268.27	46.72	284.57	69.99	277.03	57.50	267.78	58.39	265.79	47.07
268.33	52.75	284.67	67.99	277.05	59.57	267.95	49.39	265.80	45.72
268.35	47.90	284.71	70.84	277.16	61.92	268.07	57.80	265.88	43.83
268.42	49.36	284.78	71.24	277.17	66.23	268.12	56.34	265.90	48.07
268.58	47.66	284.93	70.17	277.29	64.56	268.15	58.31	266.01	44.11
268.62	46.81	285.11	70.68	277.31	64.32	268.17	52.33	266.03	53.34
268.71	49.73	285.21	66.87	277.44	60.50	268.19	55.93	266.08	49.26
268.79	47.54	285.26	68.52	277.52	60.91	268.35	54.48	266.17	47.18
268.81	45.80	285.32	64.63	277.53	54.95	268.41	51.69	266.17	54.37
268.84	45.49	285.36	67.36	277.56	61.96	268.46	53.87	266.33	56.32
268.87	46.19	285.42	69.30	277.62	57.54	268.51	52.11	266.41	52.59
268.90	49.13	285.42	66.66	277.65	57.90	268.62	56.46	266.49	55.43
268.95	49.06	285.44	72.75	277.69	56.83	268.63	47.22	266.65	45.55
269.05	47.64	285.52	67.87	277.74	58.04	268.65	54.16	266.72	53.50
269.12	49.45	285.53	66.28	277.77	64.89	268.66	61.07	266.73	47.55
269.16	51.23	285.53	70.62	277.78	58.11	268.71	52.75	266.74	43.64
269.21	49.62	285.54	69.28	277.89	58.11	268.84	45.62	266.91	47.96
269.28	51.06	285.65	65.55	277.91	62.08	268.89	56.09	266.95	54.53
269.33	50.13	285.69	68.38	278.13	55.90	268.93	56.78	266.99	52.59
269.39	50.05	285.70	72.84	278.14	57.58	268.93	54.95	267.05	52.50
269.40	50.62	285.82	74.08	278.15	58.04	269.04	45.95	267.05	47.30
269.48	49.78	285.84	69.86	278.25	59.46	269.06	52.10	267.07	54.27
269.63	49.77	285.84	69.30	278.30	64.76	269.08	51.75	267.09	54.58
269.69	46.18	285.96	68.61	278.35	63.68	269.17	55.59	267.14	54.30
269.77	47.82	286.07	70.57	278.49	62.51	269.18	45.72	267.24	50.68
269.85	46.44	286.12	69.96	278.60	62.07	269.31	50.66	267.26	57.87
269.86	46.62	286.17	70.44	278.81	60.44	269.31	47.59	267.31	52.86
269.89	45.71	286.30	70.64	278.83	65.20	269.35	47.74	267.31	47.90
269.93	50.29	286.33	70.73	278.88	67.10	269.35	55.26	267.31	51.72
269.95	47.41	286.44	67.56	278.99	64.78	269.37	53.04	267.32	46.41
270.02	48.74	286.45	68.45	279.02	58.99	269.67	49.77	267.32	56.18
270.11	45.86	286.65	67.86	279.03	58.32	269.73	54.20	267.37	55.80

270.17	50.00	286.66	68.90	279.06	56.71	269.77	49.48	267.38	56.10
270.20	50.78	286.78	70.80	279.09	56.89	269.80	48.39	267.48	53.41
270.27	51.09	286.79	74.39	279.09	58.41	269.83	54.00	267.53	45.74
270.32	50.57	286.85	72.39	279.13	63.21	269.84	59.01	267.73	50.46
270.38	48.06	287.01	70.55	279.22	65.85	269.86	46.73	267.74	51.76
270.45	50.71	287.19	71.09	279.24	62.67	270.01	51.33	267.85	48.83
270.45	48.83	287.30	70.49	279.36	62.53	270.14	57.99	267.87	46.77
270.52	49.89	287.33	69.25	279.38	63.76	270.18	54.00	267.87	52.16
270.71	49.41	287.41	67.07	279.51	59.84	270.22	60.70	267.94	45.81
270.73	48.21	287.47	71.83	279.59	58.67	270.27	54.23	267.99	52.87
270.82	47.55	287.51	68.76	279.60	59.76	270.27	57.47	268.08	47.47
270.89	48.84	287.52	73.52	279.63	61.90	270.43	56.19	268.12	56.22
270.94	46.71	287.57	69.39	279.71	60.08	270.48	56.26	268.15	50.91
270.94	50.20	287.60	71.32	279.73	61.49	270.53	53.09	268.25	47.48
270.99	47.82	287.61	68.15	279.76	58.44	270.59	55.52	268.26	54.14
271.02	50.94	287.62	68.80	279.81	59.24	270.70	57.59	268.40	60.40
271.06	50.39	287.72	66.91	279.85	65.94	270.70	49.13	268.50	54.26
271.17	48.89	287.76	73.79	279.85	59.44	270.72	54.84	268.56	54.70
271.26	48.04	287.77	72.08	279.96	57.33	270.72	55.39	268.71	50.37
271.27	52.34	287.88	73.92	279.97	60.10	270.78	55.50	268.79	54.00
271.35	53.17	287.92	72.54	280.20	59.31	270.90	46.33	268.81	47.73
271.37	52.05	287.93	74.32	280.23	58.09	270.97	57.91	268.84	44.09
271.43	51.21	288.03	69.60	280.24	60.19	271.00	56.02	269.00	51.99
271.50	51.41	288.14	71.53	280.34	64.41	271.01	59.14	269.05	57.56
271.50	52.20	288.20	71.24	280.37	65.91	271.11	50.60	269.06	52.78
271.58	52.01	288.24	70.86	280.43	62.31	271.15	51.63	269.12	52.74
271.75	49.38	288.38	71.60	280.58	62.67	271.16	55.14	269.14	52.13
271.81	50.34	288.41	72.15	280.68	62.28	271.24	56.11	269.14	53.34
271.88	50.38	288.51	68.43	280.88	60.42	271.25	48.37	269.16	55.83
271.95	47.74	288.52	70.48	280.91	68.56	271.37	48.33	269.21	54.51
272.00	50.19	288.72	69.82	280.99	66.65	271.38	44.31	269.30	51.39
272.03	49.42	288.74	72.36	281.06	65.96	271.41	48.61	269.34	60.33
272.04	52.13	288.83	74.61	281.08	62.40	271.44	55.62	269.38	46.56
272.06	48.89	288.85	71.46	281.10	59.94	271.44	54.04	269.39	51.89
272.13	52.00	288.93	72.77	281.12	57.73	271.76	49.65	269.39	55.40
272.21	49.28	289.08	72.73	281.15	58.07	271.80	56.85	269.39	47.73
272.31	52.24	289.26	73.92	281.17	59.76	271.84	51.89	269.42	57.00
272.31	52.29	289.37	69.16	281.21	61.16	271.86	48.74	269.43	56.77
272.40	50.61	289.40	72.25	281.30	68.55	271.88	53.95	269.47	55.73
272.43	53.06	289.48	68.83	281.33	68.11	271.92	60.46	269.57	51.85
272.49	51.12	289.54	72.23	281.44	65.83	271.95	46.31	269.62	48.17
272.54	53.47	289.58	72.01	281.45	64.01	272.09	55.51	269.80	51.86

272.57	50.01	289.62	75.14	281.59	61.03	272.21	59.41	269.80	51.97
272.64	52.70	289.67	72.90	281.68	63.35	272.25	55.87	269.92	47.73
272.83	52.23	289.68	76.07	281.69	59.92	272.31	61.33	269.93	55.15
272.84	50.09	289.69	72.74	281.70	64.86	272.32	56.31	269.93	47.46
272.92	48.86	289.72	73.01	281.78	58.33	272.33	57.80	270.02	49.17
273.01	48.61	289.80	70.81	281.81	61.41	272.50	55.95	270.04	48.62
273.04	47.86	289.84	73.60	281.85	59.26	272.55	55.86	270.15	47.52
273.05	48.22	289.87	74.64	281.89	62.71	272.60	56.24	270.18	55.56
273.11	53.25	289.95	73.30	281.92	65.30	272.67	57.57	270.21	51.96
273.13	52.30	289.99	73.42	281.92	61.22	272.76	56.49	270.32	54.29
273.21	50.81	289.99	71.67	282.07	61.20	272.78	49.12	270.33	47.62
273.26	49.75	290.11	70.61	282.08	67.00	272.80	56.27	270.48	58.45
273.34	50.06	290.23	72.57	282.28	59.87	272.81	60.33	270.57	54.70
273.37	55.23	290.30	72.25	282.29	59.07	272.84	54.00	270.62	57.66
273.45	53.02	290.32	72.87	282.30	58.67	272.97	49.80	270.78	49.84
273.48	53.26	290.44	72.80	282.41	62.26	273.06	60.34	270.87	57.95
273.55	49.99	290.46	72.94	282.47	68.80	273.08	57.03	270.89	52.08
273.60	50.96	290.59	71.57	282.50	65.46	273.08	57.89	270.92	48.41
273.62	51.00	290.62	70.20	282.63	66.08	273.19	47.99	271.06	50.00
273.69	49.76	290.79	70.35	282.76	65.28	273.23	53.21	271.10	58.21
273.88	50.80	290.80	72.99	282.96	61.99	273.23	55.83	271.13	52.94
273.90	49.27	290.93	75.37	282.99	68.51	273.31	56.29	271.19	54.33
273.98	52.09	290.94	72.78	283.04	70.22	273.35	51.88	271.20	49.81
274.08	48.20	291.02	72.38	283.14	68.61	273.45	45.51	271.22	54.08
274.10	51.21	291.15	72.68	283.17	64.52	273.47	54.40	271.24	57.46
274.11	48.28	291.34	75.46	283.19	66.00	273.50	56.77	271.30	55.84
274.15	52.52	291.45	70.84	283.20	59.04	273.51	48.10	271.38	53.36
274.18	49.52	291.49	72.68	283.23	62.25	273.53	54.51	271.41	57.15
274.25	52.86	291.56	72.99	283.24	62.94	273.82	50.13	271.44	53.90
274.32	47.26	291.63	73.55	283.29	63.71	273.88	55.63	271.45	48.22
274.42	54.64	291.68	74.06	283.37	66.56	273.92	50.90	271.46	55.29
274.43	52.45	291.69	75.90	283.40	67.65	273.94	49.94	271.47	58.18
274.49	51.89	291.74	73.52	283.51	64.64	273.95	53.96	271.48	50.02
274.53	52.15	291.76	77.29	283.55	64.15	274.00	61.14	271.50	57.90
274.61	54.33	291.76	73.71	283.66	64.22	274.03	47.50	271.54	58.30
274.65	51.90	291.78	73.25	283.75	60.71	274.16	53.57	271.63	55.94
274.67	51.11	291.88	70.64	283.76	62.60	274.30	61.17	271.70	46.18
274.74	49.86	291.94	75.91	283.77	66.63	274.32	56.56	271.88	55.24
274.95	51.07	291.94	75.99	283.85	62.41	274.39	62.41	271.88	56.16
274.95	52.75	292.03	74.99	283.88	61.53	274.42	60.09	272.01	47.56
275.04	50.39	292.07	72.90	283.93	62.53	274.43	60.38	272.02	49.91
275.12	49.66	292.09	74.27	283.97	62.17	274.56	57.61	272.02	58.06

275.15	51.42	292.18	71.69	284.00	64.58	274.62	56.21	272.09	48.39
275.17	49.93	292.31	78.61	284.02	65.66	274.69	56.16	272.12	52.80
275.20	50.77	292.38	70.69	284.14	62.68	274.74	57.87	272.23	49.03
275.23	51.64	292.42	76.19	284.14	63.47	274.85	51.88	272.26	58.17
275.29	51.97	292.52	76.53	284.36	60.18	274.85	59.71	272.31	50.00
275.38	50.32	292.54	76.75	284.38	62.94	274.87	60.01	272.40	49.79
275.47	53.08	292.67	71.74	284.40	63.23	274.90	61.79	272.42	54.55
275.49	53.29	292.68	75.47	284.48	63.48	274.92	57.08	272.55	62.30
275.56	53.22	292.87	71.69	284.53	68.87	275.06	50.03	272.64	55.11
275.59	54.08	292.87	74.50	284.59	65.63	275.11	62.78	272.71	58.13
275.65	53.10	292.99	73.46	284.73	69.11	275.15	60.54	272.86	49.89
275.70	55.05	293.01	74.36	284.83	65.14	275.18	57.54	272.95	58.39
275.72	52.05	293.08	76.21	285.04	62.93	275.25	49.40	272.97	51.87
275.79	51.05	293.23	74.87	285.05	68.74	275.31	54.85	273.01	49.89
275.98	52.18	293.41	75.47	285.12	68.69	275.32	54.48	273.14	51.59
276.02	49.95	293.52	71.73	285.22	68.03	275.40	58.11	273.19	58.13
276.09	53.15	293.55	73.71	285.25	62.72	275.42	50.17	273.21	54.41
276.19	51.26	293.62	70.29	285.26	63.60	275.52	46.83	273.28	49.95
276.20	49.90	293.70	74.57	285.28	60.23	275.52	50.46	273.28	58.20
276.22	48.39	293.74	74.66	285.31	62.48	275.58	49.67	273.30	55.98
276.25	50.51	293.76	77.18	285.32	63.72	275.61	56.00	273.31	61.82
276.29	50.56	293.81	74.23	285.39	65.73	275.61	59.03	273.37	56.36
276.35	54.07	293.84	74.91	285.44	69.60	275.91	50.16	273.46	54.60
276.42	50.38	293.84	73.72	285.47	66.47	275.98	58.31	273.50	63.57
276.53	52.47	293.85	74.00	285.61	68.71	276.00	52.17	273.52	55.28
276.53	53.41	293.96	71.75	285.62	68.34	276.01	54.12	273.53	49.93
276.60	53.63	294.01	76.22	285.76	64.84	276.03	55.02	273.54	50.51
276.65	53.86	294.02	78.67	285.83	65.10	276.08	62.24	273.55	60.38
276.71	53.18	294.10	78.65	285.85	65.97	276.09	47.87	273.56	56.77
276.77	52.75	294.15	78.77	285.86	60.66	276.23	54.33	273.58	59.76
276.78	56.23	294.16	74.61	285.93	62.11	276.36	62.53	273.61	58.81
276.85	55.17	294.26	72.92	285.96	62.47	276.40	58.38	273.70	54.38
277.04	53.34	294.38	75.07	285.99	62.68	276.45	62.53	273.77	47.34
277.06	51.96	294.45	74.86	286.05	62.31	276.49	63.48	273.96	54.08
277.14	53.24	294.50	75.20	286.07	66.56	276.51	57.65	273.96	54.09
277.24	51.95	294.59	74.83	286.09	64.10	276.65	61.71	274.08	56.92
277.26	53.11	294.63	76.90	286.21	64.13	276.69	58.00	274.09	50.90
277.27	50.54	294.75	74.45	286.22	64.31	276.76	54.31	274.10	51.15
277.31	54.45	294.75	70.72	286.44	61.13	276.81	57.77	274.19	52.55
277.34	53.17	294.95	71.80	286.45	63.52	276.92	58.87	274.22	51.51
277.40	53.56	294.96	75.78	286.46	62.31	276.93	52.12	274.30	51.80
277.49	52.00	295.06	74.66	286.56	64.57	276.96	60.51	274.34	56.23

277.58	56.44	295.10	79.17	286.60	68.18	276.97	60.36	274.39	54.66
277.59	51.19	295.16	75.74	286.68	70.24	276.99	57.06	274.47	49.77
277.67	56.40	295.30	76.10	286.79	68.58	277.12	51.15	274.48	57.33
277.70	53.64	295.49	78.91	286.90	66.27	277.20	62.47	274.63	61.74
277.76	51.93	295.59	72.73	287.11	64.47	277.23	60.36	274.71	58.03
277.81	53.20	295.63	75.17	287.13	70.83	277.25	59.38	274.80	57.67
277.84	53.27	295.71	71.04	287.22	69.95	277.34	49.77	274.93	49.54
277.92	53.45	295.78	76.08	287.32	65.85	277.39	58.55	275.02	57.40
278.09	54.07	295.82	74.96	287.32	70.55	277.40	54.00	275.04	51.96
278.12	53.28	295.86	79.21	287.34	63.98	277.50	62.42	275.06	49.12
278.19	53.19	295.89	74.42	287.38	66.49	277.51	51.40	275.21	53.26
278.31	50.51	295.90	78.47	287.39	62.56	277.60	51.14	275.26	58.17
278.32	53.72	295.91	74.31	287.40	64.77	277.61	52.10	275.28	54.72
278.34	52.98	295.94	75.39	287.44	65.62	277.65	49.98	275.35	57.70
278.35	52.14	295.97	79.57	287.52	68.50	277.67	59.84	275.37	54.97
278.39	53.31	296.03	73.07	287.54	70.69	277.67	57.81	275.37	52.78
278.45	55.34	296.09	77.52	287.67	69.41	278.01	54.98	275.38	60.53
278.57	54.12	296.11	77.42	287.70	65.83	278.05	58.02	275.44	59.00
278.63	53.28	296.19	77.59	287.83	66.54	278.06	55.68	275.54	55.80
278.63	53.91	296.22	77.09	287.90	64.26	278.10	55.94	275.56	62.52
278.72	54.77	296.23	75.00	287.91	62.90	278.11	58.11	275.61	48.38
278.75	54.28	296.36	77.33	287.94	68.39	278.14	63.06	275.62	56.81
278.83	52.29	296.45	76.34	288.01	65.80	278.18	50.02	275.62	55.46
278.86	53.28	296.54	76.83	288.04	66.41	278.31	56.27	275.62	53.32
278.88	53.96	296.58	78.21	288.07	62.49	278.44	65.96	275.63	60.36
278.95	53.20	296.66	78.49	288.12	66.93	278.48	57.50	275.66	63.82
279.15	55.10	296.70	77.16	288.18	66.61	278.55	65.91	275.70	56.01
279.17	53.21	296.82	76.85	288.18	69.04	278.56	63.10	275.77	58.01
279.24	53.78	296.82	74.06	288.28	64.57	278.56	57.92	275.86	44.99
279.35	52.97	297.03	76.00	288.29	65.03	278.72	62.80	276.03	55.93
279.36	51.96	297.04	76.80	288.52	66.49	278.77	57.66	276.03	56.27
279.39	53.03	297.15	76.64	288.52	65.07	278.84	57.94	276.16	58.39
279.42	52.97	297.17	77.21	288.53	63.08	278.89	60.06	276.16	49.63
279.44	52.00	297.23	77.04	288.65	66.53	279.00	62.59	276.17	51.12
279.51	55.80	297.38	78.36	288.67	71.46	279.03	62.39	276.25	53.26
279.60	51.80	297.56	79.05	288.75	68.71	279.04	53.43	276.29	55.62
279.69	55.49	297.68	74.63	288.86	68.78	279.05	59.94	276.38	51.36
279.70	53.99	297.74	81.54	289.00	67.17	279.09	57.04	276.41	57.96
279.78	55.00	297.79	75.04	289.18	66.59	279.20	54.19	276.47	54.06
279.82	53.71	297.86	79.18	289.21	75.03	279.29	64.25	276.54	50.88
279.89	55.81	297.91	74.06	289.27	71.22	279.30	62.26	276.57	57.24
279.92	53.83	297.91	79.10	289.38	71.01	279.32	60.11	276.70	62.48

279.95	54.31	297.96	76.05	289.39	66.84	279.41	51.15	276.80	56.02
280.01	53.93	297.97	76.77	289.42	64.88	279.46	57.61	276.87	61.22
280.20	54.31	297.98	74.56	289.44	64.19	279.49	59.80	277.01	49.55
280.23	54.60	298.01	74.89	289.47	64.38	279.56	60.32	277.09	59.01
280.29	53.96	298.07	79.11	289.49	63.11	279.57	54.14	277.12	51.75
280.42	51.62	298.10	76.29	289.52	66.73	279.68	51.14	277.15	51.38
280.42	55.00	298.15	79.12	289.59	72.35	279.71	48.84	277.29	54.89
280.43	52.69	298.19	79.17	289.62	69.49	279.74	55.73	277.34	58.20
280.46	53.44	298.26	76.70	289.74	68.32	279.74	58.59	277.35	55.63
280.52	55.33	298.31	80.20	289.77	67.68	279.78	59.27	277.42	57.80
280.57	55.69	298.33	76.77	289.90	67.68	280.06	53.32	277.43	51.92
280.65	54.00	298.44	74.85	289.97	67.60	280.13	63.70	277.44	58.25
280.74	57.91	298.54	81.21	289.99	63.77	280.16	59.16	277.48	60.42
280.77	56.30	298.61	78.36	290.00	69.29	280.16	55.15	277.53	59.83
280.82	57.15	298.64	79.15	290.08	67.35	280.21	59.76	277.61	57.23
280.86	54.95	298.74	79.46	290.11	67.37	280.22	66.67	277.65	64.80
280.93	56.38	298.79	79.30	290.14	66.40	280.26	49.45	277.67	56.08
280.98	57.63	298.92	76.97	290.21	67.58	280.39	57.12	277.69	48.69
281.02	59.57	298.93	75.26	290.25	73.19	280.51	65.44	277.69	53.87
281.07	55.19	299.10	74.66	290.25	66.73	280.56	58.10	277.70	58.34
281.27	54.10	299.11	76.21	290.35	66.52	280.61	66.35	277.70	60.46
281.28	58.59	299.24	77.48	290.36	66.28	280.64	58.51	277.73	62.24
281.36	55.29	299.24	80.92	290.59	65.21	280.64	63.32	277.78	60.80
281.48	53.37	299.32	81.07	290.62	64.97	280.82	62.55	277.86	57.55
281.48	54.56	299.49	77.72	290.63	63.08	280.85	59.89	277.92	49.22
281.49	52.74	299.63	81.04	290.74	65.66	280.91	60.45	278.10	56.04
281.52	56.74	299.74	77.54	290.77	74.74	280.96	60.32	278.11	60.03
281.57	55.26	299.81	77.61	290.83	72.68	281.07	62.50	278.24	60.34
281.62	58.84	299.85	72.93	290.93	70.56	281.11	53.81	278.24	51.88
281.74	56.42	299.96	79.61	291.06	70.82	281.11	62.86	278.26	52.84
281.79	56.50	299.99	78.50	291.26	66.79	281.12	58.70	278.32	54.08
281.84	57.11	300.01	81.03	291.28	74.06	281.16	59.22	278.35	54.22
281.87	56.93	300.06	77.75	291.34	72.93	281.28	52.12	278.45	51.71
281.91	55.06	300.07	80.70	291.45	72.60	281.35	64.03	278.50	57.58
282.01	54.68	300.07	76.24	291.47	66.85	281.39	65.47	278.53	56.97
282.04	55.51	300.09	79.22	291.50	66.69	281.39	59.61	278.63	59.73
282.07	56.15	300.12	79.19	291.51	62.95	281.49	52.46	278.65	53.54
282.11	54.98	300.18	76.16	291.54	68.04	281.54	59.27	278.79	64.28
282.33	55.38	300.23	80.92	291.56	64.38	281.54	60.09	278.88	60.34
282.35	59.26	300.28	83.00	291.61	69.98	281.64	62.03	278.93	60.77
282.41	53.67	300.33	78.06	291.67	71.45	281.68	57.09	279.09	54.57
282.53	56.34	300.37	78.79	291.69	73.69	281.76	56.33	279.17	62.53

282.53	53.05	300.38	80.92	291.84	71.84	281.77	50.60	279.19	53.78
282.54	53.68	300.50	76.01	291.87	72.31	281.80	51.92	279.22	52.23
282.58	58.16	300.61	78.18	291.98	68.74	281.82	62.29	279.39	60.41
282.63	56.52	300.67	76.78	292.05	69.29	281.83	59.70	279.41	60.86
282.67	57.61	300.71	79.96	292.08	62.66	282.14	57.27	279.43	56.54
282.77	53.25	300.83	79.02	292.08	70.07	282.21	61.20	279.51	54.14
282.84	56.47	300.85	80.99	292.16	65.75	282.22	57.29	279.52	60.78
282.87	56.42	300.98	74.95	292.18	66.61	282.24	56.42	279.53	58.32
282.94	57.83	300.99	81.38	292.25	66.65	282.27	59.21	279.54	59.77
282.97	59.46	301.19	79.67	292.27	67.67	282.31	69.74	279.59	59.94
283.04	57.42	301.19	76.99	292.34	68.80	282.32	53.60	279.70	57.22
283.10	55.92	301.29	78.80	292.34	74.84	282.46	56.21	279.72	62.06
283.11	56.35	301.31	82.25	292.43	66.71	282.59	66.33	279.77	50.12
283.17	56.64	301.38	82.32	292.44	70.94	282.66	62.46	279.77	59.33
283.38	58.43	301.55	80.17	292.66	66.20	282.69	69.74	279.77	58.88
283.39	55.44	301.72	82.36	292.69	66.50	282.71	62.54	279.78	56.12
283.46	56.58	301.82	79.06	292.69	65.13	282.73	64.87	279.78	61.00
283.59	53.96	301.87	79.19	292.81	69.95	282.87	62.33	279.81	60.28
283.59	56.77	301.94	75.05	292.83	74.85	282.92	60.66	279.85	61.94
283.59	52.78	302.01	81.29	292.90	71.14	282.99	59.81	279.93	55.65
283.62	57.78	302.05	75.98	293.02	70.81	283.04	62.95	280.00	50.42
283.68	54.28	302.07	81.67	293.14	70.71	283.17	60.81	280.20	58.55
283.72	57.64	302.13	82.22	293.34	68.33	283.19	60.35	280.20	59.82
283.82	53.74	302.13	80.35	293.35	75.08	283.20	58.54	280.32	55.49
283.91	56.92	302.14	81.22	293.43	77.57	283.21	62.72	280.32	53.68
283.95	55.46	302.19	79.72	293.53	73.95	283.24	60.40	280.33	60.98
284.00	60.33	302.20	82.71	293.55	70.85	283.35	55.84	280.40	54.17
284.02	55.72	302.25	79.16	293.56	66.38	283.44	65.99	280.42	54.32
284.12	56.44	302.31	81.95	293.62	65.27	283.46	64.65	280.53	55.96
284.15	59.55	302.35	84.35	293.63	70.69	283.47	63.28	280.57	60.39
284.16	56.14	302.41	82.88	293.65	68.53	283.56	54.12	280.61	59.11
284.23	57.43	302.46	80.22	293.67	69.98	283.61	59.77	280.71	54.09
284.43	59.41	302.47	79.43	293.75	75.74	283.64	58.45	280.71	60.00
284.44	54.22	302.71	84.35	293.80	73.14	283.71	62.90	280.85	68.75
284.52	55.16	302.74	80.06	293.90	71.66	283.77	55.41	280.95	59.04
284.64	56.81	302.81	82.98	293.95	73.58	283.83	56.08	281.02	61.24
284.65	55.06	302.92	82.97	294.05	70.42	283.85	51.33	281.16	51.70
284.65	56.03	302.92	82.12	294.13	69.40	283.89	62.33	281.24	61.76
284.68	56.04	303.05	76.94	294.16	66.12	283.89	54.17	281.26	52.82
284.75	54.91	303.09	80.64	294.18	72.83	283.92	63.86	281.31	54.80
284.77	59.35	303.25	77.14	294.23	68.77	284.24	60.14	281.45	56.71
284.87	54.12	303.28	77.01	294.28	70.36	284.29	60.29	281.50	60.46

284.95	57.65	303.39	80.48	294.30	66.63	284.29	57.33	281.52	59.94
284.98	57.96	303.41	81.29	294.35	68.51	284.32	59.86	281.58	61.28
285.04	58.35	303.46	81.11	294.39	74.18	284.36	59.18	281.59	58.51
285.08	57.65	303.61	80.67	294.40	69.22	284.38	66.65	281.61	59.72
285.18	60.33	303.82	83.21	294.51	69.73	284.41	51.81	281.62	63.41
285.20	60.27	303.92	78.98	294.51	68.08	284.53	59.77	281.68	62.91
285.24	61.09	303.94	82.90	294.74	66.32	284.66	67.14	281.76	60.82
285.31	62.61	304.00	78.17	294.76	70.32	284.71	62.51	281.80	63.36
285.48	58.25	304.09	81.59	294.77	66.30	284.76	69.30	281.83	51.95
285.51	57.17	304.15	80.59	294.87	70.56	284.79	65.22	281.84	54.31
285.56	58.09	304.18	83.40	294.90	75.23	284.80	62.51	281.84	59.34
285.68	54.81	304.21	79.18	294.98	75.17	284.97	63.19	281.86	62.29
285.69	56.52	304.22	81.61	295.10	75.14	284.99	61.38	281.87	63.52
285.70	56.28	304.22	83.74	295.22	70.76	285.06	61.62	281.88	63.66
285.75	57.56	304.24	79.65	295.40	68.67	285.12	64.62	281.92	62.96
285.81	58.65	304.31	85.47	295.43	76.67	285.23	64.44	282.01	59.59
285.83	60.39	304.33	78.85	295.50	74.91	285.26	64.35	282.08	50.68
285.96	58.03	304.38	83.00	295.60	74.75	285.27	61.79	282.27	61.08
286.00	61.84	304.44	85.06	295.62	69.97	285.28	59.14	282.28	59.24
286.03	58.44	304.48	84.63	295.64	65.99	285.30	61.99	282.39	61.50
286.12	60.52	304.55	83.10	295.68	66.53	285.42	57.16	282.40	55.39
286.13	62.38	304.56	81.17	295.71	72.03	285.50	67.63	282.41	56.57
286.22	57.56	304.76	81.44	295.72	67.28	285.54	64.41	282.47	56.20
286.26	58.01	304.85	82.67	295.76	71.00	285.54	62.44	282.52	57.10
286.27	59.53	304.88	83.31	295.83	74.89	285.64	52.94	282.61	55.23
286.37	63.06	305.00	81.96	295.85	73.06	285.72	62.62	282.64	60.21
286.54	58.42	305.03	86.47	295.98	74.79	285.72	60.24	282.69	60.67
286.58	55.53	305.15	78.56	296.00	71.05	285.78	65.68	282.78	54.93
286.63	58.36	305.35	81.29	296.12	72.22	285.82	56.60	282.80	60.30
286.75	57.71	305.35	79.83	296.20	70.79	285.92	55.50	282.94	66.56
286.75	56.77	305.45	81.68	296.23	72.63	285.94	55.74	283.03	60.77
286.77	55.16	305.49	84.96	296.24	68.16	285.95	54.84	283.09	64.62
286.78	57.24	305.56	81.09	296.32	68.67	285.97	62.00	283.23	51.20
286.86	58.20	305.69	79.05	296.34	69.50	285.99	60.28	283.34	53.84
286.88	59.98	305.89	85.21	296.38	66.91	286.29	60.44	283.34	64.62
286.99	58.19	305.98	81.89	296.42	69.20	286.36	64.61	283.37	55.30
287.08	56.40	306.03	82.75	296.47	72.75	286.38	58.06	283.52	58.67
287.09	61.35	306.08	80.01	296.48	74.77	286.39	58.28	283.56	60.18
287.17	61.61	306.16	84.72	296.58	67.63	286.44	61.40	283.58	58.76
287.18	58.18	306.22	78.54	296.60	69.25	286.45	67.74	283.66	56.25
287.27	60.63	306.24	84.50	296.82	67.33	286.49	55.47	283.66	63.21
287.32	61.43	306.28	83.34	296.83	72.07	286.61	61.84	283.67	61.56

287.35	57.21	306.28	80.78	296.85	68.29	286.74	68.06	283.69	64.24
287.43	58.30	306.31	82.11	296.95	70.64	286.79	62.52	283.76	63.43
287.59	61.60	306.31	81.25	296.99	74.48	286.83	70.74	283.86	60.06
287.61	57.80	306.37	86.13	297.07	74.04	286.87	63.40	283.89	64.61
287.70	58.36	306.41	80.38	297.16	74.95	286.89	67.52	283.92	61.24
287.80	57.33	306.48	83.27	297.29	72.42	287.03	64.64	283.93	62.18
287.81	57.79	306.49	85.37	297.48	68.40	287.09	63.02	283.93	58.85
287.81	55.09	306.55	83.19	297.51	77.76	287.13	62.49	283.94	52.46
287.87	58.21	306.60	82.33	297.58	75.00	287.19	64.20	283.94	58.46
287.93	59.62	306.65	83.44	297.67	76.71	287.31	65.45	283.96	66.32
287.96	63.44	306.85	83.26	297.70	71.75	287.34	63.09	283.99	62.01
288.05	58.55	306.91	83.26	297.71	67.19	287.34	68.65	284.11	62.86
288.12	58.66	306.95	84.03	297.75	67.07	287.34	57.96	284.15	51.70
288.15	59.08	307.07	84.62	297.78	68.59	287.39	62.25	284.34	60.41
288.21	62.48	307.08	85.41	297.79	71.13	287.50	57.02	284.35	62.13
288.25	60.07	307.22	82.55	297.84	72.09	287.59	68.17	284.46	62.77
288.33	58.52	307.41	81.23	297.90	76.73	287.60	64.96	284.47	58.52
288.36	57.52	307.44	80.72	297.92	76.83	287.64	66.60	284.48	56.22
288.39	61.04	307.54	82.54	298.05	72.45	287.71	56.59	284.57	59.28
288.48	59.58	307.56	83.06	298.08	72.89	287.77	60.69	284.60	54.00
288.66	58.40	307.61	84.38	298.20	72.97	287.81	64.04	284.68	58.70
288.67	63.51	307.78	82.49	298.28	71.24	287.85	66.68	284.72	62.08
288.74	58.41	307.95	85.16	298.31	72.96	287.89	60.19	284.75	59.64
288.85	58.12	308.07	81.21	298.32	67.32	287.99	56.83	284.86	63.60
288.86	58.49	308.09	83.18	298.39	69.92	288.00	53.98	284.88	57.16
288.86	55.89	308.16	81.64	298.41	70.53	288.03	59.62	285.01	66.14
288.91	61.06	308.28	80.18	298.46	70.75	288.07	65.77	285.11	62.44
288.96	58.50	308.33	85.84	298.50	68.74	288.07	64.26	285.16	67.51
288.99	61.71	308.35	81.89	298.55	76.75	288.37	58.90	285.32	51.13
289.12	59.42	308.36	84.02	298.58	72.97	288.43	62.73	285.40	64.20
289.17	60.59	308.36	83.41	298.65	70.91	288.46	61.06	285.43	55.33
289.19	57.42	308.41	82.00	298.67	70.77	288.47	61.50	285.46	55.93
289.27	61.46	308.45	86.39	298.89	68.63	288.50	62.29	285.60	59.13
289.31	64.67	308.48	83.82	298.91	70.32	288.55	72.80	285.67	64.54
289.38	59.34	308.54	84.84	298.91	68.93	288.56	56.21	285.67	59.94
289.42	59.55	308.57	87.59	299.02	71.49	288.68	60.47	285.74	64.64
289.44	57.36	308.64	87.25	299.07	79.09	288.81	70.92	285.75	62.11
289.53	58.99	308.68	82.44	299.13	73.69	288.86	63.39	285.76	58.54
289.71	62.60	308.73	89.00	299.25	72.64	288.92	69.88	285.77	63.67
289.74	60.67	308.91	87.49	299.36	73.20	288.95	66.05	285.83	64.71
289.79	59.32	308.99	84.58	299.57	78.39	288.95	64.74	285.94	63.80
289.91	57.73	309.02	85.45	299.57	72.60	289.12	66.68	285.95	66.00

289.92	56.17	309.14	84.67	299.65	79.35	289.16	63.55	285.99	60.09
289.93	59.21	309.16	87.48	299.76	76.83	289.20	63.82	286.00	64.53
289.97	59.54	309.29	80.94	299.77	71.38	289.28	64.58	286.02	51.92
290.02	57.42	309.49	82.88	299.81	73.24	289.41	58.09	286.02	64.70
290.04	61.40	309.51	81.35	299.83	69.38	289.41	68.97	286.02	60.42
290.17	59.17	309.62	86.30	299.85	73.42	289.42	67.79	286.03	64.88
290.24	60.79	309.63	84.66	299.86	68.65	289.42	66.95	286.07	65.83
290.25	60.57	309.69	83.14	299.90	73.75	289.46	64.25	286.18	62.73
290.32	63.30	309.85	82.58	299.97	76.37	289.58	60.55	286.22	51.27
290.37	64.93	310.05	87.54	300.00	76.15	289.65	68.67	286.42	64.58
290.43	61.30	310.13	82.67	300.15	77.01	289.70	67.77	286.42	63.79
290.49	60.80	310.19	85.48	300.17	74.35	289.71	67.38	286.54	62.31
290.51	58.38	310.24	81.20	300.27	75.08	289.79	55.92	286.54	58.37
290.61	59.19	310.37	81.38	300.35	71.56	289.85	62.40	286.59	58.86
290.78	62.84	310.39	87.51	300.39	75.90	289.90	63.56	286.65	58.32
290.79	61.23	310.43	82.49	300.39	70.34	289.93	66.42	286.69	58.02
290.84	59.44	310.43	87.45	300.46	69.91	289.97	59.86	286.75	60.35
290.96	58.10	310.44	87.13	300.48	71.99	290.06	57.74	286.79	63.53
290.99	59.24	310.47	83.63	300.54	70.71	290.08	55.19	286.84	62.03
290.99	60.83	310.54	87.39	300.59	70.76	290.11	56.18	286.94	57.73
291.01	60.11	310.55	83.12	300.64	77.19	290.12	65.90	286.96	63.45
291.09	58.65	310.63	88.07	300.65	74.20	290.14	63.63	287.08	66.87
291.10	64.41	310.64	87.60	300.72	72.88	290.44	62.36	287.20	66.55
291.22	58.16	310.70	84.61	300.74	74.41	290.53	67.96	287.23	66.75
291.29	65.27	310.77	84.85	300.99	70.60	290.53	63.81	287.41	57.44
291.31	61.64	310.82	86.31	301.00	70.48	290.56	61.85	287.48	64.47
291.38	65.25	311.00	90.33	301.00	74.35	290.57	62.35	287.49	56.23
291.40	61.47	311.06	84.89	301.11	71.95	290.62	73.05	287.55	58.79
291.48	60.60	311.11	89.58	301.14	78.16	290.64	55.81	287.67	60.79
291.55	64.71	311.21	86.27	301.22	78.09	290.78	64.98	287.73	61.54
291.55	62.41	311.23	88.16	301.32	76.13	290.91	70.84	287.75	64.59
291.65	60.70	311.36	82.06	301.45	77.13	290.96	64.66	287.81	65.79
291.82	62.23	311.57	84.54	301.64	73.77	291.01	73.18	287.82	63.83
291.83	59.26	311.58	82.59	301.65	78.64	291.03	64.78	287.84	59.05
291.90	60.24	311.69	85.29	301.73	76.79	291.04	70.32	287.86	65.98
292.04	60.03	311.71	85.49	301.84	76.86	291.19	67.68	287.90	65.80
292.05	60.53	311.78	83.41	301.84	72.83	291.23	64.92	288.01	62.98
292.06	58.34	311.92	83.76	301.89	70.44	291.31	63.80	288.02	66.75
292.09	66.05	312.10	88.01	301.90	70.51	291.34	67.05	288.08	63.94
292.13	61.50	312.23	86.58	301.93	70.87	291.46	68.16	288.08	64.24
292.15	64.02	312.25	84.83	301.93	73.15	291.50	69.76	288.09	65.04
292.27	60.19	312.33	83.27	301.99	73.49	291.50	62.48	288.10	61.74

292.34	64.89	312.43	82.57	302.05	76.54	291.50	69.57	288.11	68.33
292.37	61.84	312.48	88.75	302.08	75.09	291.54	65.35	288.11	56.33
292.43	64.28	312.51	88.73	302.20	76.92	291.65	60.26	288.14	64.36
292.46	62.60	312.51	82.97	302.26	71.98	291.73	70.34	288.24	62.54
292.53	59.66	312.53	89.25	302.35	75.74	291.76	68.63	288.30	54.23
292.61	60.70	312.54	86.72	302.43	74.41	291.77	66.58	288.49	64.68
292.62	63.56	312.63	84.90	302.46	70.42	291.86	56.81	288.50	62.39
292.71	64.50	312.71	88.59	302.46	76.99	291.92	67.08	288.62	63.53
292.88	63.74	312.72	87.14	302.55	72.75	291.96	66.44	288.65	58.06
292.88	59.61	312.78	86.83	302.56	71.22	292.00	67.47	288.66	60.31
292.95	60.48	312.85	87.96	302.61	74.00	292.06	60.60	288.71	61.77
293.08	59.67	312.86	86.82	302.66	72.12	292.14	62.75	288.76	55.67
293.08	60.03	313.09	88.88	302.70	76.75	292.15	58.96	288.84	59.82
293.09	58.10	313.16	86.76	302.72	73.87	292.18	56.90	288.86	63.55
293.14	61.73	313.19	89.06	302.81	72.85	292.20	65.13	288.91	62.05
293.21	65.68	313.32	87.05	302.82	73.21	292.23	68.02	289.02	64.65
293.21	63.65	313.33	89.10	303.06	72.31	292.52	63.87	289.04	58.98
293.32	60.35	313.43	85.31	303.07	72.85	292.58	65.61	289.15	70.83
293.39	61.37	313.64	85.41	303.08	70.90	292.61	62.58	289.27	64.99
293.41	61.79	313.67	84.93	303.17	75.23	292.65	66.70	289.32	66.65
293.49	65.67	313.77	85.55	303.23	82.15	292.68	64.07	289.49	58.23
293.51	62.36	313.79	86.19	303.30	77.69	292.68	72.45	289.57	55.99
293.58	62.54	313.86	85.39	303.40	76.51	292.72	57.71	289.58	66.02
293.65	62.22	314.00	84.95	303.51	76.60	292.84	65.76	289.63	60.18
293.67	60.59	314.20	89.36	303.71	74.80	292.97	70.58	289.75	62.05
293.75	61.38	314.29	85.09	303.74	83.39	293.02	68.76	289.81	62.07
293.94	61.70	314.35	90.28	303.81	82.59	293.09	74.97	289.82	67.16
293.95	67.18	314.38	86.14	303.91	78.90	293.11	66.71	289.88	66.77
294.02	61.76	314.51	84.42	303.92	74.98	293.12	69.12	289.90	63.69
294.13	60.57	314.54	89.67	303.95	72.13	293.27	68.93	289.90	62.08
294.14	58.82	314.58	86.49	303.98	72.77	293.30	66.63	289.93	66.72
294.15	60.12	314.59	85.36	304.01	73.30	293.38	64.33	289.97	69.23
294.19	65.55	314.60	88.32	304.02	73.92	293.42	66.73	290.09	67.04
294.24	62.75	314.63	87.48	304.05	74.98	293.55	67.03	290.10	68.77
294.26	64.83	314.70	86.63	304.14	79.66	293.57	68.51	290.15	63.26
294.38	59.60	314.77	88.40	304.15	76.89	293.57	62.08	290.17	57.47
294.47	68.33	314.79	91.90	304.28	79.72	293.57	68.64	290.17	63.20
294.48	60.68	314.87	88.15	304.32	75.87	293.61	69.48	290.17	65.35
294.54	65.77	314.92	87.76	304.44	77.09	293.72	62.32	290.18	68.85
294.56	62.67	314.94	88.22	304.50	74.52	293.80	69.67	290.20	66.95
294.64	62.52	315.14	89.72	304.53	77.07	293.84	69.14	290.23	68.74
294.72	61.41	315.21	87.23	304.53	70.58	293.85	69.32	290.35	66.05

294.73	63.67	315.26	89.59	304.61	70.73	293.93	58.25	290.38	54.09
294.81	62.58	315.38	89.15	304.65	72.99	294.00	66.35	290.56	63.30
294.99	60.49	315.40	91.69	304.68	74.00	294.03	66.17	290.57	65.74
294.99	66.69	315.53	88.60	304.73	76.96	294.09	68.28	290.70	67.94
295.06	61.55	315.71	87.02	304.78	80.89	294.12	63.42	290.72	61.88
295.18	60.46	315.75	84.44	304.79	74.20	294.22	58.01	290.72	59.71
295.19	61.21	315.85	86.75	304.88	74.08	294.23	60.63	290.81	63.26
295.20	59.91	315.88	87.26	304.88	75.09	294.26	62.12	290.84	56.13
295.24	62.93	315.92	86.70	305.13	73.73	294.28	67.90	290.91	60.14
295.30	61.99	316.09	87.15	305.14	74.32	294.30	68.66	290.94	64.18
295.34	65.72	316.27	90.59	305.16	75.83	294.59	64.61	291.00	63.11
295.44	60.66	316.36	85.48	305.25	74.98	294.66	67.33	291.10	66.12
295.52	64.35	316.41	89.52	305.32	80.90	294.68	63.44	291.10	60.26
295.54	63.06	316.49	86.50	305.37	78.16	294.71	64.75	291.24	70.54
295.59	66.02	316.60	85.33	305.50	76.93	294.76	68.85	291.33	66.68
295.62	64.84	316.62	89.16	305.59	75.93	294.77	72.94	291.39	68.02
295.69	63.82	316.65	88.19	305.79	76.15	294.79	58.49	291.55	58.06
295.77	62.24	316.67	88.54	305.80	81.14	294.92	67.54	291.64	66.70
295.78	61.81	316.69	91.28	305.91	80.10	295.06	72.12	291.64	55.95
295.85	62.61	316.69	88.63	306.00	75.95	295.09	67.80	291.71	59.72
296.04	64.81	316.77	86.78	306.01	84.17	295.15	72.79	291.82	61.59
296.06	62.88	316.88	89.87	306.03	73.40	295.18	69.87	291.88	64.37
296.13	62.56	316.88	91.35	306.06	74.37	295.21	72.39	291.89	61.57
296.24	61.22	316.95	93.29	306.08	74.10	295.37	70.83	291.96	67.65
296.25	60.68	317.02	89.20	306.09	73.21	295.40	68.70	291.97	66.44
296.26	61.57	317.02	88.86	306.13	76.06	295.44	67.74	291.97	62.42
296.31	64.19	317.22	91.56	306.20	79.16	295.52	68.53	292.00	71.14
296.35	62.73	317.32	87.29	306.23	81.03	295.62	70.83	292.05	69.06
296.38	65.47	317.35	91.04	306.38	78.10	295.65	70.09	292.17	67.41
296.49	62.58	317.45	89.57	306.41	77.37	295.66	69.93	292.20	76.03
296.59	63.81	317.47	91.67	306.50	74.80	295.67	67.02	292.22	64.23
296.60	63.75	317.60	87.19	306.57	73.38	295.70	68.28	292.23	66.64
296.64	67.53	317.79	88.27	306.61	78.89	295.83	62.89	292.24	69.55
296.67	67.33	317.81	85.32	306.62	72.39	295.89	72.11	292.25	62.64
296.74	63.52	317.93	91.51	306.69	72.39	295.91	70.83	292.27	58.42
296.83	62.05	317.97	89.68	306.71	73.81	295.93	68.47	292.27	68.17
296.84	68.78	318.01	90.60	306.76	75.04	296.04	64.64	292.29	69.35
296.91	63.37	318.15	86.77	306.81	75.06	296.08	69.53	292.43	66.32
297.12	65.90	318.35	91.67	306.85	79.34	296.10	67.47	292.47	60.22
297.12	61.58	318.44	89.93	306.89	79.19	296.16	70.74	292.64	64.38
297.18	62.65	318.50	88.87	306.95	77.04	296.20	64.43	292.66	68.13
297.29	61.32	318.54	86.18	306.96	76.00	296.30	58.59	292.76	69.25

297.29	62.86	318.68	86.45	307.22	75.44	296.30	61.49	292.78	61.28
297.31	61.50	318.70	93.82	307.22	74.61	296.34	60.53	292.80	62.12
297.38	64.28	318.73	89.43	307.24	75.72	296.36	70.56	292.86	63.57
297.40	62.24	318.75	86.69	307.33	78.99	296.37	67.61	292.93	62.46
297.44	67.99	318.75	90.96	307.37	82.18	296.70	65.07	292.99	61.38
297.55	61.54	318.77	89.57	307.45	80.09	296.74	69.16	293.03	64.07
297.62	63.99	318.84	90.11	307.58	78.30	296.77	65.65	293.06	66.12
297.64	61.93	318.94	91.52	307.66	77.00	296.79	65.59	293.17	65.59
297.69	66.72	318.97	93.71	307.86	77.07	296.82	66.64	293.17	59.07
297.75	71.13	319.01	90.02	307.88	85.03	296.84	74.26	293.34	70.95
297.83	62.52	319.09	89.04	307.97	81.25	296.89	60.08	293.42	66.64
297.88	64.06	319.10	90.27	308.07	77.09	297.00	68.69	293.46	69.62
297.90	67.99	319.31	91.60	308.09	82.03	297.15	72.86	293.63	57.84
297.99	70.13	319.40	90.97	308.11	79.01	297.16	69.60	293.71	68.33
298.16	63.18	319.41	91.70	308.13	75.24	297.22	74.50	293.72	60.63
298.17	66.64	319.53	91.39	308.16	73.93	297.26	69.83	293.77	62.48
298.23	60.81	319.55	93.04	308.17	77.89	297.28	70.54	293.91	66.04
298.34	61.13	319.67	89.07	308.21	77.01	297.43	71.63	293.97	62.72
298.35	61.67	319.86	89.43	308.27	80.15	297.48	69.17	293.99	68.44
298.36	62.28	319.89	89.40	308.32	79.21	297.52	70.78	294.05	66.56
298.42	65.09	320.02	89.36	308.45	81.17	297.58	71.85	294.05	69.22
298.45	62.90	320.02	90.59	308.47	76.34	297.69	72.19	294.05	62.21
298.51	69.57	320.09	88.04	308.60	77.81	297.71	74.12	294.10	69.34
298.59	63.52	320.24	89.53	308.65	77.27	297.72	70.81	294.12	70.70
298.69	70.31	320.44	92.00	308.69	74.08	297.73	65.09	294.27	67.49
298.70	65.12	320.54	90.26	308.70	79.17	297.78	70.43	294.27	71.61
298.76	69.11	320.56	91.33	308.79	77.46	297.88	65.88	294.29	63.02
298.81	65.22	320.62	89.51	308.80	78.99	297.96	75.05	294.32	70.86
298.86	65.02	320.74	89.17	308.84	74.85	298.01	72.04	294.32	57.14
298.94	70.05	320.76	94.65	308.88	76.95	298.04	71.59	294.33	70.57
298.95	67.94	320.82	91.31	308.92	81.01	298.09	63.76	294.33	64.05
299.03	65.30	320.83	91.55	308.95	77.07	298.15	70.77	294.34	71.78
299.22	62.70	320.84	91.06	309.03	77.36	298.21	69.88	294.38	68.22
299.23	70.04	320.93	90.52	309.04	77.11	298.26	70.66	294.51	65.54
299.31	64.88	321.02	90.70	309.28	75.54	298.27	64.39	294.56	59.81
299.40	63.76	321.04	95.34	309.30	78.70	298.37	62.13	294.72	66.60
299.42	62.23	321.10	96.35	309.31	75.83	298.39	62.75	294.73	68.64
299.43	64.85	321.15	92.06	309.40	79.60	298.41	65.41	294.85	67.17
299.47	65.76	321.17	95.31	309.45	82.88	298.44	70.41	294.87	60.41
299.51	62.76	321.40	93.45	309.54	80.69	298.44	70.37	294.89	65.28
299.56	67.64	321.45	91.07	309.64	77.22	298.76	67.95	294.94	63.92
299.64	64.32	321.48	94.29	309.77	79.05	298.83	74.41	294.99	62.59

299.73	69.22	321.61	92.45	309.93	78.80	298.84	66.90	295.08	66.57
299.75	65.08	321.62	94.25	309.96	84.53	298.85	68.86	295.09	66.63
299.82	69.77	321.74	89.02	310.04	81.76	298.90	69.00	295.15	66.65
299.85	66.94	321.94	88.56	310.14	83.15	298.94	75.82	295.25	66.57
299.92	63.63	321.96	88.13	310.18	77.03	298.96	64.92	295.26	63.89
299.99	65.14	322.09	91.44	310.18	79.73	299.09	71.50	295.41	74.05
300.01	68.72	322.10	90.57	310.20	76.59	299.23	77.12	295.52	69.26
300.09	65.64	322.15	91.35	310.24	75.57	299.24	72.36	295.53	70.90
300.27	68.11	322.31	88.42	310.25	78.86	299.33	79.07	295.71	62.91
300.28	64.84	322.47	98.64	310.30	80.86	299.34	72.22	295.80	72.74
300.35	64.73	322.51	95.87	310.36	81.08	299.34	74.59	295.82	63.68
300.45	62.29	322.62	94.78	310.38	81.07	299.50	72.95	295.86	64.55
300.49	63.59	322.65	91.11	310.53	80.68	299.54	69.42	295.97	63.42
300.49	62.04	322.69	87.36	310.56	80.77	299.59	72.72	296.04	68.79
300.53	66.83	322.83	89.22	310.65	78.45	299.65	70.64	296.06	67.57
300.57	66.02	322.86	93.88	310.72	79.12	299.77	72.03	296.12	73.21
300.61	69.96	322.89	92.68	310.76	79.95	299.80	72.89	296.12	68.72
300.70	63.70	322.89	92.23	310.76	78.02	299.80	72.91	296.12	65.03
300.80	67.86	322.91	95.72	310.86	79.07	299.82	69.08	296.15	72.27
300.82	63.88	323.01	90.96	310.89	80.22	299.84	71.20	296.20	71.84
300.89	69.36	323.09	93.70	310.94	78.29	299.96	66.70	296.32	68.54
300.90	65.96	323.12	94.20	310.96	78.29	300.05	73.11	296.35	72.80
300.97	67.06	323.16	93.25	311.02	85.01	300.08	76.12	296.37	65.69
301.05	65.22	323.23	92.70	311.02	80.30	300.12	73.03	296.39	68.87
301.07	71.85	323.26	93.66	311.11	79.23	300.20	62.58	296.40	70.77
301.15	71.48	323.45	93.66	311.11	76.91	300.22	71.68	296.41	58.78
301.34	68.94	323.53	91.47	311.36	79.10	300.29	70.60	296.41	68.76
301.34	66.24	323.56	94.53	311.37	78.51	300.32	73.30	296.44	70.87
301.41	63.47	323.67	92.90	311.39	76.66	300.34	67.72	296.47	69.46
301.52	63.54	323.69	95.63	311.48	79.19	300.46	62.79	296.57	66.83
301.53	65.57	323.81	91.63	311.53	85.27	300.48	61.98	296.62	59.40
301.56	64.67	324.03	93.24	311.62	80.27	300.49	63.04	296.79	68.25
301.60	66.82	324.05	92.12	311.72	81.41	300.52	70.70	296.83	71.75
301.62	64.77	324.15	92.68	311.85	83.31	300.53	70.32	296.93	70.87
301.66	70.35	324.17	93.77	312.00	79.29	300.84	68.16	296.96	62.84
301.77	64.12	324.23	91.55	312.04	85.50	300.90	74.66	296.97	64.37
301.85	67.93	324.39	92.34	312.12	83.33	300.91	66.61	297.01	67.12
301.86	65.94	324.55	99.68	312.23	84.14	300.93	69.20	297.07	61.04
301.92	69.42	324.57	95.72	312.24	80.76	301.00	72.82	297.15	67.33
301.97	68.15	324.68	91.68	312.26	78.37	301.00	77.05	297.19	69.69
302.03	67.35	324.74	96.28	312.28	78.56	301.03	62.53	297.23	66.61
302.11	67.93	324.77	89.25	312.31	79.41	301.15	69.87	297.32	63.80

302.12	64.93	324.89	90.65	312.34	78.82	301.29	73.96	297.35	70.73
302.19	67.37	324.92	95.83	312.36	79.71	301.31	70.67	297.48	74.82
302.39	63.66	324.98	98.96	312.45	80.18	301.39	77.65	297.58	68.80
302.40	72.33	324.98	96.26	312.46	82.11	301.41	72.77	297.61	72.12
302.45	64.13	325.00	92.44	312.62	83.33	301.42	74.73	297.79	62.60
302.56	64.02	325.08	90.24	312.64	78.80	301.59	73.57	297.87	70.76
302.57	64.08	325.16	93.68	312.75	83.03	301.64	69.08	297.91	63.34
302.62	63.78	325.19	95.87	312.81	82.11	301.68	73.09	297.93	64.29
302.64	68.37	325.25	95.52	312.84	82.99	301.72	71.63	298.05	65.55
302.68	67.70	325.30	92.48	312.85	77.66	301.84	74.93	298.13	68.52
302.72	70.25	325.33	95.47	312.94	78.08	301.87	75.33	298.13	66.14
302.82	66.52	325.54	96.17	312.94	78.07	301.87	74.20	298.19	70.83
302.91	72.74	325.62	93.03	312.99	76.84	301.88	68.49	298.19	64.20
302.92	67.68	325.66	95.58	313.04	78.94	301.92	72.49	298.22	68.76
302.98	70.31	325.76	95.70	313.08	81.53	302.04	66.39	298.23	71.77
303.02	69.11	325.77	96.51	313.12	80.09	302.13	74.93	298.29	73.42
303.08	66.07	325.89	91.28	313.18	80.29	302.15	74.86	298.39	69.94
303.16	67.38	326.09	93.75	313.20	80.50	302.17	70.46	298.43	73.54
303.17	65.81	326.13	93.81	313.44	78.03	302.26	63.53	298.47	69.62
303.27	67.99	326.23	97.92	313.44	76.88	302.30	70.83	298.47	70.08
303.45	72.63	326.24	93.80	313.46	76.83	302.35	70.51	298.47	70.75
303.47	67.12	326.31	94.87	313.56	80.40	302.40	73.89	298.49	62.73
303.53	67.87	326.46	93.46	313.60	85.46	302.43	67.41	298.49	71.98
303.63	66.91	326.63	103.83	313.68	81.87	302.53	64.95	298.50	66.74
303.64	64.14	326.68	96.30	313.80	81.08	302.56	63.06	298.55	70.29
303.67	65.73	326.76	93.55	313.92	83.84	302.58	68.17	298.66	70.02
303.69	67.73	326.82	96.43	314.08	81.10	302.60	72.27	298.72	58.31
303.73	68.01	326.84	92.78	314.13	87.20	302.61	74.18	298.87	68.77
303.77	71.10	326.98	93.64	314.20	84.48	302.91	69.47	298.88	70.24
303.86	65.33	326.99	96.34	314.31	81.67	302.98	72.77	298.99	70.71
303.95	68.07	327.05	96.36	314.31	84.14	303.00	69.66	299.03	66.37
303.97	65.37	327.05	93.45	314.34	83.55	303.01	68.26	299.03	64.48
304.04	71.23	327.07	96.53	314.35	82.07	303.05	72.89	299.10	67.45
304.07	72.06	327.15	92.18	314.39	77.28	303.10	77.89	299.16	62.64
304.15	66.87	327.26	98.98	314.41	78.84	303.10	62.83	299.22	66.66
304.22	69.95	327.28	100.08	314.45	83.87	303.24	72.60	299.26	68.38
304.23	69.77	327.32	99.94	314.53	82.00	303.39	76.34	299.32	68.10
304.31	68.28	327.39	94.65	314.56	81.16	303.40	74.97	299.40	64.69
304.50	71.98	327.40	96.57	314.67	83.83	303.46	78.08	299.40	69.03
304.51	66.88	327.61	95.92	314.71	82.32	303.49	74.70	299.55	72.90
304.57	66.00	327.68	96.60	314.84	85.10	303.49	75.96	299.65	72.12
304.70	65.89	327.83	95.07	314.88	78.31	303.66	75.03	299.69	71.75

304.72	68.50	327.85	97.75	314.93	78.26	303.71	72.90	299.85	62.12
304.73	65.27	327.99	93.91	314.94	84.78	303.77	76.61	299.95	69.45
304.76	68.82	328.16	93.66	315.02	82.15	303.81	75.38	299.98	63.97
304.80	66.63	328.20	93.93	315.05	79.43	303.92	74.13	300.02	66.82
304.82	71.68	328.30	98.19	315.07	79.91	303.94	75.99	300.13	69.75
304.93	66.85	328.33	94.28	315.11	83.45	303.95	75.01	300.19	70.13
305.00	70.25	328.38	95.15	315.16	85.24	303.95	70.80	300.20	69.40
305.05	66.68	328.53	92.78	315.18	80.26	304.02	73.99	300.27	75.06
305.10	74.36	328.72	107.35	315.26	84.63	304.12	70.07	300.27	66.83
305.12	72.22	328.73	97.82	315.26	79.73	304.21	76.46	300.28	68.74
305.20	69.41	328.84	93.37	315.51	82.60	304.22	77.06	300.31	75.15
305.29	69.25	328.88	97.82	315.53	79.19	304.27	74.52	300.37	74.76
305.30	67.56	328.92	92.87	315.54	82.42	304.34	63.54	300.46	70.56
305.39	74.36	329.05	92.74	315.65	84.47	304.39	73.60	300.49	73.24
305.55	72.53	329.07	97.83	315.69	87.24	304.42	74.41	300.53	69.69
305.55	66.33	329.12	96.33	315.77	84.78	304.47	74.60	300.55	61.62
305.64	68.90	329.13	97.50	315.87	84.61	304.50	71.12	300.56	74.94
305.74	68.34	329.16	98.86	316.00	83.34	304.61	61.60	300.57	73.33
305.76	65.45	329.22	93.66	316.16	81.23	304.63	71.46	300.57	70.50
305.78	65.85	329.34	98.29	316.19	87.40	304.65	64.60	300.58	71.22
305.80	69.30	329.34	97.41	316.27	85.47	304.69	73.71	300.63	75.87
305.86	67.11	329.39	98.95	316.39	85.29	304.69	76.31	300.73	70.56
305.87	73.27	329.45	94.79	316.39	81.54	304.98	72.71	300.78	62.37
306.00	66.36	329.47	97.88	316.43	85.30	305.05	74.98	300.96	70.79
306.05	69.26	329.68	100.01	316.44	81.09	305.09	72.27	300.97	69.59
306.08	66.06	329.78	100.19	316.47	78.76	305.09	67.47	301.07	70.64
306.14	74.27	329.91	95.31	316.48	80.55	305.12	72.83	301.13	68.92
306.20	71.46	329.92	99.73	316.51	84.48	305.16	79.13	301.14	68.80
306.25	68.52	330.05	93.96	316.61	85.07	305.17	64.61	301.16	68.79
306.33	69.38	330.24	94.37	316.62	86.96	305.31	74.65	301.25	69.09
306.34	67.61	330.27	94.16	316.76	86.60	305.47	80.81	301.32	68.60
306.44	69.56	330.41	98.29	316.78	83.71	305.48	77.42	301.33	69.75
306.62	68.48	330.41	98.01	316.89	83.82	305.54	80.92	301.38	65.65
306.62	73.35	330.46	94.62	316.96	83.25	305.56	76.04	301.49	64.44
306.69	66.91	330.63	97.86	316.99	79.39	305.57	77.31	301.51	72.17
306.80	68.93	330.79	105.16	317.00	84.47	305.74	76.79	301.62	77.13
306.81	65.93	330.83	98.95	317.08	79.78	305.78	74.92	301.73	71.80
306.83	66.23	330.90	96.05	317.10	83.15	305.82	74.06	301.78	72.98
306.85	68.94	330.98	95.79	317.16	79.81	305.88	75.55	301.93	62.62
306.91	69.22	331.02	97.00	317.18	81.34	305.99	72.91	302.04	74.11
306.92	72.22	331.12	95.58	317.22	84.19	306.03	70.85	302.05	64.51
307.04	66.56	331.16	101.11	317.27	85.18	306.04	77.23	302.08	65.70

307.11	69.32	331.22	97.34	317.34	81.03	306.04	76.25	302.20	68.07
307.15	67.05	331.22	96.65	317.34	83.84	306.08	76.94	302.27	69.92
307.20	75.11	331.23	98.39	317.59	82.02	306.19	70.52	302.29	69.80
307.24	70.22	331.32	97.56	317.60	85.09	306.28	79.18	302.34	76.65
307.30	69.15	331.40	98.10	317.61	78.39	306.30	77.30	302.35	72.59
307.38	70.22	331.44	101.03	317.72	83.03	306.33	75.80	302.36	68.20
307.39	69.08	331.48	100.48	317.75	87.50	306.43	69.49	302.39	72.76
307.48	70.03	331.53	97.29	317.83	82.15	306.46	72.97	302.46	76.43
307.67	74.24	331.55	99.29	317.94	85.71	306.49	74.14	302.56	72.53
307.68	69.18	331.77	99.87	318.07	85.72	306.54	75.86	302.58	78.34
307.76	71.13	331.85	97.67	318.24	82.28	306.58	70.01	302.60	70.64
307.85	68.99	331.98	98.70	318.26	87.41	306.68	71.12	302.63	72.89
307.88	68.73	331.99	99.34	318.37	87.48	306.69	65.98	302.63	73.36
307.90	67.61	332.14	96.39	318.49	86.92	306.71	68.59	302.64	64.61
307.93	70.49	332.31	95.76	318.49	84.32	306.75	74.12	302.66	70.82
307.97	67.40	332.37	96.03	318.51	83.21	306.76	72.70	302.68	80.70
308.00	76.37	332.46	98.36	318.52	82.16	307.05	72.44	302.71	77.74
308.10	66.94	332.47	99.23	318.56	83.35	307.12	79.18	302.81	71.82
308.18	76.53	332.53	98.50	318.56	81.95	307.18	68.07	302.88	64.57
308.22	71.34	332.69	97.40	318.58	83.55	307.18	74.77	303.05	72.89
308.25	73.21	332.75	101.17	318.67	88.05	307.20	74.89	303.05	70.77
308.31	73.25	332.89	106.21	318.69	86.44	307.23	79.15	303.14	72.77
308.35	69.64	332.89	99.80	318.83	85.22	307.25	66.47	303.20	66.57
308.43	72.27	332.99	95.89	318.87	86.66	307.39	75.46	303.21	69.19
308.45	69.96	333.04	100.42	318.97	83.53	307.53	77.93	303.26	70.26
308.54	71.11	333.08	96.49	319.05	84.49	307.54	78.13	303.31	68.75
308.72	73.25	333.21	95.85	319.08	82.22	307.61	80.93	303.38	68.69
308.73	67.91	333.22	101.94	319.08	87.23	307.66	77.40	303.41	72.63
308.80	70.07	333.28	101.99	319.16	83.64	307.66	77.59	303.47	68.76
308.90	68.99	333.29	101.90	319.18	82.92	307.81	80.60	303.55	64.73
308.93	70.12	333.29	98.37	319.22	78.83	307.85	73.78	303.56	72.59
308.94	70.06	333.38	96.33	319.28	88.40	307.90	75.87	303.70	76.82
308.97	73.62	333.38	111.94	319.30	87.45	307.95	78.13	303.81	72.93
309.02	68.18	333.48	98.14	319.34	83.35	308.07	77.15	303.85	76.95
309.04	75.06	333.50	99.92	319.41	84.85	308.10	73.04	304.01	64.62
309.15	68.00	333.58	101.93	319.41	82.03	308.11	77.15	304.12	66.32
309.24	73.48	333.60	97.16	319.67	81.52	308.11	78.36	304.13	74.56
309.27	71.74	333.62	103.38	319.68	83.23	308.15	75.83	304.18	65.93
309.30	74.85	333.83	100.86	319.69	82.15	308.26	70.76	304.30	68.81
309.35	73.33	333.95	99.35	319.78	82.33	308.35	78.92	304.34	71.06
309.43	70.95	334.05	98.73	319.83	86.94	308.38	79.24	304.35	72.41
309.50	76.98	334.07	102.38	319.91	86.25	308.41	77.37	304.41	74.87

309.51	74.10	334.20	97.55	320.01	86.90	308.49	66.51	304.42	68.59
309.59	74.03	334.39	97.98	320.15	85.39	308.54	76.89	304.44	70.44
309.78	70.21	334.43	97.77	320.33	82.89	308.57	75.30	304.46	77.43
309.80	75.56	334.53	99.94	320.35	91.76	308.62	78.49	304.53	76.85
309.85	67.97	334.55	98.34	320.42	88.11	308.65	72.82	304.62	73.76
309.95	67.93	334.60	99.77	320.54	87.39	308.78	67.54	304.64	76.09
309.97	67.62	334.78	97.65	320.54	84.01	308.79	68.62	304.70	71.71
309.99	69.04	334.86	104.67	320.57	84.00	308.82	68.36	304.71	73.46
310.04	75.24	334.97	101.11	320.59	83.51	308.84	78.83	304.71	62.51
310.07	70.18	334.98	108.75	320.63	86.17	308.84	76.94	304.71	71.67
310.10	76.65	335.05	98.36	320.64	85.21	309.13	72.63	304.72	77.02
310.19	69.96	335.11	102.02	320.67	83.94	309.20	81.07	304.73	74.90
310.30	71.34	335.16	98.05	320.75	89.63	309.25	75.64	304.80	75.58
310.33	72.36	335.30	97.85	320.76	88.28	309.26	73.71	304.89	70.80
310.37	75.11	335.32	108.10	320.92	89.58	309.28	76.10	304.96	63.73
310.40	74.08	335.35	100.68	320.93	84.90	309.32	81.90	305.11	70.37
310.47	70.88	335.36	102.36	321.06	84.68	309.34	71.57	305.14	77.24
310.55	77.59	335.39	101.03	321.12	83.70	309.45	75.49	305.25	75.79
310.55	70.87	335.45	111.65	321.15	87.02	309.61	81.66	305.26	68.20
310.64	72.17	335.45	97.46	321.15	81.98	309.62	78.49	305.27	68.34
310.83	69.08	335.57	101.76	321.23	85.15	309.70	82.20	305.33	70.88
310.83	76.19	335.59	104.19	321.25	86.82	309.72	76.51	305.39	66.55
310.90	70.94	335.62	103.31	321.29	81.96	309.73	77.03	305.46	68.49
311.01	69.77	335.68	98.98	321.33	87.52	309.89	80.14	305.48	73.32
311.04	70.87	335.72	102.84	321.37	89.31	309.93	76.07	305.56	68.30
311.04	68.40	335.91	102.10	321.42	84.46	309.98	77.05	305.63	68.63
311.09	71.02	336.00	102.74	321.49	89.50	310.04	78.66	305.64	71.81
311.12	71.33	336.14	102.18	321.49	83.71	310.16	79.45	305.77	78.34
311.15	75.92	336.14	98.90	321.74	87.14	310.18	79.38	305.88	72.40
311.26	72.19	336.27	99.87	321.76	85.21	310.18	74.13	305.95	76.33
311.36	74.01	336.47	101.82	321.76	82.27	310.20	79.85	306.08	64.43
311.37	71.85	336.50	98.93	321.86	85.49	310.26	77.59	306.20	66.32
311.44	77.28	336.61	103.84	321.90	88.63	310.35	73.79	306.21	76.92
311.47	74.16	336.64	100.74	322.01	89.05	310.45	80.56	306.27	69.82
311.52	71.42	336.71	98.87	322.09	88.19	310.45	80.06	306.36	69.05
311.60	72.99	336.84	100.71	322.24	89.54	310.48	76.78	306.43	75.02
311.61	71.24	336.92	104.67	322.42	89.46	310.58	67.65	306.43	73.04
311.69	75.31	336.99	108.14	322.42	84.41	310.64	76.56	306.50	68.52
311.88	76.44	337.04	109.30	322.50	89.45	310.67	80.38	306.50	76.16
311.88	70.22	337.04	101.09	322.61	90.34	310.72	81.25	306.54	79.10
311.95	71.37	337.13	96.84	322.62	84.43	310.74	74.70	306.54	75.10
312.06	68.73	337.19	103.92	322.66	85.19	310.84	71.59	306.60	77.18

312.10	70.70	337.24	97.76	322.67	86.90	310.85	68.93	306.69	74.77
312.10	71.06	337.36	101.31	322.70	84.40	310.88	69.76	306.72	80.58
312.15	73.07	337.38	105.02	322.71	85.42	310.91	77.59	306.76	72.88
312.19	70.85	337.44	101.72	322.76	88.39	310.94	76.63	306.79	72.97
312.20	76.34	337.45	102.72	322.82	89.22	311.22	73.07	306.80	74.96
312.31	70.61	337.45	101.56	322.83	87.42	311.30	79.46	306.80	78.27
312.38	72.52	337.53	98.72	323.00	90.47	311.31	74.94	306.80	75.44
312.43	70.70	337.55	112.28	323.03	89.28	311.33	71.34	306.81	63.73
312.48	76.40	337.64	101.87	323.13	85.55	311.35	74.98	306.85	76.67
312.54	74.36	337.66	101.52	323.20	88.30	311.40	69.43	306.95	74.14
312.58	70.77	337.70	102.74	323.24	90.50	311.40	83.32	307.03	64.44
312.66	75.18	337.78	103.82	323.25	84.13	311.53	78.39	307.21	72.00
312.67	76.23	337.78	100.62	323.31	85.33	311.68	80.48	307.22	76.20
312.77	78.64	338.00	104.49	323.33	85.97	311.69	78.33	307.31	76.22
312.95	76.54	338.08	101.68	323.40	85.67	311.76	83.53	307.34	69.23
312.96	73.10	338.21	99.24	323.44	86.79	311.80	78.33	307.36	68.68
313.01	72.13	338.22	104.18	323.45	89.52	311.80	79.15	307.40	71.77
313.14	72.77	338.35	100.01	323.51	87.13	311.96	78.84	307.45	69.44
313.14	71.47	338.56	101.91	323.56	87.23	312.00	77.21	307.53	70.15
313.16	70.94	338.57	100.45	323.56	83.81	312.06	81.19	307.55	74.59
313.19	72.59	338.68	102.54	323.81	86.12	312.10	78.98	307.63	72.83
313.26	76.04	338.72	101.47	323.82	84.88	312.22	78.45	307.73	72.57
313.26	74.48	338.78	102.60	323.83	81.98	312.25	74.91	307.73	76.67
313.39	74.18	338.92	101.91	323.95	87.91	312.26	81.08	307.84	78.67
313.46	79.87	339.00	105.17	323.97	92.19	312.26	79.75	307.95	76.38
313.48	72.38	339.06	108.02	324.06	88.69	312.31	81.15	308.00	77.37
313.54	79.62	339.12	102.04	324.16	89.35	312.41	72.78	308.18	70.84
313.60	74.93	339.13	111.49	324.30	89.13	312.51	79.03	308.27	65.90
313.63	73.33	339.21	101.75	324.48	87.29	312.52	81.90	308.28	76.94
313.71	74.21	339.26	104.96	324.51	91.70	312.57	79.06	308.33	70.34
313.72	73.60	339.32	101.72	324.58	90.24	312.64	72.22	308.43	70.24
313.83	74.12	339.43	99.78	324.69	85.67	312.71	82.04	308.51	74.42
313.99	77.33	339.45	105.97	324.71	91.57	312.73	78.60	308.52	77.54
314.00	71.28	339.51	105.31	324.74	91.81	312.78	81.18	308.57	68.85
314.09	71.21	339.53	104.14	324.75	86.39	312.80	74.89	308.60	79.29
314.18	72.12	339.53	103.38	324.78	85.16	312.91	72.83	308.60	72.91
314.22	69.99	339.62	113.06	324.81	85.39	312.93	70.53	308.62	77.96
314.23	70.90	339.63	101.03	324.82	86.73	312.95	73.94	308.69	79.10
314.24	76.32	339.73	101.94	324.90	90.93	312.99	80.38	308.77	76.29
314.29	72.15	339.75	105.74	324.92	91.58	313.01	80.76	308.79	82.12
314.31	78.72	339.77	103.39	325.07	91.82	313.31	77.92	308.84	74.64
314.43	71.65	339.85	100.93	325.09	87.87	313.36	79.99	308.87	76.95

314.50	74.57	339.88	103.95	325.20	89.37	313.39	76.84	308.87	78.59
314.54	73.89	340.08	105.64	325.27	86.89	313.40	73.94	308.88	79.05
314.61	81.37	340.15	105.19	325.30	84.41	313.42	76.59	308.89	72.97
314.65	78.82	340.29	105.95	325.31	89.31	313.47	81.29	308.90	67.84
314.68	73.89	340.29	103.81	325.38	85.16	313.48	70.74	308.92	80.85
314.77	73.33	340.42	102.81	325.41	87.41	313.60	80.41	309.03	75.06
314.78	79.73	340.64	102.20	325.47	84.60	313.76	81.00	309.10	66.08
314.86	74.29	340.67	105.12	325.51	92.19	313.78	81.57	309.28	72.72
315.06	80.44	340.76	104.07	325.53	89.68	313.84	82.69	309.28	77.08
315.06	74.51	340.81	106.22	325.59	87.07	313.87	82.58	309.39	76.97
315.13	73.48	340.84	103.81	325.64	86.19	313.87	79.55	309.41	70.82
315.25	73.65	340.99	103.37	325.64	89.79	314.05	83.50	309.44	72.31
315.26	70.13	341.07	106.91	325.89	84.91	314.07	76.16	309.47	70.03
315.26	71.80	341.14	109.51	325.90	87.44	314.15	83.08	309.53	68.94
315.30	78.49	341.19	112.40	325.93	85.07	314.19	81.38	309.63	74.36
315.36	77.43	341.21	105.97	326.01	87.70	314.32	83.26	309.63	75.28
315.37	76.03	341.29	102.98	326.07	93.77	314.33	77.31	309.72	75.71
315.49	72.21	341.34	104.64	326.17	93.19	314.33	80.95	309.80	70.51
315.54	79.17	341.40	100.66	326.24	88.11	314.35	82.82	309.80	75.01
315.58	71.02	341.52	102.01	326.37	89.29	314.38	80.37	309.94	85.41
315.65	78.63	341.53	106.27	326.57	86.67	314.50	77.11	310.04	74.91
315.69	77.96	341.60	108.20	326.58	93.03	314.58	82.75	310.08	78.17
315.73	74.39	341.60	105.91	326.64	93.93	314.61	86.06	310.24	66.98
315.83	75.49	341.61	109.40	326.77	90.63	314.64	80.18	310.34	70.01
315.85	74.97	341.69	104.07	326.77	87.61	314.74	75.06	310.35	78.57
315.95	74.17	341.79	104.43	326.82	89.41	314.79	82.84	310.40	70.79
316.11	78.52	341.81	106.31	326.84	87.67	314.80	79.84	310.50	72.23
316.12	74.79	341.85	108.83	326.85	88.87	314.86	81.97	310.58	77.06
316.17	72.42	341.93	107.02	326.87	87.65	314.88	76.93	310.59	74.62
316.29	72.18	341.93	102.88	326.89	88.66	314.99	72.02	310.65	79.25
316.31	71.16	342.15	107.37	326.98	90.68	314.99	68.53	310.65	73.45
316.32	73.42	342.24	108.01	326.98	90.39	315.02	73.03	310.67	74.48
316.38	76.38	342.37	106.03	327.15	91.11	315.07	80.70	310.70	82.18
316.40	74.29	342.37	105.64	327.16	90.91	315.07	80.14	310.75	80.13
316.41	78.70	342.41	116.94	327.27	88.48	315.39	79.30	310.84	77.11
316.55	73.00	342.50	101.85	327.36	91.59	315.43	84.28	310.86	81.00
316.60	76.39	342.70	103.37	327.38	91.46	315.47	73.79	310.94	78.49
316.66	71.92	342.73	103.65	327.41	84.63	315.48	79.98	310.94	78.93
316.70	79.44	342.83	103.74	327.47	86.97	315.50	80.70	310.94	75.04
316.75	74.62	342.87	104.46	327.49	89.40	315.54	85.34	310.95	78.17
316.78	73.25	342.92	105.74	327.54	87.94	315.56	72.44	310.95	81.21
316.89	75.06	343.07	103.25	327.58	89.73	315.67	81.14	310.96	65.08

316.89	78.68	343.15	109.21	327.61	91.53	315.84	84.02	311.02	80.63
316.99	79.00	343.23	113.28	327.65	89.55	315.85	81.84	311.10	73.39
317.17	79.72	343.28	106.28	327.71	93.71	315.93	87.33	311.18	65.56
317.17	74.39	343.30	117.79	327.71	85.83	315.95	83.52	311.35	72.61
317.23	74.29	343.36	104.69	327.97	88.79	315.96	84.26	311.36	78.78
317.35	71.93	343.43	108.71	327.99	87.07	316.12	84.36	311.45	77.26
317.37	74.45	343.47	103.59	328.00	87.18	316.15	79.62	311.49	72.03
317.37	73.64	343.59	105.51	328.10	87.53	316.22	82.13	311.53	70.82
317.41	74.92	343.61	107.07	328.16	93.01	316.26	82.86	311.55	73.98
317.46	72.78	343.69	110.31	328.24	89.48	316.38	81.81	311.62	71.23
317.50	83.20	343.70	104.63	328.31	91.43	316.40	80.85	311.70	72.82
317.59	74.96	343.70	106.55	328.45	89.81	316.41	77.40	311.71	78.61
317.66	82.95	343.79	104.08	328.64	89.15	316.41	81.46	311.80	74.31
317.70	72.16	343.87	107.08	328.67	96.88	316.47	81.87	311.89	74.58
317.75	81.10	343.89	106.29	328.72	92.77	316.57	78.35	311.90	75.38
317.82	76.35	343.92	107.95	328.84	91.34	316.66	82.23	312.01	87.10
317.84	74.03	344.01	104.05	328.86	89.42	316.68	84.78	312.12	76.80
317.94	74.73	344.02	103.95	328.88	91.14	316.72	79.97	312.16	81.20
317.95	76.00	344.24	113.62	328.92	87.82	316.81	72.96	312.31	70.01
318.03	78.55	344.30	106.37	328.93	93.52	316.85	83.60	312.41	70.64
318.23	73.65	344.46	107.22	328.94	85.36	316.87	80.50	312.42	78.12
318.24	81.65	344.46	105.38	328.96	89.79	316.93	81.24	312.49	71.25
318.28	73.58	344.49	117.36	329.05	94.96	316.97	78.72	312.60	77.03
318.40	74.64	344.60	104.69	329.08	95.92	317.06	73.09	312.66	75.60
318.42	72.89	344.77	104.64	329.22	93.83	317.08	70.61	312.69	81.02
318.43	74.02	344.80	102.56	329.24	91.29	317.12	75.12	312.73	80.88
318.46	76.81	344.91	105.84	329.34	91.56	317.15	80.64	312.75	74.51
318.52	75.72	344.94	108.33	329.42	91.56	317.15	80.73	312.75	74.71
318.53	81.82	344.99	104.91	329.45	91.48	317.44	77.08	312.77	80.44
318.66	74.36	345.15	106.89	329.47	88.58	317.54	83.30	312.83	79.76
318.71	79.88	345.25	110.18	329.55	88.14	317.54	80.48	312.92	78.73
318.78	76.46	345.30	112.02	329.55	91.26	317.56	74.73	312.94	83.38
318.80	82.81	345.35	105.98	329.62	86.58	317.59	83.17	312.99	76.90
318.86	79.26	345.36	115.81	329.65	91.55	317.61	83.49	313.02	81.25
318.89	74.72	345.44	104.08	329.69	95.62	317.63	72.12	313.02	79.70
318.99	76.61	345.49	107.42	329.72	87.30	317.77	84.17	313.03	75.39
319.00	75.40	345.54	103.62	329.78	92.98	317.92	83.48	313.05	70.86
319.10	76.31	345.67	105.47	329.79	89.02	317.93	84.96	313.06	88.19
319.27	75.70	345.68	112.20	330.06	90.89	318.01	85.33	313.08	80.79
319.29	79.75	345.75	110.35	330.06	91.28	318.02	83.10	313.18	77.26
319.33	74.35	345.75	107.65	330.06	87.04	318.02	82.27	313.25	68.04
319.46	75.58	345.75	108.33	330.17	91.42	318.19	83.36	313.43	74.78

319.48	74.93	345.84	103.16	330.21	95.48	318.23	82.04	313.46	78.93
319.50	74.80	345.94	105.86	330.31	91.46	318.28	82.90	313.54	77.52
319.52	76.34	345.96	108.84	330.39	94.13	318.34	83.24	313.58	77.09
319.57	76.58	346.00	112.39	330.53	92.28	318.47	83.03	313.61	74.68
319.60	80.33	346.07	106.23	330.72	89.43	318.48	84.66	313.65	77.05
319.73	74.96	346.09	106.44	330.75	95.87	318.48	80.34	313.69	69.33
319.77	84.51	346.32	110.82	330.80	93.98	318.50	83.35	313.77	73.85
319.83	76.77	346.38	110.24	330.91	93.25	318.53	83.40	313.78	77.65
319.86	81.64	346.53	106.46	330.92	90.36	318.66	79.23	313.86	74.52
319.91	79.53	346.56	118.11	330.95	91.63	318.73	83.00	313.94	74.14
319.94	76.86	346.66	103.83	330.99	90.38	318.75	86.16	313.98	79.84
320.04	76.82	346.85	106.16	331.00	89.84	318.80	83.80	314.08	85.17
320.05	77.46	346.87	103.89	331.02	89.79	318.90	74.90	314.18	76.11
320.15	76.41	346.99	109.84	331.04	92.44	318.93	82.99	314.23	79.22
320.33	81.32	347.02	108.12	331.13	92.71	318.96	80.74	314.38	70.55
320.36	75.47	347.08	108.81	331.15	93.77	319.02	84.97	314.50	70.70
320.39	76.27	347.23	106.76	331.30	92.98	319.03	79.26	314.51	81.10
320.50	75.65	347.38	113.66	331.33	90.74	319.15	78.69	314.58	74.75
320.54	75.24	347.44	109.55	331.45	91.39	319.18	76.84	314.68	75.15
320.55	77.86	347.46	117.63	331.49	91.58	319.18	76.24	314.76	76.77
320.57	76.67	347.51	104.56	331.53	93.24	319.22	82.55	314.77	79.76
320.62	77.04	347.58	112.50	331.55	89.31	319.23	83.93	314.81	77.97
320.66	84.02	347.63	105.56	331.62	91.69	319.55	82.51	314.82	81.19
320.76	76.21	347.74	106.22	331.63	91.58	319.59	85.09	314.85	79.58
320.82	78.76	347.75	110.46	331.69	88.38	319.62	81.46	314.87	85.26
320.88	77.60	347.82	110.18	331.73	95.76	319.65	81.08	314.92	83.42
320.92	81.69	347.83	108.30	331.76	94.15	319.66	81.15	314.99	78.28
320.99	78.60	347.85	110.09	331.80	90.62	319.70	85.40	315.01	83.36
321.01	78.64	347.93	103.61	331.87	88.79	319.71	76.80	315.07	79.62
321.10	77.25	348.02	108.78	331.87	93.79	319.83	85.28	315.09	77.18
321.10	81.26	348.03	109.45	332.12	90.97	319.99	84.43	315.09	80.08
321.20	81.11	348.07	108.36	332.13	95.75	320.01	87.12	315.11	82.52
321.39	80.48	348.15	107.39	332.14	89.03	320.07	87.71	315.12	67.76
321.39	77.62	348.19	111.94	332.24	90.92	320.10	85.37	315.12	81.01
321.45	75.40	348.37	112.33	332.28	96.07	320.11	84.37	315.19	80.66
321.56	76.86	348.47	110.02	332.41	96.02	320.27	87.69	315.25	78.80
321.59	76.26	348.59	106.80	332.47	92.33	320.30	82.17	315.32	66.69
321.59	75.09	348.64	121.51	332.60	93.51	320.37	87.12	315.51	81.18
321.63	81.95	348.75	106.15	332.78	90.57	320.43	84.66	315.53	79.57
321.69	77.66	348.95	107.53	332.81	95.74	320.53	84.52	315.60	79.19
321.70	81.77	348.98	109.18	332.87	95.85	320.55	85.84	315.65	75.05
321.82	76.44	349.08	108.46	333.01	98.89	320.57	79.65	315.67	74.28

321.88	81.11	349.09	111.05	333.02	95.46	320.58	87.34	315.70	77.04
321.93	75.45	349.16	108.50	333.04	94.23	320.61	85.42	315.76	70.84
321.98	82.68	349.30	109.91	333.05	91.10	320.74	79.89	315.84	76.40
322.03	82.18	349.45	114.15	333.09	90.77	320.82	87.50	315.85	80.87
322.07	76.80	349.51	110.28	333.10	90.84	320.83	87.02	315.93	74.87
322.16	78.35	349.51	117.78	333.11	92.87	320.87	83.25	316.02	73.82
322.17	77.47	349.61	110.20	333.21	97.49	320.97	79.25	316.04	80.05
322.26	77.61	349.65	111.14	333.22	94.92	321.00	83.98	316.17	86.29
322.44	82.75	349.70	104.45	333.37	95.90	321.03	84.14	316.26	79.22
322.44	77.52	349.81	107.66	333.39	94.71	321.09	87.13	316.30	82.64
322.51	78.47	349.83	113.84	333.50	92.36	321.10	79.16	316.46	70.91
322.61	75.59	349.90	110.17	333.57	92.81	321.22	75.62	316.57	72.45
322.64	76.98	349.92	110.66	333.60	94.49	321.24	73.71	316.57	79.14
322.67	77.94	349.93	108.86	333.62	88.45	321.26	76.69	316.65	74.93
322.68	79.71	350.00	106.03	333.69	90.64	321.29	83.28	316.74	76.30
322.74	76.85	350.10	109.19	333.72	92.12	321.30	84.39	316.81	78.68
322.76	82.69	350.12	110.42	333.77	91.91	321.60	82.81	316.82	80.35
322.86	77.10	350.14	111.78	333.80	93.43	321.66	88.80	316.88	84.09
322.92	80.48	350.22	108.54	333.83	95.60	321.70	82.71	316.89	76.74
322.98	77.90	350.25	112.13	333.89	93.48	321.71	78.92	316.90	76.55
323.02	82.87	350.46	112.13	333.94	95.66	321.73	82.32	316.95	82.40
323.08	78.14	350.53	112.16	333.96	93.04	321.78	89.55	316.98	83.34
323.11	77.58	350.70	109.79	334.20	91.03	321.78	75.29	317.07	78.53
323.21	81.85	350.72	121.20	334.21	89.59	321.90	83.24	317.09	83.90
323.22	77.86	350.84	107.48	334.22	93.71	322.07	88.26	317.15	79.96
323.30	78.62	351.00	108.13	334.35	94.08	322.09	86.78	317.17	77.68
323.49	81.62	351.05	109.97	334.36	96.66	322.14	87.95	317.18	82.14
323.53	77.66	351.15	109.44	334.47	93.48	322.18	86.90	317.18	83.36
323.55	78.11	351.17	110.13	334.54	93.88	322.21	84.07	317.18	83.04
323.66	76.53	351.22	110.21	334.67	93.96	322.34	88.93	317.19	71.69
323.70	77.99	351.38	108.93	334.89	91.44	322.38	80.75	317.23	81.92
323.73	82.90	351.54	114.97	334.90	99.60	322.44	88.67	317.34	81.07
323.73	76.60	351.59	118.04	334.95	101.22	322.52	85.42	317.41	68.69
323.79	77.68	351.60	110.50	335.08	93.87	322.61	84.15	317.59	80.64
323.81	82.76	351.66	107.93	335.10	99.75	322.63	86.52	317.60	79.93
323.92	78.62	351.72	112.39	335.13	92.93	322.65	82.67	317.68	81.01
323.99	86.12	351.77	108.59	335.14	95.49	322.66	87.23	317.71	77.91
324.06	80.24	351.89	110.67	335.17	92.15	322.71	84.98	317.76	75.81
324.11	83.82	351.90	112.53	335.18	92.70	322.80	81.63	317.79	77.12
324.14	84.05	351.99	111.34	335.21	96.16	322.89	87.03	317.83	75.34
324.16	78.14	352.01	115.12	335.28	97.67	322.90	89.50	317.94	76.29
324.28	84.20	352.01	113.64	335.29	95.07	322.94	84.54	317.95	80.89

324.29	79.75	352.08	109.81	335.46	96.31	323.03	76.86	318.02	79.67
324.35	80.56	352.16	112.43	335.46	93.22	323.09	89.37	318.10	75.23
324.56	78.93	352.19	111.95	335.60	94.42	323.12	83.53	318.11	78.75
324.56	82.99	352.24	112.03	335.64	93.63	323.16	87.36	318.25	85.42
324.62	79.58	352.31	109.78	335.68	95.65	323.18	82.28	318.35	82.08
324.72	78.56	352.35	115.10	335.70	92.46	323.31	78.02	318.38	82.25
324.75	78.67	352.55	114.57	335.77	93.46	323.31	76.87	318.56	72.61
324.76	79.25	352.63	112.42	335.80	92.69	323.34	77.73	318.64	80.67
324.80	80.42	352.70	128.15	335.84	92.31	323.37	83.29	318.65	72.95
324.84	79.81	352.76	112.18	335.90	96.25	323.37	84.38	318.71	76.79
324.88	83.19	352.79	123.78	335.92	96.96	323.69	84.68	318.82	76.99
324.97	78.14	352.91	111.87	335.96	95.31	323.76	87.57	318.89	81.38
325.02	81.95	353.09	109.65	336.01	95.55	323.78	81.10	318.92	83.62
325.11	80.95	353.12	109.80	336.04	92.59	323.79	82.95	318.95	83.29
325.14	83.42	353.14	118.02	336.28	95.60	323.82	83.79	318.98	79.16
325.20	81.33	353.21	110.32	336.30	95.11	323.86	76.54	318.99	78.87
325.22	80.58	353.26	112.29	336.30	92.81	323.86	88.54	319.01	86.09
325.33	79.34	353.31	114.45	336.40	94.03	324.01	85.42	319.08	87.22
325.33	79.47	353.45	111.99	336.46	99.43	324.15	87.88	319.14	81.62
325.43	82.21	353.62	116.56	336.54	96.64	324.16	87.42	319.19	91.33
325.61	82.52	353.66	113.52	336.61	95.53	324.24	88.56	319.24	81.22
325.61	78.76	353.69	122.81	336.75	95.62	324.26	86.48	319.25	83.39
325.66	77.88	353.74	109.12	336.98	95.89	324.27	87.23	319.26	83.17
325.78	80.38	353.80	116.45	336.98	97.99	324.42	88.97	319.26	84.03
325.80	78.60	353.84	109.34	337.05	96.61	324.48	85.63	319.27	77.61
325.81	77.91	353.97	112.29	337.15	97.45	324.51	88.47	319.28	70.75
325.85	81.07	353.98	112.30	337.18	98.59	324.58	87.36	319.32	86.62
325.89	80.45	354.06	112.07	337.20	94.77	324.68	87.73	319.41	81.16
325.92	83.31	354.06	115.20	337.21	94.20	324.70	85.17	319.48	72.75
326.02	78.65	354.06	113.93	337.24	93.78	324.74	85.35	319.67	79.87
326.11	81.16	354.15	108.89	337.24	96.75	324.75	91.67	319.67	82.09
326.16	80.77	354.24	112.46	337.27	96.68	324.78	88.20	319.75	84.70
326.19	83.62	354.28	114.69	337.36	97.07	324.90	82.61	319.80	77.11
326.26	81.54	354.33	112.48	337.38	95.86	324.96	86.93	319.82	76.93
326.28	79.57	354.39	111.95	337.52	96.97	324.97	89.57	319.86	79.32
326.37	79.92	354.41	111.30	337.54	95.13	325.04	89.25	319.92	77.24
326.38	79.71	354.62	115.69	337.68	95.58	325.11	76.49	320.01	81.06
326.48	82.57	354.69	114.47	337.72	95.24	325.18	89.34	320.02	78.94
326.66	82.60	354.75	126.59	337.76	99.09	325.20	86.53	320.09	78.73
326.67	80.82	354.85	112.02	337.77	90.64	325.24	87.19	320.19	76.86
326.71	78.54	354.86	123.85	337.84	92.94	325.28	85.41	320.20	82.62
326.83	78.67	354.99	109.80	337.86	93.59	325.37	78.44	320.31	86.87

326.87	79.62	355.17	112.40	337.91	92.52	325.39	76.34	320.44	81.25
326.87	79.49	355.19	111.24	337.96	96.41	325.41	78.63	320.45	85.72
326.89	84.45	355.23	116.74	338.00	98.01	325.45	85.17	320.61	73.03
326.95	81.82	355.29	112.00	338.04	96.91	325.45	85.85	320.72	74.11
326.97	83.28	355.33	115.14	338.11	99.06	325.76	84.79	320.72	83.89
327.10	81.55	355.38	113.90	338.12	94.13	325.83	89.55	320.79	77.02
327.14	81.99	355.53	114.37	338.35	96.37	325.85	86.69	320.90	79.76
327.21	78.99	355.72	120.30	338.36	93.37	325.86	82.88	320.97	85.23
327.25	85.99	355.74	114.40	338.37	91.33	325.90	84.83	320.98	82.02
327.30	81.82	355.77	121.97	338.50	95.02	325.92	89.44	321.02	83.32
327.34	82.56	355.81	110.64	338.52	99.33	325.93	80.71	321.04	78.90
327.44	79.87	355.87	116.02	338.65	101.13	326.07	89.13	321.06	82.27
327.45	86.83	355.92	108.96	338.69	95.78	326.22	89.95	321.09	87.27
327.54	86.94	356.04	112.96	338.85	99.96	326.23	89.59	321.13	85.51
327.72	85.56	356.06	117.68	339.05	94.85	326.30	89.68	321.23	81.90
327.74	82.33	356.15	113.05	339.07	102.71	326.33	87.74	321.26	87.50
327.77	80.68	356.15	117.82	339.10	97.94	326.34	87.22	321.30	81.92
327.88	80.29	356.16	116.37	339.23	99.09	326.50	91.44	321.32	83.42
327.92	81.31	356.22	110.19	339.24	97.51	326.54	86.32	321.32	79.17
327.94	81.92	356.32	113.19	339.27	97.25	326.58	89.30	321.33	82.95
327.95	83.29	356.34	114.64	339.28	95.61	326.65	87.39	321.35	89.84
328.01	82.35	356.41	118.93	339.32	93.54	326.76	87.51	321.37	74.29
328.03	84.71	356.45	111.83	339.33	93.48	326.78	89.38	321.39	84.34
328.14	80.68	356.48	115.44	339.37	97.84	326.80	84.05	321.50	83.46
328.21	82.48	356.69	116.62	339.43	98.19	326.82	89.59	321.57	74.46
328.27	82.03	356.77	114.93	339.44	96.47	326.87	86.74	321.73	79.58
328.30	84.20	356.85	129.03	339.60	100.85	326.96	85.15	321.77	83.11
328.36	82.70	356.90	114.41	339.62	95.71	327.03	87.43	321.83	83.95
328.40	80.38	356.94	125.51	339.75	95.88	327.06	91.59	321.87	79.49
328.50	83.78	357.07	111.81	339.80	95.43	327.09	86.42	321.92	82.02
328.50	80.37	357.24	111.74	339.83	99.31	327.21	79.09	321.93	79.50
328.59	86.99	357.26	115.99	339.85	94.65	327.24	87.32	321.98	75.34
328.78	86.06	357.29	116.73	339.92	94.38	327.26	87.38	322.08	80.07
328.80	80.53	357.36	112.25	339.96	97.56	327.34	84.42	322.11	84.61
328.82	81.34	357.40	114.46	339.99	93.48	327.34	89.58	322.17	80.14
328.94	81.60	357.45	114.07	340.06	97.90	327.44	82.75	322.25	79.16
328.97	80.39	357.60	115.52	340.07	99.69	327.49	83.25	322.28	84.51
328.99	80.24	357.80	121.85	340.13	95.25	327.50	82.60	322.39	91.50
329.00	82.62	357.81	114.49	340.18	100.37	327.52	87.39	322.50	83.48
329.05	81.88	357.83	134.71	340.18	94.77	327.52	89.31	322.52	85.21
329.08	87.01	357.83	121.91	340.42	98.08	327.83	84.75	322.69	73.68
329.20	82.82	357.90	112.25	340.44	93.42	327.91	94.88	322.80	74.65

329.25	85.56	357.95	117.59	340.45	97.36	327.92	87.49	322.80	86.76
329.32	79.89	358.00	111.32	340.56	97.63	327.96	86.75	322.87	79.02
329.38	85.66	358.13	114.33	340.62	101.96	327.97	86.69	322.96	79.25
329.44	88.80	358.15	116.65	340.70	99.32	328.00	91.58	323.05	85.43
329.44	82.91	358.21	116.57	340.77	96.72	328.04	80.41	323.08	83.26
329.55	84.66	358.22	114.92	340.90	97.87	328.15	88.83	323.12	79.84
329.56	82.84	358.24	115.44	341.11	95.40	328.30	88.65	323.12	87.98
329.63	87.06	358.32	112.32	341.13	100.77	328.31	93.83	323.14	85.29
329.84	80.97	358.39	116.26	341.18	99.33	328.39	93.13	323.17	85.54
329.84	84.89	358.41	114.68	341.30	99.08	328.41	88.63	323.21	87.12
329.90	83.73	358.46	114.54	341.33	98.26	328.43	90.37	323.30	79.09
330.01	81.46	358.55	112.24	341.34	98.08	328.56	91.63	323.33	91.81
330.02	81.23	358.56	114.46	341.36	97.48	328.62	88.55	323.38	83.00
330.06	82.62	358.76	118.70	341.40	95.44	328.66	90.82	323.40	82.72
330.06	81.10	358.84	116.57	341.41	97.64	328.73	89.60	323.41	86.92
330.11	83.04	358.92	132.08	341.43	98.22	328.83	88.15	323.41	87.51
330.13	86.05	358.98	114.22	341.51	97.90	328.85	91.01	323.42	74.61
330.26	81.64	359.01	125.69	341.51	97.96	328.89	90.72	323.43	82.89
330.30	85.96	359.13	112.23	341.67	99.98	328.89	85.92	323.49	86.74
330.40	80.83	359.32	112.36	341.70	95.41	328.92	90.50	323.57	82.55
330.42	87.80	359.34	115.03	341.85	101.05	329.06	86.19	323.63	72.88
330.47	82.85	359.39	119.79	341.89	98.71	329.12	94.05	323.81	81.21
330.50	82.84	359.44	114.86	341.90	101.08	329.14	89.69	323.82	82.42
330.60	81.87	359.48	115.69	341.93	96.08	329.19	87.43	323.92	84.53
330.60	85.07	359.53	117.44	341.99	98.08	329.27	83.67	323.95	80.37
330.69	84.24	359.68	116.35	342.02	96.44	329.32	90.64	323.98	80.01
330.88	86.62	359.86	122.29	342.08	96.96	329.35	88.23	324.00	82.34
330.89	83.36	359.89	117.66	342.11	99.98	329.41	87.42	324.06	77.02
330.93	81.14	359.93	138.71	342.14	100.05	329.42	89.57	324.16	81.00
331.05	81.46	359.93	124.12	342.19	95.61	329.55	87.72	324.17	83.58
331.07	82.08	359.97	113.50	342.25	100.39	329.56	81.13	324.26	84.72
331.10	80.25	360.02	118.13	342.26	97.10	329.57	79.97	324.34	83.16
331.11	84.81	360.08	111.25	342.50	99.79	329.60	89.50	324.35	83.93
331.16	82.29	360.19	115.94	342.51	94.94	329.61	90.59	324.46	89.54
331.20	86.96	360.22	116.75	342.52	97.14	329.91	89.37	324.58	83.32
331.30	82.18	360.29	118.61	342.64	96.83	329.99	96.04	324.60	86.57
331.35	85.11	360.29	116.63	342.67	102.35	330.00	87.19	324.78	77.16
331.43	82.92	360.30	118.61	342.78	100.73	330.05	83.97	324.89	74.65
331.49	86.87	360.38	115.22	342.85	100.06	330.07	91.50	324.89	89.05
331.53	83.73	360.47	114.36	343.01	102.51	330.08	91.60	324.94	79.78
331.55	83.99	360.51	116.65	343.18	96.98	330.11	80.37	325.06	81.18
331.65	83.95	360.56	116.75	343.20	103.60	330.24	93.94	325.13	86.47

331.65	88.85	360.62	115.65	343.26	104.64	330.37	92.23	325.15	84.77
331.74	86.19	360.65	116.24	343.39	99.23	330.37	90.08	325.18	86.09
331.94	85.73	360.83	120.08	343.40	104.38	330.49	92.99	325.20	82.59
331.97	84.93	360.92	118.49	343.43	101.48	330.49	88.29	325.21	83.52
332.01	83.88	360.99	130.80	343.43	100.05	330.50	91.67	325.24	89.54
332.10	82.31	361.08	115.97	343.47	98.02	330.66	91.76	325.29	86.02
332.16	81.48	361.09	127.41	343.48	95.61	330.71	89.75	325.38	83.11
332.16	80.33	361.23	113.97	343.52	101.02	330.73	91.55	325.41	90.17
332.19	84.74	361.34	125.03	343.58	100.43	330.80	89.55	325.46	84.94
332.24	84.54	361.39	113.89	343.61	102.42	330.90	89.50	325.47	87.50
332.25	86.62	361.43	121.18	343.77	102.86	330.93	90.04	325.49	84.05
332.38	83.56	361.45	120.85	343.78	99.78	330.96	91.59	325.50	85.07
332.40	87.67	361.53	116.38	343.92	99.01	330.96	88.88	325.51	75.20
332.50	85.10	361.55	119.43	343.95	98.87	331.01	90.67	325.52	89.24
332.55	87.98	361.60	118.65	343.99	101.28	331.12	87.08	325.55	87.98
332.58	86.37	361.77	118.53	344.00	96.92	331.20	91.23	325.64	86.12
332.60	84.32	361.94	122.16	344.07	97.28	331.21	93.50	325.71	74.72
332.70	86.67	361.96	118.61	344.11	99.06	331.28	92.10	325.92	83.54
332.71	85.07	361.99	125.43	344.14	97.06	331.34	84.57	325.92	84.51
332.79	85.74	362.00	136.91	344.20	101.71	331.41	93.79	325.98	85.85
333.00	82.82	362.07	116.39	344.22	102.45	331.44	90.07	326.03	82.58
333.01	89.06	362.12	120.66	344.29	101.77	331.47	91.70	326.06	80.05
333.06	84.30	362.15	112.01	344.32	102.00	331.51	89.12	326.09	82.69
333.15	83.03	362.27	116.60	344.33	97.77	331.63	81.13	326.14	77.20
333.20	81.12	362.29	122.01	344.58	100.51	331.63	81.25	326.23	81.15
333.21	83.39	362.36	118.06	344.59	95.77	331.63	89.49	326.25	85.00
333.22	85.29	362.36	122.41	344.60	96.85	331.67	89.76	326.33	83.83
333.29	83.80	362.38	118.63	344.71	100.40	331.69	93.36	326.42	80.66
333.30	86.88	362.49	114.50	344.75	104.14	331.98	88.06	326.44	85.35
333.42	82.62	362.54	117.68	344.87	100.43	332.06	93.85	326.56	91.31
333.47	89.22	362.59	121.17	344.92	100.07	332.10	83.59	326.65	86.21
333.55	86.01	362.62	117.72	345.06	102.46	332.10	89.35	326.70	86.20
333.60	90.04	362.69	114.85	345.28	102.01	332.12	89.69	326.84	77.03
333.63	86.86	362.72	118.91	345.30	107.10	332.15	91.59	326.95	86.75
333.66	85.01	362.92	126.01	345.35	102.09	332.17	80.94	326.95	78.98
333.76	85.42	363.02	123.20	345.45	103.60	332.29	89.23	327.01	81.05
333.78	88.20	363.07	133.63	345.46	101.12	332.45	93.71	327.12	82.61
333.84	87.87	363.13	115.85	345.51	100.95	332.45	93.40	327.20	87.46
334.06	87.09	363.16	129.05	345.53	105.67	332.54	93.64	327.22	84.89
334.06	83.98	363.30	114.60	345.54	97.88	332.57	88.00	327.27	87.46
334.11	84.86	363.41	126.38	345.57	101.83	332.59	92.06	327.27	83.22
334.22	85.66	363.47	118.24	345.58	101.34	332.72	94.39	327.28	84.56

334.26	84.12	363.50	118.89	345.67	100.28	332.77	89.78	327.32	87.28
334.26	81.31	363.53	124.85	345.69	101.62	332.83	93.63	327.36	87.45
334.27	87.29	363.61	117.12	345.84	105.61	332.87	91.62	327.45	82.96
334.33	85.97	363.65	122.16	345.86	101.05	333.01	95.33	327.48	91.70
334.36	90.06	363.67	119.51	346.00	102.94	333.03	94.30	327.55	89.01
334.47	83.17	363.84	119.42	346.03	98.96	333.04	94.18	327.55	88.71
334.52	93.29	364.01	123.51	346.05	104.09	333.05	91.55	327.57	82.65
334.61	86.78	364.05	117.86	346.07	98.65	333.09	89.12	327.58	76.91
334.65	89.16	364.07	137.45	346.14	98.41	333.21	87.38	327.58	88.62
334.68	90.39	364.10	127.09	346.17	99.57	333.28	91.22	327.58	94.43
334.72	85.78	364.12	116.59	346.22	98.20	333.30	94.88	327.64	93.18
334.81	90.31	364.19	122.95	346.28	107.47	333.36	93.61	327.73	85.38
334.83	85.05	364.23	114.06	346.29	104.07	333.41	83.65	327.81	78.36
334.90	89.16	364.34	120.46	346.36	99.38	333.47	94.07	327.97	85.29
335.11	87.93	364.39	121.17	346.41	104.22	333.50	91.38	328.00	88.31
335.11	83.87	364.44	119.85	346.43	100.26	333.56	94.25	328.05	89.68
335.18	83.80	364.44	124.04	346.65	101.81	333.56	89.50	328.10	84.99
335.26	83.73	364.45	122.21	346.66	97.85	333.69	84.68	328.13	83.20
335.31	82.35	364.55	117.27	346.70	100.88	333.70	83.01	328.16	83.27
335.32	84.70	364.64	118.37	346.78	101.77	333.74	84.16	328.21	80.05
335.33	91.55	364.66	122.27	346.82	104.94	333.74	89.33	328.31	82.84
335.38	85.19	364.70	118.37	346.93	103.57	333.75	92.63	328.33	88.88
335.41	88.10	364.76	116.40	346.99	99.97	334.05	89.62	328.39	84.45
335.52	82.84	364.81	120.18	347.14	102.60	334.13	95.60	328.49	81.06
335.56	92.61	364.98	123.30	347.34	102.01	334.16	93.12	328.53	90.20
335.65	86.85	365.07	123.99	347.36	106.11	334.17	85.16	328.62	91.17
335.70	89.20	365.17	134.39	347.42	103.59	334.21	93.47	328.73	86.39
335.74	92.24	365.21	118.78	347.53	103.93	334.22	93.75	328.79	91.33
335.76	86.02	365.25	129.78	347.54	102.83	334.24	84.92	328.91	77.49
335.86	91.59	365.39	114.48	347.58	106.58	334.38	93.52	329.03	90.61
335.89	91.07	365.49	127.01	347.58	102.94	334.52	93.71	329.05	77.31
335.98	87.58	365.57	116.18	347.62	99.92	334.53	92.37	329.10	81.05
336.15	89.18	365.59	120.40	347.65	101.72	334.61	94.84	329.20	86.77
336.19	87.10	365.63	123.42	347.65	103.29	334.64	89.38	329.27	88.56
336.22	85.92	365.69	118.43	347.75	105.93	334.65	90.66	329.30	88.00
336.33	87.30	365.74	121.20	347.75	100.08	334.81	95.11	329.34	85.60
336.36	83.77	365.74	121.07	347.92	101.88	334.84	90.09	329.35	87.43
336.37	83.08	365.92	121.29	347.93	104.42	334.92	94.66	329.36	85.41
336.38	86.97	366.11	127.56	348.06	99.29	334.95	95.27	329.40	92.30
336.44	85.85	366.11	119.83	348.10	102.52	335.07	95.52	329.44	87.82
336.47	89.26	366.14	138.57	348.14	104.80	335.10	95.40	329.55	93.22
336.57	83.44	366.17	131.09	348.17	98.95	335.11	90.74	329.55	88.30

336.61	92.73	366.22	117.91	348.22	99.88	335.11	93.25	329.62	89.46
336.72	86.27	366.26	123.72	348.24	100.92	335.15	91.33	329.63	87.93
336.75	90.75	366.30	117.77	348.29	99.14	335.30	91.90	329.63	85.94
336.79	89.58	366.42	121.86	348.34	104.73	335.35	92.91	329.65	91.92
336.82	87.25	366.44	122.38	348.38	104.98	335.35	95.52	329.65	78.64
336.91	88.14	366.52	120.00	348.45	104.35	335.43	91.60	329.65	85.47
336.93	87.99	366.52	123.35	348.47	105.77	335.49	86.01	329.71	90.47
337.04	89.59	366.55	124.74	348.50	101.40	335.56	91.54	329.79	87.51
337.23	89.34	366.62	118.71	348.75	99.60	335.58	93.02	329.87	76.23
337.24	83.99	366.71	119.82	348.75	104.06	335.62	94.36	330.05	89.49
337.27	84.78	366.73	120.48	348.76	103.53	335.64	91.32	330.07	85.42
337.38	85.79	366.79	125.74	348.86	102.05	335.76	85.40	330.13	89.01
337.41	84.03	366.84	118.45	348.89	106.63	335.77	86.58	330.17	82.73
337.42	83.38	366.87	124.16	349.01	102.96	335.81	89.59	330.21	82.65
337.44	92.37	367.06	124.92	349.08	103.91	335.82	94.39	330.24	83.82
337.51	85.76	367.15	124.14	349.22	104.30	335.82	92.71	330.32	79.92
337.52	89.47	367.23	134.10	349.43	101.95	336.13	93.34	330.41	86.32
337.64	84.81	367.28	119.44	349.44	106.28	336.20	96.95	330.42	91.77
337.68	90.87	367.32	132.36	349.49	104.96	336.23	94.09	330.48	86.24
337.76	87.84	367.46	118.40	349.61	107.88	336.26	88.64	330.58	87.04
337.81	91.11	367.59	129.03	349.64	103.30	336.28	93.05	330.58	90.93
337.87	95.04	367.65	121.05	349.65	104.72	336.33	96.64	330.72	98.47
337.87	87.85	367.66	118.75	349.65	104.33	336.34	84.46	330.80	87.57
337.97	90.83	367.72	124.35	349.70	102.49	336.45	94.76	330.84	91.57
337.98	87.46	367.78	124.75	349.71	100.70	336.59	93.13	330.99	76.87
338.08	93.28	367.81	122.93	349.73	105.00	336.61	97.37	331.10	91.66
338.29	92.70	367.83	122.72	349.81	105.51	336.69	95.83	331.12	81.70
338.31	85.41	367.98	118.33	349.83	104.49	336.73	95.40	331.17	83.06
338.35	89.16	368.18	125.06	349.99	106.98	336.74	94.95	331.28	89.42
338.43	87.78	368.19	120.73	350.00	101.73	336.89	95.71	331.34	91.80
338.48	87.20	368.22	142.98	350.13	100.92	336.92	92.80	331.37	86.71
338.48	85.91	368.26	129.96	350.19	102.77	336.97	95.73	331.42	87.88
338.51	89.08	368.30	122.17	350.20	105.62	337.05	96.49	331.43	89.81
338.57	85.63	368.33	125.18	350.22	100.61	337.16	95.65	331.43	89.54
338.59	93.33	368.40	117.21	350.31	103.78	337.17	93.60	331.50	96.10
338.71	88.53	368.49	121.60	350.33	103.52	337.18	95.28	331.54	93.49
338.73	89.38	368.51	124.00	350.39	104.41	337.19	93.67	331.61	85.59
338.82	86.62	368.58	123.32	350.42	105.45	337.23	90.30	331.63	92.82
338.87	91.76	368.59	126.62	350.44	103.86	337.35	91.38	331.69	89.18
338.91	94.31	368.61	124.54	350.50	101.97	337.42	93.30	331.70	92.03
338.92	88.45	368.72	121.56	350.55	106.89	337.43	95.80	331.71	87.52
339.02	91.27	368.78	121.45	350.58	101.38	337.51	95.45	331.73	78.08

339.03	89.45	368.82	120.89	350.82	100.58	337.56	85.63	331.73	89.30
339.14	88.87	368.85	125.66	350.82	107.74	337.62	95.03	331.74	94.52
339.34	90.40	368.94	121.70	350.84	100.06	337.66	97.56	331.79	92.49
339.37	86.16	368.95	122.71	350.93	104.69	337.71	95.82	331.87	90.08
339.38	86.62	369.14	124.64	350.97	107.32	337.73	94.21	331.95	80.34
339.48	88.36	369.22	123.86	351.08	107.20	337.85	88.26	332.12	87.53
339.52	85.32	369.32	135.71	351.14	104.75	337.85	86.05	332.17	87.60
339.53	84.74	369.36	122.62	351.29	108.04	337.87	86.40	332.22	89.71
339.55	88.95	369.39	131.44	351.51	107.63	337.89	95.56	332.26	86.12
339.63	93.16	369.53	116.69	351.51	104.14	337.91	92.93	332.31	86.87
339.63	88.00	369.66	130.19	351.56	105.59	338.23	95.67	332.32	85.31
339.75	86.36	369.71	119.06	351.68	107.45	338.29	97.59	332.38	81.42
339.79	92.43	369.73	119.39	351.69	103.70	338.31	94.27	332.46	86.33
339.87	89.28	369.78	125.64	351.73	110.37	338.32	89.77	332.48	89.23
339.91	92.26	369.84	125.63	351.75	105.63	338.35	93.68	332.54	87.96
339.96	89.59	369.88	127.07	351.77	101.76	338.38	95.79	332.65	90.17
339.97	87.76	369.90	123.86	351.78	103.92	338.40	87.58	332.67	84.96
340.08	89.08	370.06	121.23	351.80	104.06	338.55	97.49	332.79	95.78
340.08	91.98	370.25	128.74	351.89	104.18	338.68	98.36	332.87	91.08
340.19	91.26	370.27	123.20	351.93	104.09	338.68	96.17	332.92	93.68
340.39	91.16	370.30	142.80	352.07	107.41	338.79	97.50	333.08	82.74
340.40	85.98	370.33	131.84	352.07	104.86	338.79	94.86	333.17	91.52
340.44	89.13	370.37	123.20	352.23	104.16	338.80	93.77	333.22	82.86
340.55	88.50	370.41	124.97	352.25	104.06	338.96	94.33	333.27	87.70
340.59	85.36	370.46	117.69	352.28	105.99	338.99	94.68	333.35	86.71
340.59	85.86	370.57	122.57	352.31	103.14	339.06	97.81	333.42	91.66
340.62	95.43	370.60	125.70	352.38	105.11	339.14	96.23	333.45	89.09
340.67	85.96	370.66	124.43	352.39	104.41	339.25	95.14	333.50	90.66
340.68	92.19	370.68	124.20	352.48	102.32	339.25	95.13	333.50	86.06
340.81	85.91	370.70	127.01	352.50	106.79	339.28	94.88	333.53	89.51
340.82	92.52	370.77	124.41	352.55	106.45	339.29	93.73	333.55	92.64
340.92	89.32	370.86	122.73	352.59	104.05	339.30	92.66	333.60	90.43
341.00	93.78	370.88	124.60	352.64	102.75	339.45	95.35	333.71	93.93
341.04	97.43	370.96	125.31	352.65	108.23	339.50	93.50	333.72	88.47
341.06	89.26	371.01	124.64	352.89	105.58	339.51	99.95	333.77	89.27
341.13	92.63	371.03	124.51	352.90	103.53	339.58	95.08	333.78	91.53
341.13	88.02	371.21	126.02	352.91	104.16	339.64	89.69	333.80	95.64
341.24	91.80	371.30	126.51	353.00	104.46	339.72	98.56	333.82	88.28
341.45	94.22	371.39	137.34	353.08	110.10	339.72	95.63	333.83	91.60
341.46	87.18	371.46	121.59	353.17	107.20	339.78	99.07	333.84	79.07
341.51	91.34	371.47	132.10	353.22	105.91	339.79	93.79	333.85	93.12
341.59	89.31	371.62	121.12	353.39	108.27	339.92	89.51	333.97	92.85

341.64	85.76	371.74	131.35	353.58	111.18	339.92	86.39	334.03	78.72
341.66	92.06	371.79	120.87	353.59	105.36	339.95	87.47	334.19	88.58
341.66	85.75	371.80	120.70	353.63	106.67	339.97	97.36	334.22	88.68
341.73	88.48	371.87	129.47	353.76	107.86	339.99	97.02	334.30	91.58
341.74	94.70	371.93	122.72	353.77	104.97	340.30	94.83	334.34	86.61
341.87	86.42	371.94	127.21	353.81	108.18	340.37	99.51	334.36	87.23
341.89	93.63	371.99	129.26	353.81	106.00	340.38	97.23	334.40	89.72
341.98	90.59	372.15	128.07	353.85	104.49	340.40	91.66	334.46	82.63
342.05	94.55	372.34	124.08	353.86	104.44	340.42	93.71	334.54	87.36
342.09	93.99	372.36	127.94	353.88	105.86	340.46	97.78	334.56	90.89
342.09	91.10	372.37	143.07	353.97	108.05	340.47	86.78	334.63	89.37
342.19	92.12	372.39	132.35	353.98	107.39	340.60	97.54	334.73	85.32
342.21	98.67	372.44	124.78	354.15	105.50	340.75	94.71	334.74	91.01
342.29	91.36	372.50	126.81	354.15	110.47	340.76	97.86	334.86	95.70
342.52	96.35	372.54	118.91	354.30	104.52	340.84	97.55	334.95	89.71
342.54	91.20	372.64	126.23	354.32	105.63	340.88	93.93	335.01	91.94
342.56	90.86	372.68	125.88	354.37	110.33	340.90	93.84	335.15	80.13
342.67	89.01	372.73	123.06	354.37	103.03	341.04	98.24	335.25	91.69
342.69	86.68	372.75	130.09	354.47	105.08	341.08	94.74	335.27	83.82
342.72	87.85	372.76	127.49	354.47	104.00	341.12	97.06	335.32	88.10
342.73	96.96	372.84	123.87	354.54	105.90	341.21	99.75	335.42	91.24
342.78	88.91	372.94	124.42	354.60	107.11	341.31	98.43	335.51	91.53
342.80	94.23	372.95	125.79	354.62	110.55	341.34	99.23	335.53	88.35
342.93	88.63	373.02	128.51	354.65	104.96	341.34	95.83	335.57	87.43
342.94	94.04	373.08	122.48	354.71	110.08	341.36	97.92	335.58	90.44
343.04	90.29	373.10	125.58	354.72	104.47	341.38	96.50	335.61	93.39
343.09	94.80	373.29	126.99	354.97	106.10	341.53	94.56	335.63	97.61
343.13	93.86	373.37	125.92	354.98	107.70	341.58	97.94	335.69	93.67
343.15	91.43	373.47	139.05	355.00	105.40	341.58	95.30	335.77	89.59
343.24	93.69	373.52	125.08	355.10	107.51	341.65	96.37	335.78	94.43
343.27	91.74	373.55	134.24	355.13	110.21	341.72	88.81	335.86	91.01
343.36	92.41	373.69	118.21	355.27	112.19	341.79	98.68	335.88	94.82
343.55	95.03	373.81	131.97	355.30	106.97	341.80	96.86	335.88	94.94
343.57	88.20	373.87	120.80	355.45	108.39	341.85	98.93	335.89	91.20
343.62	90.32	373.88	128.20	355.67	111.38	341.87	93.51	335.89	89.51
343.70	91.08	373.93	129.04	355.67	106.38	341.99	93.89	335.92	81.16
343.75	86.36	373.99	126.76	355.71	110.38	342.00	88.31	335.93	95.08
343.76	88.99	374.03	129.78	355.83	111.33	342.02	88.97	336.02	91.35
343.76	93.24	374.07	127.38	355.84	106.65	342.04	98.40	336.11	83.49
343.84	93.66	374.21	124.04	355.88	110.48	342.05	95.13	336.27	92.03
343.85	89.20	374.41	124.81	355.92	108.87	342.39	100.26	336.30	92.30
343.98	89.20	374.44	132.65	355.93	105.93	342.43	100.77	336.36	94.38

343.99	97.79	374.45	145.18	355.94	105.93	342.47	97.30	336.44	86.45
344.10	91.33	374.50	134.02	355.95	109.25	342.48	95.63	336.44	88.07
344.15	95.58	374.52	126.49	356.04	109.25	342.53	97.51	336.48	91.01
344.18	93.44	374.58	130.94	356.06	110.25	342.53	99.46	336.55	85.01
344.20	90.26	374.62	119.21	356.23	105.45	342.57	93.50	336.62	88.00
344.31	95.12	374.71	128.26	356.23	109.93	342.69	99.15	336.65	90.95
344.32	92.36	374.75	128.89	356.38	109.50	342.84	96.34	336.69	91.16
344.41	94.37	374.83	124.88	356.40	109.71	342.86	99.64	336.80	86.24
344.61	94.34	374.83	129.66	356.43	111.24	342.93	97.88	336.83	94.85
344.62	88.98	374.83	128.22	356.45	103.30	342.94	95.26	336.96	97.80
344.67	90.84	374.93	125.47	356.53	105.65	342.95	97.49	337.05	92.69
344.76	90.32	375.01	127.12	356.57	108.15	343.10	95.87	337.08	95.41
344.80	89.68	375.03	126.74	356.61	106.07	343.15	96.40	337.23	85.56
344.82	87.68	375.09	126.06	356.66	112.43	343.20	100.49	337.33	95.85
344.82	96.51	375.15	123.94	356.69	112.23	343.27	99.88	337.35	85.24
344.89	89.77	375.20	126.28	356.74	106.25	343.39	98.71	337.41	86.06
344.92	95.37	375.36	129.07	356.78	111.80	343.42	98.74	337.50	91.53
345.03	87.51	375.47	130.35	356.80	108.08	343.42	97.77	337.58	91.14
345.03	94.53	375.61	124.69	357.05	108.95	343.45	94.95	337.60	90.63
345.16	93.45	375.63	138.62	357.06	104.07	343.45	95.76	337.64	91.71
345.21	96.05	375.79	124.10	357.06	103.69	343.59	94.72	337.65	89.09
345.23	98.71	375.88	133.69	357.18	107.59	343.65	98.15	337.68	92.06
345.27	93.76	375.94	123.82	357.23	110.81	343.66	98.85	337.70	98.17
345.35	93.37	375.95	129.06	357.32	110.02	343.75	99.97	337.75	93.85
345.36	92.37	376.04	130.05	357.39	108.69	343.79	90.09	337.85	97.33
345.47	98.64	376.10	125.67	357.53	109.95	343.86	97.90	337.87	95.52
345.67	97.63	376.10	129.24	357.73	112.75	343.90	100.47	337.91	90.89
345.68	89.13	376.13	128.86	357.73	108.22	343.93	101.81	337.94	93.76
345.71	91.25	376.30	128.43	357.78	109.20	343.95	97.90	337.95	98.41
345.81	90.07	376.50	130.66	357.92	110.26	344.06	92.36	337.96	91.69
345.85	88.02	376.51	128.85	357.93	114.30	344.08	90.24	337.96	90.02
345.87	96.92	376.52	146.01	357.96	110.46	344.11	95.46	337.98	82.56
345.89	89.55	376.56	135.12	357.99	110.03	344.12	99.92	338.00	96.20
345.94	90.34	376.59	127.43	358.00	106.49	344.15	99.86	338.11	94.41
345.97	98.70	376.65	131.51	358.02	110.33	344.45	97.84	338.20	83.72
346.08	90.07	376.69	120.74	358.03	107.42	344.52	102.02	338.34	91.57
346.11	96.53	376.81	127.10	358.11	109.38	344.54	98.98	338.37	91.14
346.22	91.35	376.83	131.28	358.14	109.20	344.56	97.01	338.47	96.84
346.27	97.47	376.89	126.24	358.30	110.86	344.59	97.72	338.50	89.26
346.31	93.40	376.90	130.79	358.32	110.07	344.62	98.57	338.51	87.93
346.32	95.32	376.90	129.78	358.46	111.30	344.65	90.97	338.55	90.67
346.40	96.09	377.00	126.18	358.47	108.89	344.76	99.96	338.62	89.20

346.42	92.08	377.08	126.89	358.50	111.41	344.90	99.90	338.69	90.93
346.53	95.92	377.10	127.68	358.53	106.43	344.91	103.47	338.71	93.33
346.73	96.60	377.17	130.38	358.61	105.97	345.01	101.82	338.77	91.49
346.74	89.31	377.22	124.01	358.65	109.15	345.02	96.93	338.89	95.22
346.77	91.24	377.25	131.69	358.69	109.05	345.05	97.32	338.90	90.21
346.86	92.15	377.44	130.44	358.76	110.42	345.20	98.32	339.02	102.42
346.91	88.67	377.52	130.87	358.78	114.36	345.22	95.77	339.11	93.77
346.93	89.21	377.67	126.42	358.81	107.90	345.27	100.13	339.17	97.61
346.95	95.82	377.71	140.40	358.89	113.15	345.34	99.94	339.31	87.25
347.00	90.28	377.84	121.87	358.90	110.69	345.46	98.11	339.40	97.34
347.02	96.51	377.97	137.39	359.12	109.82	345.48	101.74	339.43	85.17
347.13	90.72	378.02	124.43	359.13	107.46	345.49	96.92	339.48	89.90
347.14	95.71	378.02	123.68	359.15	109.03	345.51	98.04	339.59	94.17
347.26	93.16	378.09	131.60	359.26	110.19	345.54	98.02	339.67	95.97
347.31	97.27	378.15	126.86	359.31	115.07	345.67	96.17	339.67	90.55
347.36	98.51	378.18	130.67	359.39	111.41	345.73	98.81	339.73	95.87
347.37	94.31	378.20	129.26	359.45	110.63	345.73	98.68	339.74	91.53
347.46	92.89	378.39	130.20	359.60	111.54	345.81	99.45	339.75	93.71
347.48	94.95	378.57	129.42	359.81	108.44	345.88	94.46	339.77	97.89
347.58	99.60	378.60	134.94	359.83	117.79	345.93	99.88	339.83	93.83
347.78	97.70	378.60	146.87	359.87	111.64	345.96	98.72	339.92	93.03
347.79	90.21	378.63	136.57	359.99	112.56	346.00	102.03	339.93	101.94
347.86	95.79	378.66	128.37	360.02	113.15	346.03	98.86	340.01	92.78
347.94	94.69	378.74	131.28	360.03	112.36	346.15	89.40	340.02	99.91
347.97	90.85	378.79	126.05	360.05	110.27	346.15	92.98	340.03	95.95
347.98	89.69	378.88	129.01	360.07	108.18	346.19	92.43	340.04	93.54
348.02	96.45	378.90	130.85	360.10	110.85	346.20	100.86	340.05	92.75
348.06	92.34	378.97	127.58	360.10	107.43	346.21	97.04	340.07	88.40
348.07	99.07	378.97	132.85	360.19	111.12	346.53	98.79	340.09	94.30
348.21	90.88	378.98	129.86	360.24	110.02	346.58	102.21	340.19	95.87
348.22	97.72	379.07	130.78	360.38	112.49	346.61	99.92	340.29	84.96
348.31	93.81	379.16	127.77	360.41	111.60	346.65	96.61	340.42	95.42
348.36	98.13	379.18	131.38	360.55	110.46	346.66	99.47	340.44	94.12
348.41	98.83	379.25	129.13	360.57	109.34	346.70	99.55	340.54	95.65
348.42	94.15	379.33	123.97	360.59	112.81	346.72	92.65	340.56	92.11
348.52	96.58	379.33	129.34	360.61	109.28	346.84	102.02	340.59	90.95
348.52	101.95	379.54	137.35	360.71	109.62	346.97	99.91	340.63	91.72
348.65	95.59	379.60	131.07	360.71	110.58	346.99	102.71	340.68	87.21
348.85	98.92	379.76	126.57	360.75	109.56	347.08	99.94	340.78	91.03
348.86	93.93	379.78	139.73	360.84	112.06	347.09	100.92	340.79	93.62
348.88	92.13	379.92	126.26	360.84	116.27	347.11	98.61	340.84	93.19
348.98	94.30	380.05	136.94	360.88	111.74	347.26	102.03	340.96	92.64

349.02	88.75	380.09	123.78	360.95	109.68	347.29	95.91	340.96	93.48
349.04	90.12	380.11	124.10	360.97	113.47	347.35	103.84	341.09	97.97
349.06	100.71	380.18	133.65	361.21	115.86	347.42	103.71	341.19	95.34
349.11	91.51	380.23	127.62	361.23	105.74	347.53	101.38	341.25	99.12
349.12	99.71	380.26	134.12	361.23	108.25	347.56	101.33	341.37	87.33
349.25	89.76	380.28	130.59	361.33	111.35	347.57	98.62	341.49	97.34
349.26	95.94	380.44	128.68	361.37	113.92	347.60	97.64	341.51	86.42
349.37	93.57	380.59	144.63	361.48	114.31	347.61	101.26	341.55	89.54
349.43	99.63	380.64	128.90	361.55	110.28	347.74	97.81	341.66	91.05
349.47	94.19	380.66	132.44	361.68	113.93	347.80	99.92	341.73	95.10
349.48	97.69	380.69	148.90	361.89	111.61	347.80	99.89	341.75	92.86
349.57	98.92	380.71	137.63	361.90	116.44	347.88	100.86	341.80	91.46
349.59	95.54	380.76	131.36	361.94	112.53	347.95	91.81	341.82	96.07
349.69	96.08	380.82	133.25	362.06	114.48	348.03	105.40	341.83	97.50
349.89	99.07	380.86	123.02	362.10	114.47	348.05	101.15	341.85	99.93
349.91	91.56	380.94	132.55	362.12	114.00	348.10	104.36	341.90	95.90
349.94	94.71	380.99	131.94	362.13	111.75	348.11	99.92	342.00	99.95
350.04	93.30	381.05	133.63	362.15	108.33	348.22	94.43	342.00	94.10
350.07	89.53	381.06	133.21	362.16	108.21	348.22	88.91	342.07	92.92
350.09	90.88	381.07	133.63	362.19	115.15	348.27	100.98	342.09	95.32
350.13	97.41	381.15	131.88	362.27	114.13	348.28	97.92	342.10	98.81
350.16	93.20	381.24	127.72	362.31	113.91	348.30	101.96	342.11	91.58
350.20	99.65	381.26	131.21	362.46	116.19	348.63	101.81	342.12	96.45
350.30	91.98	381.32	130.96	362.46	109.98	348.66	104.05	342.14	89.56
350.32	96.77	381.41	129.42	362.63	112.45	348.68	101.75	342.16	95.67
350.43	96.67	381.41	130.35	362.64	111.34	348.71	96.65	342.26	96.33
350.48	99.83	381.61	138.91	362.66	114.08	348.73	101.34	342.34	85.95
350.52	99.01	381.68	135.15	362.68	109.11	348.76	100.11	342.51	98.52
350.53	95.58	381.83	128.48	362.76	110.57	348.78	91.63	342.54	94.58
350.62	99.77	381.86	140.37	362.79	109.79	348.93	101.93	342.62	98.70
350.63	98.37	381.99	124.62	362.83	109.76	349.06	102.03	342.64	93.49
350.74	101.64	382.11	138.03	362.91	116.54	349.07	104.05	342.68	93.16
350.94	99.74	382.17	130.47	362.91	113.99	349.17	102.27	342.70	93.16
350.95	92.31	382.19	128.82	362.96	110.26	349.17	99.71	342.75	88.44
351.00	96.56	382.26	134.25	363.02	114.48	349.19	100.32	342.85	92.23
351.10	95.34	382.30	131.03	363.04	112.30	349.34	101.91	342.86	95.57
351.12	92.66	382.33	131.70	363.27	116.32	349.39	100.42	342.95	99.26
351.17	93.69	382.35	129.87	363.31	108.27	349.43	106.24	343.03	91.70
351.19	97.70	382.52	127.41	363.32	112.48	349.49	102.01	343.04	97.11
351.21	93.55	382.65	147.86	363.40	113.08	349.62	103.25	343.17	99.45
351.26	100.42	382.74	136.62	363.47	118.67	349.63	102.98	343.28	100.36
351.36	92.43	382.75	131.35	363.56	116.07	349.64	99.98	343.32	99.94

351.36	97.32	382.76	149.33	363.60	112.00	349.69	102.02	343.45	87.66
351.48	96.24	382.78	138.95	363.75	114.52	349.69	103.64	343.55	100.50
351.54	100.83	382.81	131.47	363.97	114.05	349.81	101.54	343.58	87.47
351.58	95.16	382.88	136.12	363.99	116.73	349.89	101.47	343.64	93.33
351.60	100.88	382.94	127.21	364.01	116.43	349.89	100.13	343.73	93.61
351.69	98.80	383.02	130.92	364.14	115.99	349.99	100.76	343.81	95.78
351.70	94.52	383.05	133.29	364.16	112.95	350.02	92.12	343.85	94.18
351.80	97.63	383.12	134.65	364.20	114.58	350.10	106.07	343.88	93.68
351.99	102.62	383.13	136.26	364.20	115.08	350.12	103.28	343.90	97.44
352.01	92.40	383.13	134.86	364.22	110.03	350.16	104.25	343.90	98.89
352.08	95.84	383.22	130.62	364.24	109.02	350.20	101.32	343.92	99.73
352.15	93.80	383.31	128.63	364.26	113.49	350.29	93.34	343.99	98.75
352.17	93.14	383.33	131.13	364.34	115.82	350.30	94.84	344.08	95.04
352.20	89.59	383.40	135.83	364.37	115.67	350.35	90.65	344.10	106.70
352.24	101.33	383.47	126.21	364.53	115.77	350.36	103.50	344.15	95.14
352.28	93.90	383.48	131.96	364.53	113.68	350.37	101.07	344.17	95.70
352.29	100.71	383.70	136.01	364.69	111.79	350.68	101.87	344.17	102.09
352.41	99.76	383.78	135.36	364.72	112.95	350.74	105.13	344.19	97.82
352.42	94.48	383.90	128.54	364.73	115.75	350.77	101.96	344.20	87.31
352.53	94.95	383.94	140.34	364.75	109.26	350.79	99.63	344.20	95.93
352.61	100.86	384.06	125.99	364.84	113.27	350.83	106.18	344.25	100.21
352.65	103.98	384.20	138.38	364.86	112.46	350.84	104.21	344.33	95.87
352.66	98.13	384.25	126.82	364.93	112.48	350.87	93.13	344.41	85.57
352.72	99.43	384.25	127.68	364.99	117.68	350.99	104.05	344.59	95.74
352.74	96.53	384.36	135.51	365.01	114.20	351.14	108.19	344.60	95.39
352.87	104.98	384.40	134.20	365.06	109.74	351.16	102.76	344.69	97.13
353.08	93.44	384.41	131.40	365.10	111.85	351.24	102.04	344.72	93.36
353.08	101.83	384.43	136.19	365.10	116.51	351.26	103.98	344.74	93.36
353.11	95.66	384.59	127.96	365.35	114.67	351.28	101.02	344.78	94.04
353.19	94.11	384.71	146.99	365.36	110.92	351.41	103.02	344.83	89.63
353.24	91.89	384.83	136.89	365.37	111.21	351.46	102.23	344.92	93.59
353.25	92.57	384.83	130.94	365.49	114.40	351.52	103.65	344.96	95.61
353.29	96.44	384.83	150.31	365.52	118.58	351.58	104.25	345.00	94.39
353.33	94.61	384.85	140.56	365.64	116.77	351.70	103.96	345.11	92.87
353.36	102.03	384.89	133.09	365.68	115.75	351.70	102.13	345.14	100.28
353.46	92.94	384.95	137.58	365.83	115.01	351.72	104.42	345.24	103.69
353.48	101.97	385.00	126.99	366.04	114.07	351.76	102.67	345.33	97.94
353.58	97.21	385.09	134.76	366.07	118.11	351.77	101.51	345.41	99.65
353.66	104.04	385.12	133.22	366.09	114.54	351.90	100.43	345.52	89.57
353.69	97.66	385.20	137.33	366.21	118.57	351.95	103.73	345.62	100.46
353.69	103.44	385.20	132.91	366.23	115.81	351.96	103.20	345.65	89.51
353.78	102.05	385.22	137.52	366.28	114.00	352.04	102.03	345.72	95.17

353.80	97.23	385.30	131.77	366.29	116.73	352.10	96.85	345.80	96.49
353.91	99.36	385.39	132.75	366.30	114.18	352.17	107.27	345.88	95.65
354.12	101.88	385.41	133.99	366.31	110.68	352.19	103.92	345.90	94.86
354.15	97.77	385.46	133.18	366.35	115.80	352.24	106.02	345.95	96.61
354.16	96.59	385.54	129.91	366.41	115.80	352.28	102.01	345.97	97.39
354.25	95.34	385.58	133.22	366.44	114.44	352.37	99.86	345.97	98.49
354.30	92.26	385.77	138.35	366.62	115.02	352.38	91.82	346.01	99.02
354.30	91.87	385.83	136.50	366.62	117.58	352.41	95.71	346.07	98.17
354.34	102.02	385.99	131.03	366.77	112.34	352.43	104.64	346.16	100.77
354.37	94.19	386.03	143.18	366.79	114.35	352.45	101.83	346.16	96.19
354.41	104.45	386.14	126.64	366.81	118.52	352.76	102.04	346.24	96.48
354.52	93.76	386.27	141.50	366.83	111.54	352.81	109.83	346.25	99.66
354.54	106.67	386.33	128.21	366.91	112.40	352.85	103.42	346.26	99.79
354.63	97.50	386.33	136.43	366.95	115.31	352.88	99.53	346.27	97.35
354.73	102.51	386.44	137.08	366.99	112.75	352.89	104.45	346.28	89.81
354.74	97.58	386.49	135.08	367.06	116.96	352.92	106.19	346.28	96.75
354.74	101.44	386.49	131.70	367.07	118.84	352.93	93.39	346.31	98.30
354.86	103.53	386.51	135.47	367.11	112.41	353.06	107.07	346.41	97.80
354.86	95.57	386.70	140.03	367.18	114.46	353.21	107.69	346.51	87.49
354.96	103.67	386.80	150.26	367.18	117.42	353.23	103.97	346.67	97.18
355.18	102.83	386.89	137.05	367.43	116.34	353.34	103.92	346.68	95.01
355.18	94.54	386.90	133.03	367.44	110.46	353.34	107.18	346.78	102.07
355.25	95.66	386.90	152.91	367.47	112.11	353.34	102.03	346.80	94.19
355.32	98.56	386.93	141.33	367.57	115.13	353.48	104.32	346.83	95.74
355.34	92.57	386.99	132.41	367.62	119.34	353.53	103.17	346.86	95.19
355.36	92.56	387.05	139.31	367.73	117.66	353.59	107.47	346.92	91.68
355.41	98.51	387.10	127.27	367.76	116.61	353.65	105.79	347.00	97.46
355.42	94.16	387.17	136.37	367.92	118.95	353.77	106.00	347.05	97.72
355.46	102.25	387.20	137.07	368.12	113.78	353.80	107.10	347.07	95.84
355.58	93.77	387.28	139.89	368.13	121.57	353.81	105.53	347.18	97.62
355.60	108.22	387.28	134.65	368.17	119.44	353.84	104.02	347.19	99.97
355.68	96.32	387.28	138.98	368.30	122.19	353.86	105.04	347.31	106.09
355.78	102.79	387.37	133.01	368.32	115.77	353.99	106.09	347.43	103.29
355.81	97.98	387.47	131.60	368.35	116.20	354.03	106.58	347.48	103.29
355.81	102.65	387.49	132.89	368.37	112.03	354.05	103.68	347.60	89.96
355.88	102.80	387.54	134.77	368.37	117.64	354.11	104.81	347.70	101.99
355.91	97.95	387.61	132.71	368.39	112.17	354.20	94.65	347.73	93.65
356.01	104.42	387.64	134.92	368.42	119.49	354.27	105.76	347.79	96.91
356.22	102.80	387.83	139.57	368.48	117.04	354.27	105.74	347.88	95.59
356.24	94.34	387.92	140.75	368.52	116.30	354.31	106.98	347.96	98.58
356.28	95.75	388.06	132.38	368.69	116.37	354.34	104.18	347.99	97.13
356.37	96.79	388.09	144.13	368.69	118.78	354.44	93.09	348.03	99.12

356.40	93.83	388.21	135.23	368.84	113.47	354.45	98.07	348.04	96.79
356.41	95.00	388.36	142.01	368.88	118.52	354.50	105.84	348.04	98.92
356.46	100.68	388.41	139.25	368.89	115.75	354.51	102.31	348.09	98.96
356.47	95.62	388.41	132.74	368.90	111.85	354.52	99.20	348.13	101.53
356.54	104.18	388.50	137.82	368.99	112.13	354.83	105.44	348.23	98.99
356.62	94.14	388.57	134.51	369.01	114.25	354.89	111.52	348.25	102.09
356.63	105.53	388.58	139.46	369.06	113.62	354.92	107.01	348.31	97.50
356.75	98.75	388.59	138.41	369.13	116.37	354.95	103.54	348.32	97.27
356.83	105.93	388.75	135.12	369.15	118.16	354.97	105.74	348.32	101.30
356.86	98.74	388.87	149.89	369.20	112.20	355.00	106.16	348.35	97.96
356.87	101.19	388.96	138.14	369.26	122.87	355.01	94.43	348.36	87.21
356.94	106.72	388.98	153.19	369.26	115.00	355.15	105.79	348.37	97.12
356.96	98.66	388.99	133.40	369.51	117.12	355.28	108.82	348.38	99.68
357.06	100.98	389.04	142.66	369.52	111.94	355.29	104.76	348.48	101.21
357.27	102.89	389.05	133.88	369.53	112.36	355.41	105.77	348.57	88.67
357.30	94.79	389.12	140.36	369.63	116.70	355.41	108.22	348.73	96.19
357.33	98.31	389.17	127.86	369.70	120.78	355.43	108.76	348.77	101.98
357.41	96.50	389.25	137.25	369.79	117.57	355.57	106.27	348.84	102.03
357.47	93.84	389.29	135.64	369.83	116.43	355.61	103.57	348.90	97.87
357.47	96.96	389.35	141.72	370.00	118.71	355.67	110.24	348.93	97.82
357.50	101.16	389.35	136.26	370.20	116.72	355.72	107.29	348.94	98.88
357.53	95.49	389.36	139.20	370.21	121.54	355.84	106.53	349.00	92.80
357.58	104.03	389.45	134.38	370.25	117.37	355.87	108.25	349.07	96.97
357.68	106.84	389.54	132.87	370.36	120.20	355.88	106.56	349.12	99.29
357.69	94.96	389.58	135.21	370.39	116.92	355.91	105.03	349.15	97.49
357.79	98.74	389.64	137.12	370.43	118.67	355.93	105.07	349.25	96.56
357.90	97.15	389.69	131.42	370.44	119.06	356.05	103.65	349.29	100.47
357.91	104.90	389.74	136.47	370.44	114.83	356.10	106.75	349.40	103.94
357.94	104.25	389.93	146.22	370.46	113.47	356.12	103.35	349.50	100.37
357.99	104.36	390.00	142.29	370.48	119.21	356.19	104.00	349.55	101.90
358.03	97.22	390.13	133.22	370.56	116.24	356.26	95.57	349.67	90.09
358.15	104.87	390.18	148.39	370.60	119.27	356.34	107.97	349.77	102.19
358.32	103.75	390.32	128.98	370.76	115.56	356.37	108.57	349.80	91.99
358.35	95.64	390.42	143.99	370.78	122.95	356.39	109.26	349.87	98.00
358.39	99.03	390.50	141.91	370.94	114.78	356.41	104.01	349.95	97.73
358.47	98.38	390.50	130.03	370.94	116.24	356.52	94.83	350.06	98.44
358.51	96.13	390.59	140.33	370.95	119.96	356.54	97.92	350.06	101.81
358.52	94.71	390.64	141.51	370.97	113.88	356.57	98.50	350.10	97.79
358.57	100.86	390.66	141.08	371.08	116.35	356.59	104.13	350.11	102.09
358.59	98.49	390.66	137.36	371.09	116.47	356.59	108.20	350.12	98.22
358.65	105.88	390.84	145.62	371.14	114.19	356.92	108.39	350.17	100.19
358.73	96.41	390.96	152.17	371.21	121.46	356.96	110.04	350.20	101.28

358.74	105.57	391.04	138.95	371.22	120.60	357.01	108.23	350.31	99.65
358.84	98.22	391.04	135.37	371.27	113.56	357.03	101.64	350.31	106.79
358.94	104.76	391.09	155.46	371.33	114.35	357.05	107.61	350.40	102.28
358.97	99.74	391.10	142.98	371.34	118.51	357.08	95.49	350.40	100.94
358.97	106.37	391.12	137.95	371.60	118.35	357.09	107.23	350.41	99.37
359.04	104.43	391.19	141.62	371.61	114.13	357.23	106.75	350.42	101.81
359.08	103.63	391.24	128.70	371.61	114.43	357.36	107.94	350.43	91.02
359.18	106.93	391.33	136.82	371.71	118.05	357.37	107.59	350.43	100.17
359.38	106.34	391.37	137.36	371.76	124.04	357.48	106.12	350.46	104.11
359.41	96.66	391.42	141.51	371.87	121.43	357.50	107.59	350.57	103.74
359.44	97.75	391.43	138.39	371.92	119.25	357.50	106.55	350.64	91.49
359.52	97.91	391.43	136.25	372.08	122.37	357.67	111.78	350.83	99.57
359.56	94.99	391.53	134.86	372.28	122.86	357.68	104.81	350.83	101.88
359.61	95.31	391.61	134.15	372.30	118.72	357.74	110.05	350.94	104.63
359.61	106.10	391.63	134.99	372.33	122.59	357.81	112.01	350.95	100.10
359.64	97.07	391.70	136.35	372.43	123.48	357.94	106.99	351.00	99.85
359.70	105.04	391.78	133.11	372.49	121.74	357.96	108.36	351.01	98.99
359.78	95.90	391.79	141.53	372.50	116.34	357.96	109.79	351.07	93.82
359.80	110.46	392.00	142.98	372.51	120.72	357.99	109.51	351.14	100.01
359.89	100.25	392.07	141.88	372.52	115.35	358.00	106.47	351.20	100.08
360.01	105.71	392.22	133.43	372.53	114.28	358.13	105.74	351.22	98.93
360.03	108.27	392.24	146.65	372.55	117.04	358.18	106.72	351.33	99.15
360.04	100.62	392.37	132.45	372.64	117.75	358.21	112.43	351.38	105.38
360.09	103.56	392.51	144.60	372.67	118.45	358.27	107.42	351.48	110.83
360.12	100.58	392.55	138.61	372.84	119.66	358.33	95.85	351.56	101.92
360.23	103.70	392.57	131.20	372.87	122.46	358.42	108.98	351.65	106.15
360.43	105.16	392.65	144.11	372.99	115.60	358.43	110.61	351.76	93.66
360.46	96.73	392.71	137.44	373.02	117.96	358.46	110.26	351.84	103.48
360.49	98.71	392.73	131.20	373.03	120.71	358.49	107.00	351.90	92.31
360.57	98.49	392.74	137.02	373.05	113.67	358.60	95.34	351.95	99.22
360.63	96.89	392.90	134.12	373.15	117.44	358.63	98.32	352.04	97.99
360.67	98.60	393.04	153.02	373.16	116.20	358.66	110.32	352.13	102.26
360.69	109.12	393.12	143.24	373.21	115.85	358.67	98.02	352.15	99.88
360.70	97.96	393.13	137.09	373.29	119.80	358.68	107.90	352.18	99.55
360.74	105.63	393.14	155.66	373.31	125.82	358.99	107.69	352.21	102.44
360.83	97.20	393.19	144.71	373.34	116.38	359.03	110.78	352.22	99.97
360.84	106.24	393.21	137.19	373.40	115.89	359.07	108.32	352.23	101.81
360.96	98.78	393.26	143.44	373.42	119.62	359.10	102.63	352.28	103.75
361.05	107.72	393.31	130.71	373.66	122.25	359.14	109.88	352.38	103.93
361.08	101.41	393.41	138.65	373.68	114.30	359.16	107.39	352.39	99.34
361.09	107.12	393.44	142.25	373.71	114.30	359.18	97.28	352.47	103.67
361.15	110.16	393.49	144.54	373.78	119.37	359.30	109.93	352.49	99.80

361.19	106.09	393.50	139.02	373.83	124.73	359.45	111.70	352.49	107.43
361.32	103.94	393.52	143.52	373.94	120.61	359.46	107.90	352.50	101.03
361.49	108.02	393.62	140.55	373.98	118.37	359.56	110.70	352.50	101.68
361.53	100.57	393.70	138.14	374.15	121.43	359.57	108.06	352.51	93.39
361.54	98.96	393.71	137.63	374.35	118.23	359.59	107.30	352.54	102.68
361.63	98.31	393.77	140.32	374.35	123.96	359.72	111.06	352.63	104.70
361.67	96.14	393.84	136.94	374.39	122.86	359.75	104.12	352.71	91.64
361.70	98.07	393.89	137.40	374.52	123.44	359.82	109.38	352.90	101.84
361.74	108.47	394.07	143.59	374.55	120.55	359.88	112.76	352.90	101.55
361.74	98.25	394.16	143.10	374.58	118.18	360.00	107.45	353.03	104.09
361.80	106.04	394.30	137.00	374.59	116.35	360.02	108.76	353.03	99.83
361.89	105.20	394.32	147.23	374.60	121.30	360.03	107.75	353.07	98.53
361.89	96.51	394.44	128.76	374.64	116.94	360.06	108.05	353.08	100.94
362.00	100.22	394.59	145.75	374.65	122.09	360.07	107.09	353.14	95.25
362.12	106.88	394.63	134.60	374.72	121.93	360.20	105.82	353.22	101.60
362.13	107.25	394.65	132.43	374.74	120.02	360.28	110.11	353.26	101.42
362.14	99.76	394.73	143.11	374.93	123.78	360.29	114.31	353.31	99.76
362.21	104.40	394.79	137.12	374.94	118.49	360.34	106.02	353.41	99.41
362.25	100.22	394.80	135.02	375.07	118.74	360.44	98.34	353.45	105.46
362.35	109.91	394.81	146.48	375.09	118.89	360.50	111.18	353.55	106.00
362.53	106.76	394.98	106.15	375.11	125.31	360.50	111.14	353.64	100.47
362.59	99.71	395.10	154.35	375.15	115.21	360.53	112.10	353.71	106.26
362.61	101.59	395.19	140.52	375.22	116.61	360.56	106.11	353.84	91.71
362.71	99.55	395.20	137.03	375.25	117.72	360.67	96.89	353.93	104.93
362.75	97.53	395.23	157.79	375.30	115.96	360.71	100.17	353.97	93.61
362.76	97.44	395.25	145.73	375.40	120.69	360.73	98.56	354.01	99.91
362.80	110.03	395.27	141.54	375.40	127.32	360.73	111.36	354.11	96.00
362.82	99.31	395.35	143.94	375.41	116.30	360.74	105.62	354.20	102.31
362.85	109.02	395.38	131.17	375.49	124.41	361.07	107.72	354.23	100.12
362.94	110.42	395.50	139.01	375.50	119.46	361.12	112.37	354.25	100.20
362.96	100.13	395.51	142.53	375.74	118.74	361.16	108.93	354.28	103.84
363.07	100.09	395.57	144.44	375.74	116.93	361.17	103.05	354.30	104.14
363.16	106.93	395.59	143.17	375.76	116.51	361.19	111.13	354.34	107.92
363.18	99.82	395.60	139.40	375.88	118.80	361.23	110.53	354.36	104.49
363.20	106.03	395.68	138.57	375.93	124.71	361.25	95.78	354.46	106.86
363.25	104.82	395.76	136.13	376.04	126.50	361.40	112.87	354.47	100.52
363.29	100.22	395.78	140.15	376.08	122.86	361.51	113.34	354.56	101.66
363.41	110.42	395.87	144.71	376.25	122.54	361.52	110.33	354.56	104.56
363.61	108.16	395.91	134.75	376.45	118.25	361.63	110.61	354.57	103.01
363.62	98.85	395.98	139.38	376.46	128.98	361.65	107.59	354.58	94.01
363.65	100.77	396.14	147.75	376.47	124.15	361.67	111.39	354.58	102.15
363.75	101.24	396.23	144.92	376.60	126.55	361.82	110.39	354.59	106.01

363.78	97.46	396.38	136.20	376.62	118.67	361.83	107.48	354.61	102.35
363.81	98.27	396.40	150.77	376.65	119.37	361.89	113.31	354.71	104.66
363.84	109.30	396.53	129.87	376.66	122.47	361.98	113.21	354.79	93.88
363.86	99.91	396.66	147.31	376.67	116.23	362.09	108.86	354.97	100.68
363.91	108.09	396.71	148.55	376.70	117.00	362.10	107.80	354.98	100.88
363.99	106.26	396.72	136.89	376.73	123.20	362.10	109.52	355.08	106.98
364.02	98.12	396.82	145.79	376.81	124.51	362.14	109.12	355.10	98.79
364.13	103.01	396.87	142.40	376.82	124.06	362.14	107.79	355.16	102.37
364.22	108.33	396.87	137.94	377.00	117.71	362.30	108.40	355.16	104.09
364.24	102.90	396.88	126.85	377.01	125.03	362.34	108.07	355.23	94.49
364.24	104.71	397.05	105.01	377.16	119.30	362.34	111.84	355.31	101.61
364.31	108.13	397.21	155.49	377.17	118.60	362.43	109.89	355.34	102.30
364.34	101.90	397.28	144.77	377.19	124.39	362.49	102.16	355.38	101.25
364.46	106.03	397.29	139.27	377.22	119.49	362.58	114.61	355.48	101.99
364.65	107.97	397.31	157.63	377.29	119.94	362.58	112.53	355.52	105.79
364.68	100.60	397.35	140.12	377.34	121.59	362.61	112.67	355.62	107.77
364.70	100.77	397.35	146.67	377.37	117.94	362.64	108.74	355.72	102.12
364.79	99.76	397.42	146.31	377.47	123.79	362.77	101.51	355.81	109.23
364.86	100.19	397.47	133.01	377.48	127.04	362.78	97.97	355.91	95.71
364.86	98.86	397.56	140.65	377.51	121.87	362.80	99.87	355.99	108.31
364.90	103.75	397.59	141.58	377.57	118.22	362.82	115.77	356.04	97.46
364.90	100.68	397.67	148.08	377.57	126.90	362.83	109.90	356.09	98.98
364.96	109.68	397.67	140.00	377.81	120.69	363.14	111.05	356.18	99.87
365.06	113.11	397.67	146.42	377.82	118.64	363.19	113.84	356.28	104.11
365.08	99.03	397.75	141.00	377.84	117.23	363.23	111.89	356.29	100.36
365.17	101.93	397.85	137.35	377.96	122.82	363.28	104.35	356.34	104.26
365.28	101.05	397.86	139.60	377.99	127.83	363.28	115.36	356.36	103.12
365.30	109.95	397.93	143.64	378.11	124.49	363.32	99.95	356.36	103.71
365.30	105.06	397.99	137.91	378.16	120.55	363.33	112.42	356.39	103.55
365.36	111.42	398.05	142.86	378.31	124.84	363.45	109.81	356.45	105.93
365.39	101.08	398.21	146.97	378.51	119.96	363.59	110.44	356.54	100.32
365.51	106.09	398.30	145.47	378.52	127.03	363.61	112.71	356.54	107.27
365.70	107.81	398.44	139.21	378.54	122.91	363.71	112.45	356.62	104.94
365.72	99.84	398.47	149.68	378.67	124.65	363.72	107.08	356.63	107.49
365.76	100.70	398.62	137.08	378.70	122.64	363.74	111.42	356.63	106.28
365.86	100.97	398.73	150.32	378.72	120.54	363.90	113.55	356.65	104.03
365.90	98.18	398.78	139.35	378.73	121.60	363.91	109.57	356.65	104.84
365.91	99.39	398.79	133.28	378.76	120.48	363.97	114.58	356.66	95.84
365.96	100.87	398.92	146.11	378.77	118.09	364.03	114.26	356.68	103.90
365.96	110.16	398.94	139.09	378.79	121.81	364.15	112.25	356.79	103.50
366.03	108.81	398.94	147.84	378.90	126.75	364.17	111.31	356.89	92.69
366.11	99.23	398.95	129.80	378.92	121.28	364.20	113.04	357.06	103.04

366.12	110.49	399.13	105.27	379.08	126.15	364.21	109.63	357.06	103.44
366.22	102.00	399.27	156.45	379.10	121.97	364.22	109.51	357.16	106.68
366.34	111.42	399.34	145.14	379.22	120.62	364.36	108.52	357.20	99.90
366.35	104.42	399.35	139.59	379.24	121.58	364.42	112.13	357.24	102.41
366.38	113.46	399.38	159.46	379.27	125.32	364.43	114.51	357.24	101.43
366.41	107.20	399.41	147.28	379.28	119.67	364.52	111.56	357.30	95.38
366.44	106.66	399.45	141.64	379.38	119.76	364.57	100.25	357.38	102.62
366.57	107.09	399.50	145.57	379.39	120.28	364.66	113.20	357.43	106.15
366.76	108.15	399.56	133.06	379.45	118.28	364.66	114.27	357.46	97.76
366.78	100.54	399.66	145.74	379.53	126.40	364.69	116.81	357.55	100.38
366.81	100.69	399.67	147.06	379.56	127.69	364.74	112.19	357.60	107.25
366.90	100.97	399.73	146.18	379.58	119.57	364.85	102.62	357.69	108.31
366.96	99.98	399.74	143.47	379.63	117.92	364.86	99.82	357.81	106.27
366.97	102.74	399.74	141.23	379.64	127.55	364.87	103.79	357.88	108.16
367.00	109.35	399.85	142.05	379.88	122.45	364.89	115.36	357.98	97.39
367.01	100.84	399.94	141.38	379.91	119.31	364.90	110.41	358.10	111.64
367.09	107.72	399.94	139.59	379.91	118.25	365.22	112.31	358.11	97.39
367.15	108.23	400.02	143.52	380.03	119.53	365.26	118.69	358.17	98.72
367.17	99.31	400.07	138.62	380.06	129.09	365.31	111.69	358.25	99.59
367.27	103.21	400.11	145.54	380.20	128.84	365.36	114.32	358.35	105.22
367.39	102.81	400.29	147.52	380.22	122.90	365.36	108.93	358.40	106.07
367.40	109.13	400.37	147.22	380.38	124.79	365.38	110.45	358.42	104.12
367.40	110.62	400.53	138.50	380.58	120.62	365.39	101.51	358.44	106.69
367.46	110.06	400.56	154.19	380.61	131.40	365.53	114.19	358.46	103.02
367.49	106.14	400.69	137.63	380.63	125.68	365.67	114.37	358.49	110.41
367.65	106.82	400.81	150.63	380.76	128.93	365.69	110.78	358.52	106.22
367.81	108.06	400.87	136.13	380.77	121.92	365.80	113.99	358.64	108.57
367.83	100.96	400.88	159.14	380.80	122.28	365.80	106.97	358.64	103.23
367.88	101.85	400.97	147.39	380.82	121.20	365.80	112.19	358.70	103.47
367.95	100.88	401.02	147.72	380.83	123.17	365.96	111.86	358.70	105.95
368.03	101.25	401.03	139.96	380.85	121.75	365.98	110.30	358.71	106.71
368.03	101.11	401.03	145.40	380.87	122.48	366.06	113.68	358.72	103.26
368.06	105.79	401.20	105.86	380.97	124.98	366.12	115.35	358.74	106.48
368.07	102.88	401.36	157.21	381.00	124.63	366.23	110.75	358.74	94.46
368.13	109.46	401.42	147.89	381.15	120.23	366.26	112.63	358.75	107.52
368.22	109.32	401.43	141.46	381.16	126.98	366.27	114.29	358.88	104.15
368.24	103.71	401.45	162.65	381.29	120.78	366.29	112.45	358.95	93.53
368.33	103.11	401.50	149.07	381.33	124.32	366.30	114.63	359.12	100.84
368.44	102.62	401.50	144.71	381.33	124.89	366.44	110.29	359.13	103.69
368.45	109.58	401.59	149.75	381.37	119.38	366.50	109.61	359.25	110.27
368.47	109.97	401.63	135.76	381.44	120.80	366.51	115.22	359.28	101.83
368.51	108.46	401.72	145.52	381.49	122.67	366.59	111.43	359.30	101.33

368.55	104.74	401.73	144.53	381.52	119.83	366.65	102.10	359.31	105.47
368.68	112.36	401.80	149.96	381.61	126.69	366.72	114.58	359.37	99.63
368.87	110.18	401.81	145.22	381.62	124.41	366.73	114.81	359.46	101.65
368.89	103.77	401.81	148.07	381.64	122.88	366.76	117.33	359.49	103.96
368.92	102.93	401.92	143.13	381.72	124.45	366.80	110.31	359.55	99.37
369.02	101.29	402.01	140.91	381.74	122.17	366.91	99.13	359.62	104.30
369.07	101.17	402.01	139.07	381.95	122.79	366.92	103.82	359.68	105.54
369.07	103.03	402.09	145.29	381.98	118.55	366.96	102.58	359.80	109.61
369.11	106.85	402.14	139.16	382.01	119.60	366.96	116.29	359.88	107.85
369.12	102.87	402.18	144.24	382.10	123.46	366.97	109.46	359.94	111.52
369.18	110.19	402.37	152.75	382.14	129.24	367.30	112.69	360.05	98.05
369.28	111.64	402.45	147.30	382.28	126.85	367.36	116.68	360.17	110.42
369.29	104.59	402.62	154.94	382.29	122.94	367.37	114.39	360.19	97.24
369.37	104.00	402.63	140.99	382.48	124.67	367.41	102.55	360.25	99.86
369.51	107.96	402.77	139.40	382.65	122.53	367.43	116.12	360.34	104.29
369.51	110.84	402.88	152.21	382.67	131.35	367.46	114.36	360.44	108.97
369.52	106.45	402.94	148.00	382.70	129.02	367.47	99.75	360.45	102.74
369.56	109.28	402.95	137.26	382.83	130.42	367.62	113.98	360.50	108.21
369.61	103.94	403.05	148.02	382.84	122.66	367.76	118.64	360.52	105.70
369.73	112.82	403.10	143.07	382.87	122.18	367.76	111.73	360.52	102.96
369.93	102.90	403.10	133.54	382.88	123.33	367.86	113.88	360.57	108.30
369.94	110.74	403.12	149.59	382.90	120.76	367.87	106.95	360.59	108.48
370.00	105.98	403.30	111.01	382.92	119.36	367.89	114.30	360.69	103.33
370.06	102.77	403.42	158.23	382.95	124.06	368.04	116.79	360.71	109.92
370.12	101.52	403.50	147.43	383.05	124.23	368.05	108.64	360.77	103.31
370.14	102.40	403.51	141.49	383.07	124.85	368.12	114.97	360.77	108.21
370.17	109.59	403.53	162.04	383.22	129.22	368.19	118.81	360.79	106.64
370.17	104.24	403.56	153.20	383.24	124.10	368.31	112.51	360.80	106.31
370.23	111.41	403.58	143.89	383.37	124.21	368.32	114.53	360.80	105.49
370.31	113.47	403.66	148.40	383.41	124.74	368.35	118.06	360.81	95.36
370.33	103.76	403.71	137.17	383.42	123.51	368.37	112.40	360.83	109.35
370.43	104.36	403.79	144.92	383.43	121.78	368.37	116.08	360.96	108.58
370.55	111.45	403.81	145.53	383.52	124.62	368.51	110.27	361.04	93.64
370.57	104.49	403.88	143.48	383.55	123.69	368.57	111.42	361.21	105.93
370.57	114.58	403.88	151.70	383.60	120.67	368.57	116.39	361.22	103.82
370.61	109.76	403.91	148.99	383.69	124.09	368.66	110.85	361.32	110.07
370.65	105.86	404.02	141.27	383.71	131.33	368.71	103.00	361.36	108.16
370.81	111.01	404.07	139.80	383.73	120.80	368.81	118.20	361.38	105.13
370.97	110.34	404.08	144.03	383.79	122.39	368.83	118.18	361.39	103.72
370.99	102.13	404.16	145.26	383.83	128.76	368.84	117.93	361.47	102.19
371.05	106.10	404.21	140.31	384.04	124.68	368.90	110.42	361.54	105.41
371.12	105.02	404.26	145.48	384.05	119.15	368.98	100.48	361.58	107.76

371.18	102.67	404.44	149.74	384.07	117.78	369.01	102.45	361.63	105.31
371.18	102.13	404.52	150.63	384.18	122.94	369.04	118.51	361.70	105.72
371.22	110.54	404.68	141.54	384.23	131.15	369.04	110.23	361.74	106.70
371.24	104.33	404.70	155.35	384.36	127.81	369.05	104.25	361.85	112.32
371.28	110.26	404.85	138.80	384.37	123.13	369.37	113.99	361.96	106.12
371.37	115.64	404.96	153.94	384.54	125.60	369.44	118.36	362.02	110.79
371.40	102.86	405.01	146.23	384.73	123.00	369.46	114.22	362.13	95.51
371.48	103.60	405.02	141.51	384.76	131.81	369.49	104.30	362.23	110.03
371.61	105.08	405.12	148.46	384.80	127.06	369.51	115.95	362.29	98.42
371.62	109.85	405.17	133.09	384.92	122.14	369.54	101.63	362.33	102.68
371.62	111.19	405.17	145.80	384.93	130.46	369.57	114.54	362.40	102.35
371.68	112.16	405.18	147.88	384.95	121.09	369.70	118.57	362.52	108.09
371.70	104.99	405.35	120.54	384.96	126.79	369.83	112.62	362.54	105.29
371.84	114.08	405.52	163.21	384.98	124.96	369.85	120.57	362.57	106.05
372.03	110.25	405.58	148.66	385.00	124.47	369.94	114.50	362.59	105.85
372.07	106.17	405.61	144.52	385.02	124.85	369.97	112.99	362.61	107.77
372.09	104.78	405.62	164.21	385.12	127.35	369.99	114.80	362.63	108.50
372.18	106.24	405.64	151.18	385.15	124.74	370.11	116.54	362.67	108.11
372.23	103.08	405.66	142.55	385.30	127.02	370.13	108.69	362.77	110.97
372.23	103.16	405.75	152.51	385.30	124.25	370.20	119.38	362.78	105.03
372.27	110.68	405.78	138.25	385.44	125.34	370.27	118.27	362.85	108.32
372.29	105.10	405.88	150.35	385.48	124.87	370.40	116.29	362.85	104.98
372.34	109.96	405.89	145.10	385.51	122.09	370.41	114.87	362.87	112.13
372.43	110.45	405.96	151.54	385.51	130.06	370.41	116.55	362.87	105.52
372.45	105.46	405.97	141.57	385.59	123.27	370.43	113.92	362.88	107.85
372.53	106.10	405.98	146.21	385.62	124.64	370.44	114.12	362.88	95.64
372.66	107.25	406.09	141.58	385.68	123.20	370.59	113.70	362.93	107.54
372.67	110.55	406.16	143.99	385.76	127.92	370.65	118.02	363.04	110.29
372.67	112.26	406.17	144.45	385.78	129.13	370.66	111.79	363.12	97.87
372.73	115.78	406.23	144.59	385.80	125.01	370.73	110.92	363.27	105.84
372.75	106.66	406.32	143.29	385.87	121.54	370.80	103.83	363.29	105.31
372.90	111.33	406.33	145.79	385.91	126.79	370.88	118.03	363.38	110.32
373.08	111.26	406.54	151.98	386.14	124.65	370.89	117.05	363.44	109.41
373.11	106.21	406.60	149.66	386.15	121.21	370.93	121.79	363.45	103.85
373.16	105.35	406.76	143.63	386.15	123.31	370.98	114.64	363.46	106.13
373.25	106.36	406.78	156.98	386.28	127.12	371.07	103.50	363.55	99.92
373.30	104.58	406.91	142.20	386.29	131.12	371.08	100.99	363.61	105.17
373.30	106.65	407.04	154.46	386.42	128.61	371.11	119.13	363.64	106.10
373.33	114.27	407.10	148.06	386.45	126.17	371.11	104.75	363.70	105.55
373.33	105.75	407.10	141.02	386.62	126.58	371.12	110.32	363.78	104.81
373.41	111.47	407.21	150.13	386.82	124.94	371.44	113.71	363.85	110.83
373.47	112.33	407.25	144.94	386.82	133.20	371.52	118.48	363.92	111.69

373.49	103.68	407.25	147.41	386.87	126.90	371.53	116.13	364.02	105.67
373.61	107.49	407.25	133.24	386.98	130.04	371.57	107.49	364.09	111.81
373.71	106.17	407.43	146.75	387.02	122.24	371.58	118.03	364.21	99.15
373.71	114.09	407.58	161.22	387.02	127.65	371.62	114.49	364.33	113.44
373.75	114.51	407.65	149.41	387.05	126.64	371.62	106.04	364.35	99.12
373.80	118.72	407.69	145.36	387.05	124.77	371.80	119.09	364.43	106.55
373.82	106.25	407.71	165.47	387.07	122.26	371.90	112.47	364.48	105.63
373.95	112.03	407.71	153.14	387.10	126.11	371.90	120.39	364.58	108.33
374.13	111.77	407.75	143.75	387.19	127.00	372.02	112.26	364.60	104.11
374.15	105.05	407.82	153.98	387.23	127.79	372.03	116.48	364.65	109.05
374.20	105.64	407.85	139.47	387.40	123.20	372.05	114.55	364.65	106.23
374.28	105.89	407.95	145.73	387.41	130.80	372.18	119.57	364.67	106.32
374.33	104.91	407.97	149.60	387.52	124.29	372.22	111.73	364.71	113.22
374.37	104.53	408.03	153.51	387.56	126.47	372.27	120.78	364.74	108.76
374.38	105.24	408.04	146.46	387.57	128.52	372.35	122.82	364.84	103.56
374.39	110.06	408.06	143.47	387.61	123.86	372.46	114.22	364.85	110.49
374.45	114.02	408.15	144.46	387.67	126.70	372.48	115.83	364.93	111.74
374.53	113.98	408.23	143.12	387.71	126.88	372.51	113.11	364.94	113.29
374.57	105.73	408.25	145.56	387.75	121.88	372.51	114.88	364.95	106.26
374.65	107.26	408.31	147.80	387.84	129.10	372.55	113.95	364.95	108.84
374.76	113.09	408.37	146.57	387.84	131.07	372.66	113.83	364.96	107.48
374.78	113.66	408.41	149.25	387.89	124.26	372.73	110.33	364.97	99.93
374.79	108.50	408.59	152.75	387.96	124.00	372.73	118.42	364.99	109.72
374.83	112.01	408.68	153.77	387.98	128.27	372.80	113.71	365.10	110.16
374.89	106.68	408.84	143.92	388.20	124.76	372.87	104.93	365.20	96.22
375.00	113.34	408.88	158.87	388.21	125.69	372.96	116.88	365.35	105.11
375.18	111.92	409.00	143.63	388.23	120.97	372.97	119.39	365.38	108.04
375.20	104.98	409.11	157.57	388.35	126.16	372.99	120.88	365.47	109.39
375.25	106.16	409.16	141.87	388.36	131.41	373.04	115.47	365.50	106.12
375.34	106.79	409.17	141.47	388.51	130.61	373.14	103.76	365.56	105.64
375.39	105.53	409.29	151.75	388.52	124.26	373.16	102.62	365.56	107.04
375.40	104.68	409.33	152.00	388.69	127.54	373.18	103.52	365.61	99.96
375.44	106.17	409.33	147.16	388.88	124.64	373.19	118.69	365.68	105.69
375.45	116.33	409.34	153.81	388.91	133.15	373.20	112.23	365.74	109.61
375.50	112.36	409.50	138.26	388.94	126.11	373.52	116.80	365.77	104.17
375.58	114.49	409.66	162.94	389.06	132.57	373.60	124.05	365.86	103.85
375.60	105.24	409.72	151.19	389.08	127.77	373.62	116.38	365.92	111.67
375.71	108.37	409.77	166.27	389.11	127.05	373.64	103.71	366.03	112.50
375.82	107.85	409.78	148.12	389.11	129.22	373.65	117.45	366.12	108.18
375.83	111.70	409.80	153.11	389.15	124.98	373.70	116.40	366.19	116.96
375.84	114.60	409.81	146.16	389.15	126.26	373.70	105.15	366.28	100.43
375.88	114.19	409.89	152.73	389.17	127.66	373.86	117.95	366.40	112.51

375.94	109.56	409.94	144.31	389.26	127.62	373.98	114.82	366.45	100.40
376.05	115.38	410.03	147.53	389.31	128.04	373.98	120.76	366.48	104.07
376.24	113.46	410.04	149.84	389.46	128.72	374.11	114.59	366.56	106.13
376.27	108.36	410.11	153.86	389.47	126.57	374.11	115.31	366.68	110.20
376.31	109.28	410.12	149.61	389.59	127.39	374.12	114.91	366.69	106.43
376.40	106.71	410.13	155.41	389.64	130.34	374.26	118.61	366.72	106.19
376.44	105.46	410.22	146.19	389.66	129.06	374.28	110.84	366.73	109.07
376.45	105.49	410.31	143.57	389.66	123.71	374.37	120.72	366.75	106.48
376.49	108.10	410.31	146.60	389.74	126.68	374.42	122.80	366.78	110.13
376.50	116.81	410.39	152.11	389.78	127.40	374.53	114.46	366.82	108.41
376.57	116.66	410.45	145.63	389.83	122.78	374.55	115.85	366.93	113.50
376.63	113.49	410.50	149.14	389.92	126.55	374.59	116.53	366.94	104.52
376.67	106.16	410.67	154.01	389.92	131.34	374.59	119.22	367.01	107.20
376.75	107.13	410.75	154.02	389.96	127.90	374.60	114.49	367.01	111.16
376.88	114.65	410.92	145.60	390.03	124.02	374.74	116.65	367.03	110.20
376.88	107.24	410.94	159.65	390.04	132.06	374.80	118.66	367.03	107.44
376.90	119.00	411.07	142.59	390.27	126.41	374.81	113.90	367.03	99.31
376.95	115.64	411.20	157.81	390.29	127.74	374.87	114.44	367.04	110.21
376.98	108.13	411.24	141.86	390.31	122.45	374.95	106.24	367.06	113.01
377.12	114.58	411.25	143.35	390.41	126.57	375.04	118.41	367.17	109.94
377.31	117.60	411.37	152.62	390.44	135.88	375.05	121.98	367.26	99.57
377.32	106.08	411.40	149.85	390.57	130.12	375.09	124.79	367.44	105.46
377.37	108.21	411.40	147.24	390.60	128.10	375.14	116.74	367.45	107.56
377.47	108.15	411.40	135.19	390.76	129.02	375.22	103.94	367.54	113.28
377.51	105.75	411.59	121.35	390.97	136.07	375.23	105.48	367.60	112.30
377.52	105.98	411.74	164.70	390.98	126.40	375.26	107.71	367.61	106.02
377.54	108.63	411.80	151.54	391.03	128.55	375.28	115.87	367.61	106.40
377.54	113.67	411.83	148.42	391.14	130.89	375.28	122.35	367.69	101.42
377.61	115.56	411.85	168.15	391.16	127.92	375.61	116.51	367.76	106.15
377.68	115.81	411.88	148.17	391.19	127.21	375.67	122.06	367.80	109.73
377.71	106.68	411.90	158.44	391.19	126.45	375.69	117.91	367.84	108.92
377.82	108.64	411.99	155.94	391.20	126.95	375.71	106.57	367.95	108.12
377.92	107.54	412.00	141.67	391.25	128.68	375.73	119.54	367.98	111.71
377.93	115.65	412.10	152.12	391.25	128.20	375.76	115.45	368.10	114.57
377.94	112.84	412.11	150.04	391.34	128.55	375.78	105.63	368.18	112.57
377.99	114.54	412.18	156.85	391.39	126.80	375.93	117.05	368.25	113.66
378.04	110.32	412.20	151.79	391.54	132.37	376.05	122.55	368.36	99.95
378.18	115.38	412.22	153.24	391.57	129.08	376.06	114.63	368.46	114.00
378.37	117.79	412.31	148.54	391.67	129.15	376.17	118.07	368.51	100.69
378.38	107.06	412.37	143.99	391.71	128.31	376.19	119.14	368.55	106.00
378.42	108.77	412.39	147.80	391.72	130.46	376.19	114.08	368.63	104.06
378.51	109.48	412.46	152.91	391.74	125.74	376.33	117.75	368.75	110.50

378.55	108.21	412.52	147.03	391.82	127.33	376.38	115.73	368.76	109.16
378.59	106.90	412.58	147.89	391.85	128.72	376.44	119.72	368.81	110.43
378.62	108.15	412.76	160.90	391.93	125.55	376.51	122.17	368.81	111.82
378.62	115.37	412.82	154.03	392.01	132.84	376.61	116.66	368.82	110.34
378.69	115.18	413.00	151.62	392.02	128.94	376.65	119.47	368.87	113.06
378.75	116.61	413.04	162.18	392.03	128.87	376.65	115.21	368.89	111.99
378.77	109.68	413.14	143.59	392.10	124.91	376.68	116.40	368.99	107.32
378.86	110.32	413.28	158.06	392.12	126.70	376.69	118.10	369.02	113.14
378.98	116.60	413.31	136.98	392.35	126.90	376.83	116.90	369.09	115.88
379.01	111.48	413.32	149.84	392.36	124.72	376.89	122.82	369.09	112.48
379.02	121.42	413.43	158.20	392.40	126.62	376.90	116.89	369.11	101.01
379.04	113.94	413.47	149.70	392.51	126.95	376.95	114.39	369.11	108.20
379.09	108.21	413.48	135.81	392.52	134.85	377.02	105.60	369.11	107.96
379.22	115.67	413.50	148.39	392.67	131.08	377.12	120.80	369.12	110.10
379.42	109.05	413.65	141.25	392.68	129.66	377.14	122.64	369.13	112.04
379.42	115.48	413.83	169.95	392.85	131.24	377.15	124.87	369.28	110.74
379.48	111.07	413.88	152.88	393.05	135.37	377.21	117.24	369.34	101.24
379.59	108.99	413.92	169.77	393.06	126.95	377.30	105.11	369.51	107.90
379.60	108.04	413.92	149.81	393.09	129.59	377.32	112.54	369.52	108.05
379.63	106.74	413.96	157.09	393.21	134.65	377.33	108.06	369.61	112.92
379.67	109.35	413.98	149.83	393.25	129.11	377.34	122.74	369.66	108.02
379.68	116.41	414.05	154.36	393.25	130.83	377.35	115.90	369.69	109.03
379.73	115.74	414.08	142.76	393.27	127.94	377.71	120.58	369.71	110.33
379.79	120.12	414.17	149.74	393.28	126.71	377.73	122.61	369.76	105.61
379.83	108.20	414.19	154.60	393.30	127.45	377.76	121.00	369.86	110.25
379.91	111.05	414.27	155.89	393.33	129.96	377.79	110.73	369.90	110.00
380.03	116.68	414.27	150.23	393.42	132.93	377.80	120.59	369.94	111.99
380.04	108.86	414.29	148.83	393.46	130.75	377.84	116.41	370.02	105.49
380.05	116.29	414.39	148.64	393.61	131.12	377.87	106.57	370.07	112.40
380.10	116.09	414.45	151.19	393.65	127.43	378.02	120.30	370.16	114.38
380.13	110.47	414.46	150.05	393.76	128.98	378.13	123.59	370.25	110.43
380.27	116.68	414.53	149.88	393.78	129.10	378.16	116.29	370.32	116.19
380.47	108.24	414.61	148.73	393.80	131.75	378.25	118.62	370.43	102.05
380.50	116.89	414.64	149.47	393.82	126.46	378.25	116.17	370.54	114.36
380.52	109.89	414.83	161.24	393.89	128.78	378.27	117.42	370.58	103.67
380.62	109.25	414.92	156.04	393.92	128.52	378.41	118.71	370.65	110.24
380.65	106.71	415.07	147.82	393.99	125.12	378.46	114.56	370.72	107.99
380.69	107.96	415.10	162.95	394.07	132.42	378.53	124.61	370.83	110.90
380.71	109.28	415.22	147.84	394.07	128.47	378.57	122.54	370.84	107.30
380.72	118.83	415.34	160.69	394.11	128.14	378.71	118.40	370.88	109.68
380.78	115.95	415.38	151.53	394.18	127.79	378.71	116.53	370.89	110.95
380.84	117.07	415.39	145.81	394.20	133.33	378.75	118.50	370.90	112.40

380.87	109.08	415.51	155.15	394.42	128.86	378.75	119.69	370.95	113.57
380.96	110.29	415.55	133.49	394.43	128.59	378.76	119.20	370.97	109.70
381.08	116.61	415.56	158.79	394.46	125.65	378.90	118.04	371.07	106.89
381.09	109.30	415.56	148.93	394.59	127.64	378.95	121.55	371.08	118.32
381.11	117.75	415.73	151.71	394.59	135.35	378.97	116.03	371.16	111.66
381.14	116.26	415.91	167.14	394.73	133.32	379.02	117.52	371.17	114.19
381.21	111.94	415.95	153.67	394.75	130.66	379.10	106.50	371.18	109.97
381.32	117.36	415.98	150.72	394.91	130.84	379.20	118.17	371.19	101.00
381.53	115.62	415.99	169.29	395.12	135.70	379.20	122.97	371.19	110.00
381.54	112.55	416.03	156.91	395.14	128.34	379.22	122.81	371.20	109.16
381.57	110.23	416.05	151.91	395.19	136.23	379.27	119.89	371.23	114.07
381.69	112.41	416.12	157.99	395.29	136.04	379.40	111.81	371.35	112.16
381.71	108.03	416.16	147.84	395.34	129.88	379.40	114.93	371.41	99.52
381.73	108.21	416.26	151.98	395.34	130.82	379.41	106.55	371.59	112.06
381.76	110.44	416.27	150.63	395.35	129.79	379.42	122.67	371.60	107.71
381.76	115.62	416.34	159.16	395.36	126.98	379.45	115.81	371.68	113.98
381.84	116.55	416.34	156.85	395.39	126.95	379.77	121.00	371.73	111.40
381.90	115.05	416.37	151.23	395.41	131.11	379.83	121.01	371.76	109.19
381.92	108.30	416.47	151.42	395.49	130.94	379.84	127.75	371.78	111.70
382.01	112.36	416.54	154.89	395.54	132.37	379.87	108.28	371.83	104.20
382.15	115.33	416.57	158.16	395.71	130.57	379.88	121.54	371.92	110.93
382.16	113.50	416.61	151.90	395.71	133.24	379.92	120.44	371.95	109.56
382.16	118.62	416.70	148.93	395.82	131.30	379.94	107.92	372.00	108.20
382.19	119.59	416.73	152.98	395.86	133.11	380.09	119.11	372.11	112.06
382.25	116.42	416.90	157.53	395.87	132.37	380.21	122.59	372.15	114.82
382.37	117.54	416.98	155.51	395.90	127.77	380.22	120.16	372.24	120.82
382.58	110.42	417.17	150.20	395.98	128.44	380.32	118.24	372.33	111.97
382.60	118.38	417.20	163.89	396.01	128.80	380.34	115.19	372.40	116.18
382.64	110.54	417.29	149.44	396.06	124.80	380.35	120.32	372.52	101.73
382.75	111.33	417.42	160.78	396.14	132.83	380.49	120.76	372.61	114.37
382.79	108.70	417.46	137.50	396.16	135.28	380.53	116.33	372.68	103.25
382.79	109.79	417.48	150.81	396.18	127.42	380.61	121.89	372.71	108.85
382.81	109.63	417.58	156.21	396.25	127.67	380.65	124.50	372.79	108.45
382.83	117.22	417.62	136.30	396.27	131.10	380.77	118.12	372.90	111.38
382.91	121.86	417.63	150.80	396.51	127.22	380.79	120.74	372.93	109.56
382.95	117.88	417.64	156.21	396.53	130.51	380.81	119.84	372.95	109.53
382.97	109.03	417.81	155.84	396.53	125.39	380.82	120.79	372.96	109.03
383.07	112.00	417.99	168.96	396.66	135.30	380.82	120.72	372.99	110.68
383.21	113.98	418.04	155.65	396.68	131.99	380.98	119.74	373.01	118.45
383.21	119.05	418.05	152.23	396.82	130.74	381.05	119.89	373.07	115.40
383.22	122.89	418.07	172.03	396.83	132.82	381.05	122.45	373.16	115.71
383.25	117.76	418.10	159.61	397.02	133.57	381.12	119.78	373.16	107.39

383.29	112.09	418.12	151.21	397.20	129.07	381.18	108.38	373.23	112.48
383.42	118.47	418.20	157.54	397.21	140.07	381.28	122.70	373.24	118.30
383.63	109.45	418.23	147.67	397.26	133.27	381.29	121.76	373.25	110.88
383.64	117.44	418.33	157.54	397.36	135.10	381.30	126.92	373.26	112.55
383.68	112.66	418.34	153.38	397.41	129.84	381.35	120.33	373.26	103.97
383.80	111.45	418.42	128.86	397.41	131.08	381.46	107.96	373.28	110.25
383.82	109.71	418.43	159.35	397.41	134.82	381.47	110.58	373.30	114.52
383.84	109.45	418.43	151.58	397.45	131.36	381.48	108.15	373.43	116.39
383.86	111.47	418.56	156.35	397.47	129.61	381.51	123.47	373.49	103.61
383.87	115.98	418.62	150.92	397.47	130.32	381.51	117.31	373.66	110.46
383.94	117.68	418.63	153.34	397.56	134.26	381.85	121.99	373.66	109.19
384.02	116.40	418.68	154.75	397.60	133.15	381.93	124.28	373.78	116.55
384.05	110.93	418.76	149.68	397.79	134.16	381.93	122.01	373.82	110.23
384.12	113.98	418.80	154.14	397.80	132.88	381.95	111.79	373.85	112.36
384.26	118.79	419.00	159.27	397.93	131.45	381.97	124.43	373.86	109.56
384.26	121.31	419.06	157.43	397.93	131.12	382.00	119.54	373.90	105.96
384.27	115.30	419.22	150.99	397.95	135.24	382.02	108.22	373.99	110.94
384.30	122.30	419.26	164.73	397.97	130.63	382.15	118.75	374.06	110.33
384.36	111.19	419.37	147.79	398.04	131.82	382.28	124.87	374.08	111.15
384.47	118.63	419.49	162.77	398.09	133.11	382.29	119.83	374.17	108.13
384.70	117.99	419.53	149.81	398.14	127.64	382.40	122.06	374.21	113.83
384.71	110.88	419.57	149.90	398.22	135.11	382.42	119.57	374.35	118.22
384.77	112.42	419.66	160.34	398.23	133.10	382.42	122.23	374.40	111.86
384.84	111.21	419.70	153.31	398.28	128.68	382.57	125.30	374.47	116.19
384.88	110.33	419.71	154.41	398.32	128.83	382.61	116.47	374.62	106.81
384.91	110.84	419.71	154.27	398.36	131.15	382.68	121.76	374.69	117.98
384.91	110.99	419.88	146.25	398.58	130.83	382.75	125.83	374.76	106.16
384.93	116.89			398.59	127.71	382.85	121.48	374.79	108.68
384.99	120.85			398.61	128.14	382.88	120.55	374.88	112.11
385.08	125.11			398.73	129.96	382.89	124.70	374.97	114.56
385.09	110.94			398.75	139.43	382.91	122.63	374.99	113.09
385.17	112.46			398.89	134.19	382.92	119.37	375.03	112.91
385.30	119.50			398.89	131.73	383.04	120.59	375.05	112.46
385.31	114.47			399.08	133.81	383.11	118.00	375.07	112.04
385.31	118.94			399.27	130.57	383.13	123.22	375.09	113.90
385.35	119.43			399.28	139.12	383.19	118.87	375.12	112.87
385.40	116.40			399.34	138.67	383.25	112.49	375.23	109.35
385.52	118.72			399.43	137.16	383.34	122.88	375.25	120.01
385.74	112.57			399.48	131.74	383.35	124.98	375.31	115.30
385.74	121.13			399.51	133.71	383.38	126.25	375.32	111.94
385.81	113.42			399.52	135.23	383.45	122.17	375.33	116.24
385.90	112.84			399.54	129.64	383.53	107.94	375.34	110.13

385.94	109.86	399.54	130.99	383.53	110.06	375.34	106.09
385.95	111.32	399.55	131.83	383.55	109.67	375.36	115.16
385.96	111.76	399.64	134.86	383.58	118.08	375.39	115.98
385.98	119.37	399.69	134.07	383.59	127.35	375.49	113.74
386.04	121.78	399.85	135.39	383.92	123.40	375.57	105.71
386.13	120.82	399.86	132.77	383.98	129.28	375.74	112.43
386.13	111.36	399.99	133.25	384.00	123.25	375.74	112.01
386.22	112.46	400.03	133.63	384.02	110.48	375.85	116.63
386.35	119.82	400.04	134.65	384.03	124.72	375.88	113.29
386.36	114.13	400.05	131.09	384.07	122.17	375.91	112.09
386.37	118.07	400.12	133.21	384.08	109.59	375.92	112.38
386.40	119.59	400.16	132.29	384.23	120.76	375.99	107.05
386.45	112.62	400.22	129.11	384.35	122.94	376.06	111.67
386.59	117.72	400.30	134.95	384.38	120.66	376.14	114.84
386.79	119.73	400.32	135.61	384.48	121.79	376.15	110.56
386.79	113.63	400.37	135.06	384.49	117.85	376.25	110.18
386.87	116.80	400.41	129.79	384.49	123.35	376.29	116.61
386.97	116.05	400.44	132.92	384.64	124.37	376.40	118.51
386.98	111.76	400.65	128.60	384.68	116.37	376.49	116.47
387.03	110.96	400.66	136.79	384.76	122.59	376.55	119.65
387.03	120.08	400.68	127.53	384.80	126.71	376.67	106.05
387.04	113.16	400.81	130.39	384.95	121.70	376.77	118.67
387.11	121.02	400.83	138.32	384.95	120.88	376.83	108.40
387.17	118.05	400.96	135.46	384.95	123.53	376.87	110.50
387.20	112.37	401.00	135.62	384.98	123.45	376.94	108.98
387.27	115.07	401.15	135.09	385.00	123.88	377.04	114.56
387.41	121.31	401.35	130.67	385.12	122.74	377.07	112.23
387.42	118.83	401.38	139.39	385.19	119.87	377.11	113.04
387.43	114.61	401.42	135.38	385.20	124.97	377.13	113.71
387.47	120.90	401.52	138.17	385.26	119.74	377.13	115.22
387.50	115.16	401.55	132.06	385.33	115.82	377.16	115.60
387.64	120.90	401.56	133.92	385.42	120.93	377.21	113.07
387.85	120.01	401.58	134.82	385.44	127.77	377.31	117.90
387.86	112.91	401.61	134.23	385.44	129.27	377.34	113.51
387.91	114.58	401.62	134.14	385.50	122.87	377.40	114.13
388.01	115.40	401.63	132.10	385.60	111.91	377.41	113.02
388.06	115.29	401.71	134.35	385.63	117.28	377.41	114.63
388.08	111.61	401.75	134.42	385.65	126.34	377.42	117.85
388.09	113.57	401.94	131.64	385.65	118.05	377.42	112.19
388.09	118.95	401.95	140.68	385.66	117.44	377.43	105.53
388.15	121.45	402.07	131.22	386.00	124.36	377.48	116.50
388.23	125.10	402.10	137.30	386.06	124.89	377.57	115.69

388.26	115.49	402.11	136.27	386.09	124.43	377.64	105.47
388.33	114.68	402.12	129.85	386.09	111.99	377.81	112.35
388.46	120.99	402.22	133.49	386.10	124.40	377.84	111.70
388.49	122.55	402.24	135.84	386.17	122.43	377.93	117.00
388.50	118.85	402.31	133.91	386.17	110.56	377.99	111.81
388.51	120.92	402.39	135.49	386.30	120.75	377.99	112.19
388.58	116.73	402.40	141.51	386.44	126.71	378.00	114.91
388.69	118.67	402.42	130.98	386.45	120.54	378.08	108.63
388.90	121.16	402.49	131.06	386.55	122.76	378.14	111.89
388.91	113.63	402.50	138.66	386.57	121.33	378.21	116.34
388.99	115.70	402.73	132.93	386.58	121.65	378.22	110.65
389.06	114.51	402.76	132.98	386.73	125.76	378.33	115.81
389.10	115.48	402.77	130.14	386.75	118.62	378.39	116.52
389.13	114.17	402.89	139.33	386.82	125.53	378.49	123.21
389.14	124.20	402.90	135.24	386.89	129.06	378.56	115.03
389.14	115.48	403.05	139.82	387.02	120.03	378.62	120.45
389.20	122.08	403.07	134.68	387.02	122.93	378.77	106.53
389.27	120.99	403.22	136.05	387.03	127.00	378.84	117.70
389.31	115.58	403.43	140.76	387.07	124.96	378.91	107.33
389.39	117.74	403.44	133.34	387.08	124.87	378.96	111.80
389.51	121.99	403.48	138.57	387.21	125.28	379.05	111.60
389.53	116.06	403.61	138.87	387.27	126.23	379.12	115.86
389.54	126.85	403.64	132.93	387.29	125.05	379.14	112.94
389.55	119.82	403.65	136.23	387.35	120.39	379.19	114.33
389.61	119.72	403.67	135.04	387.40	112.89	379.22	113.70
389.74	120.87	403.67	134.03	387.49	124.10	379.22	112.68
389.95	121.93	403.69	132.72	387.51	125.64	379.24	120.21
389.96	114.59	403.72	138.73	387.54	128.97	379.28	114.26
390.03	116.38	403.81	138.02	387.59	124.62	379.39	119.08
390.13	116.49	403.83	134.76	387.67	113.46	379.41	111.17
390.14	112.85	404.00	138.45	387.69	114.69	379.47	115.20
390.18	115.13	404.02	134.07	387.72	116.03	379.47	115.72
390.19	124.09	404.13	133.30	387.72	126.59	379.47	118.22
390.20	117.74	404.18	136.92	387.76	118.52	379.49	115.49
390.26	122.48	404.18	135.37	388.08	126.90	379.49	114.05
390.33	126.04	404.20	134.57	388.13	128.99	379.50	107.29
390.36	115.05	404.28	135.15	388.17	128.81	379.53	117.97
390.44	118.02	404.30	134.91	388.18	126.36	379.65	117.10
390.57	126.06	404.38	131.56	388.19	114.64	379.71	106.90
390.58	123.13	404.45	140.13	388.23	123.55	379.90	111.69
390.58	116.78	404.48	139.05	388.27	112.32	379.90	114.27
390.63	123.28	404.51	133.37	388.39	125.10	379.99	117.93

390.66	115.66	404.57	131.70	388.52	122.79	380.04	114.55
390.81	119.86	404.59	135.16	388.52	124.91	380.07	113.70
391.00	114.60	404.81	135.29	388.63	126.90	380.09	112.66
391.03	122.30	404.83	139.64	388.64	121.27	380.14	108.48
391.08	116.88	404.83	132.20	388.66	126.09	380.23	116.39
391.20	113.15	404.97	134.09	388.82	126.84	380.28	116.27
391.20	117.37	404.97	141.40	388.83	119.35	380.30	112.47
391.24	115.58	405.11	137.21	388.90	123.14	380.41	116.35
391.25	125.57	405.15	134.92	388.96	128.55	380.48	118.44
391.26	113.98	405.30	137.52	389.09	121.79	380.55	122.95
391.32	124.02	405.51	141.94	389.10	123.30	380.63	116.62
391.37	120.80	405.52	133.30	389.10	126.32	380.69	120.72
391.43	114.40	405.58	137.47	389.14	124.03	380.84	111.43
391.49	116.76	405.69	141.38	389.14	126.08	380.93	120.74
391.64	118.47	405.71	136.74	389.27	124.45	380.97	110.24
391.64	122.55	405.73	139.93	389.35	121.65	381.01	111.85
391.65	124.94	405.73	136.91	389.35	126.86	381.10	112.21
391.69	121.55	405.75	135.05	389.41	119.20	381.22	117.19
391.71	116.54	405.76	135.24	389.48	115.64	381.22	116.85
391.87	123.44	405.78	136.67	389.59	124.68	381.25	114.60
392.06	117.82	405.89	138.89	389.59	128.54	381.28	114.35
392.08	123.22	405.93	139.42	389.60	131.43	381.30	114.64
392.13	119.00	406.08	135.00	389.67	127.73	381.31	121.80
392.24	119.05	406.08	138.49	389.75	115.00	381.36	114.64
392.27	117.44	406.21	136.56	389.76	115.57	381.47	124.44
392.29	113.90	406.25	137.30	389.81	120.81	381.47	113.69
392.31	118.83	406.25	138.73	389.82	118.58	381.55	124.13
392.31	120.61	406.27	135.97	389.82	130.06	381.56	120.00
392.36	123.60	406.36	136.72	390.14	126.60	381.56	114.56
392.43	123.66	406.38	136.56	390.21	128.23	381.57	108.58
392.47	114.94	406.44	132.32	390.23	128.99	381.58	116.32
392.56	117.79	406.54	139.21	390.25	116.46	381.58	116.15
392.67	124.40	406.55	137.58	390.27	126.34	381.60	116.93
392.69	127.15	406.59	137.36	390.31	124.50	381.74	118.12
392.69	118.38	406.63	134.81	390.34	118.13	381.79	104.49
392.73	124.54	406.68	143.47	390.46	123.00	381.96	116.84
392.76	119.25	406.88	135.14	390.61	126.25	381.97	113.72
392.90	125.84	406.90	136.09	390.62	128.72	382.08	120.58
393.13	119.12	406.90	133.06	390.71	125.98	382.11	115.04
393.14	127.88	407.04	135.34	390.73	125.00	382.15	113.97
393.19	117.76	407.06	141.70	390.74	121.46	382.17	117.54
393.29	117.38	407.19	140.23	390.89	127.79	382.21	112.56

393.30	116.45	407.21	136.82	390.90	120.24	382.29	114.47
393.34	114.36	407.38	139.87	390.97	126.84	382.37	116.59
393.35	115.54	407.58	143.66	391.04	130.93	382.37	114.37
393.38	124.59	407.59	134.71	391.17	121.83	382.48	115.05
393.42	125.20	407.64	139.32	391.18	126.72	382.54	119.93
393.48	124.18	407.75	142.03	391.18	122.88	382.62	122.39
393.52	117.26	407.79	139.17	391.21	125.68	382.70	117.13
393.61	117.82	407.80	137.06	391.21	129.12	382.78	121.40
393.73	125.01	407.81	137.11	391.38	124.52	382.92	110.39
393.74	123.04	407.82	135.01	391.42	124.61	383.00	120.52
393.74	121.30	407.85	135.48	391.42	127.92	383.06	110.47
393.77	124.90	407.85	140.73	391.51	120.71	383.09	113.33
393.85	121.38	407.95	137.33	391.55	112.54	383.18	114.49
393.96	127.80	407.99	137.75	391.65	125.97	383.29	116.06
394.18	115.75	408.17	140.88	391.66	126.91	383.30	118.63
394.18	128.17	408.17	137.97	391.68	131.13	383.35	118.11
394.23	118.73	408.28	136.80	391.75	126.92	383.36	117.77
394.36	115.21	408.32	140.24	391.83	112.79	383.36	118.55
394.36	118.91	408.33	139.90	391.84	119.88	383.41	120.13
394.40	116.03	408.35	135.50	391.88	114.40	383.46	119.88
394.41	115.77	408.45	136.01	391.89	122.31	383.53	122.21
394.41	124.93	408.45	139.65	391.89	128.78	383.54	113.85
394.47	124.92	408.53	135.00	392.22	129.98	383.62	118.94
394.53	128.09	408.60	138.30	392.28	128.99	383.63	121.59
394.59	116.07	408.64	143.09	392.30	129.10	383.65	117.15
394.65	120.42	408.66	137.96	392.33	114.31	383.65	120.10
394.77	125.06	408.71	135.07	392.34	127.83	383.66	117.45
394.79	128.21	408.75	143.01	392.38	126.44	383.67	110.20
394.80	119.88	408.96	134.93	392.41	118.60	383.68	118.11
394.83	124.05	408.98	138.81	392.54	126.90	383.81	120.07
394.87	120.70	408.99	132.96	392.67	124.94	383.87	108.38
395.01	126.98	409.14	143.67	392.67	127.02	384.03	116.22
395.23	125.28	409.14	136.61	392.78	126.96	384.04	114.33
395.24	116.72	409.26	141.84	392.81	128.48	384.18	119.08
395.28	120.80	409.30	137.70	392.83	122.35	384.21	117.72
395.40	120.77	409.45	141.17	392.95	128.27	384.22	114.99
395.43	116.98	409.66	135.20	392.98	122.86	384.24	116.21
395.45	116.85	409.66	144.28	393.05	125.53	384.29	111.57
395.45	115.62	409.71	143.74	393.12	131.06	384.36	115.55
395.46	127.11	409.84	142.07	393.24	125.01	384.44	119.78
395.54	126.07	409.86	139.39	393.26	127.37	384.46	119.55
395.60	131.58	409.87	140.43	393.28	128.00	384.58	117.96

395.63	116.46	409.89	137.05	393.29	129.04	384.62	119.63
395.70	119.00	409.89	143.58	393.29	126.12	384.70	122.07
395.83	128.00	409.93	135.95	393.45	128.55	384.77	118.49
395.84	128.25	409.95	141.30	393.52	124.21	384.84	122.85
395.84	119.79	410.03	140.87	393.52	133.24	385.00	111.34
395.90	132.14	410.06	139.63	393.58	124.70	385.07	120.54
395.94	119.87	410.24	141.65	393.62	116.31	385.13	112.61
396.06	127.88	410.24	139.04	393.72	127.10	385.18	115.96
396.28	124.99	410.35	137.56	393.76	129.14	385.27	119.67
396.28	118.79	410.40	140.58	393.77	132.77	385.37	117.29
396.33	121.65	410.41	141.53	393.81	126.84	385.38	120.79
396.45	119.17	410.43	135.97	393.90	113.97	385.41	114.99
396.46	116.63	410.51	138.65	393.94	119.20	385.44	118.64
396.51	125.71	410.53	138.06	393.95	119.36	385.44	119.64
396.52	121.08	410.60	134.27	393.96	130.51	385.46	120.75
396.52	118.56	410.69	141.31	393.96	123.82	385.52	118.00
396.57	126.12	410.70	141.37	394.30	129.10	385.61	121.98
396.64	130.69	410.76	138.29	394.36	129.02	385.61	114.06
396.68	116.67	410.79	136.31	394.41	132.14	385.71	118.28
396.78	123.63	410.83	141.64	394.42	119.54	385.72	110.18
396.90	127.79	411.04	137.38	394.44	128.41	385.72	118.79
396.90	122.93	411.05	143.39	394.46	126.91	385.72	122.52
396.92	132.03	411.07	132.99	394.50	116.05	385.72	122.38
396.96	128.52	411.21	138.10	394.63	125.80	385.73	117.45
396.99	126.39	411.22	145.33	394.74	128.91	385.75	119.27
397.11	126.13	411.36	140.86	394.77	124.64	385.89	119.45
397.33	119.10	411.37	139.02	394.87	128.60	385.94	108.20
397.33	128.16	411.54	142.35	394.89	124.33	386.11	116.84
397.38	120.85	411.73	145.73	394.90	127.03	386.15	120.34
397.50	119.72	411.75	139.66	395.02	129.15	386.25	122.77
397.51	117.46	411.78	141.50	395.05	122.43	386.27	118.38
397.57	120.89	411.91	145.15	395.13	130.16	386.29	116.52
397.57	116.05	411.94	138.91	395.19	131.43	386.30	116.60
397.58	124.17	411.96	140.94	395.31	124.30	386.37	112.30
397.62	128.60	411.96	141.61	395.33	125.90	386.44	116.48
397.70	131.58	411.99	139.68	395.34	128.10	386.51	118.82
397.74	117.56	412.00	137.20	395.37	128.27	386.52	116.12
397.84	124.37	412.01	142.32	395.39	129.60	386.63	116.34
397.93	129.09	412.10	141.60	395.51	127.16	386.69	122.75
397.95	120.89	412.14	141.60	395.58	130.15	386.79	124.88
397.96	127.95	412.32	143.83	395.59	125.97	386.87	118.64
397.99	131.66	412.32	140.40	395.66	126.37	386.92	124.41

398.03	123.61	412.44	143.38	395.70	119.75	387.08	110.31
398.17	125.58	412.47	140.37	395.80	126.88	387.14	122.00
398.39	127.12	412.48	143.26	395.83	131.17	387.20	112.96
398.39	118.67	412.49	136.36	395.83	133.19	387.26	116.04
398.44	121.79	412.61	139.76	395.89	130.10	387.36	114.28
398.55	119.77	412.61	139.74	395.97	117.79	387.44	120.62
398.56	116.81	412.67	135.46	396.00	116.87	387.46	119.87
398.62	126.92	412.76	145.31	396.03	120.68	387.51	120.37
398.63	116.93	412.78	143.66	396.04	125.20	387.51	118.94
398.64	119.85	412.82	137.12	396.04	131.24	387.53	118.89
398.68	127.14	412.86	136.22	396.39	130.39	387.54	121.79
398.74	127.46	412.93	148.59	396.44	130.94	387.61	122.12
398.79	120.59	413.11	137.59	396.48	118.75	387.69	113.87
398.87	120.84	413.13	139.30	396.48	132.92	387.69	121.50
398.99	128.30	413.15	136.06	396.49	130.01	387.79	119.51
399.01	126.02	413.28	145.61	396.53	127.54	387.79	118.81
399.01	124.09	413.30	139.46	396.57	117.39	387.80	122.80
399.04	126.57	413.44	144.35	396.71	126.27	387.80	109.92
399.08	121.99	413.46	143.34	396.83	131.82	387.80	117.96
399.24	129.18	413.61	141.21	396.83	124.96	387.81	122.67
399.43	126.72	413.83	139.19	396.93	128.92	387.83	124.62
399.45	119.19	413.84	145.94	396.95	131.05	387.98	123.18
399.50	122.19	413.89	141.66	396.96	127.48	388.01	111.02
399.62	123.18	413.98	144.15	397.10	129.81	388.19	119.69
399.63	120.73	414.01	137.33	397.12	125.83	388.20	116.41
399.68	131.30	414.02	144.34	397.20	130.76	388.35	125.65
399.69	120.36	414.03	141.04	397.26	132.85	388.36	120.59
399.69	120.34	414.07	139.02	397.38	127.69	388.38	118.72
399.73	127.12	414.07	139.53	397.40	127.52	388.39	118.68
399.79	128.11	414.09	143.32	397.42	129.87	388.44	116.68
399.84	118.74	414.19	143.93	397.44	129.83	388.53	117.84
399.92	122.95	414.22	141.71	397.44	129.14	388.61	116.24
400.03	130.16	414.39	138.94	397.59	127.35	388.61	121.71
400.06	131.47	414.39	147.90	397.66	130.79	388.72	119.63
400.07	122.49	414.51	141.64	397.66	126.62	388.76	122.21
400.10	127.51	414.54	141.82	397.75	128.10	388.87	128.39
400.13	122.48	414.56	144.79	397.78	118.24	388.94	121.68
400.30	134.63	414.59	137.85	397.87	130.38	389.00	125.89
400.49	131.22	414.66	141.48	397.89	131.29	389.15	113.54
400.50	119.76	414.68	141.46	397.91	135.29	389.24	126.78
400.54	122.56	414.75	135.74	397.97	128.39	389.28	112.44
400.67	121.76	414.83	143.54	398.06	117.12	389.35	118.05

400.70	119.87	414.85	145.20	398.09	118.29	389.42	118.38
400.73	120.94	414.90	139.76	398.11	118.74	389.52	120.91
400.73	128.14	414.93	137.69	398.11	132.43	389.55	122.65
400.75	118.44	415.00	144.61	398.12	126.84	389.57	121.02
400.80	132.19	415.18	139.11	398.49	135.39	389.59	122.20
400.85	132.54	415.22	135.72	398.53	132.19	389.59	120.71
400.90	121.95	415.22	142.69	398.55	117.03	389.61	122.53
401.00	125.47	415.35	147.53	398.55	133.16	389.68	118.74
401.09	129.17	415.36	139.50	398.56	129.93	389.76	124.44
401.12	127.29	415.52	146.16	398.62	129.03	389.77	116.23
401.13	125.45	415.52	141.65	398.65	118.25	389.86	122.64
401.14	130.04	415.69	142.48	398.77	127.72	389.86	122.18
401.18	125.43	415.89	139.23	398.90	131.17	389.86	122.83
401.33	127.51	415.90	149.53	398.91	129.27	389.87	117.08
401.55	122.34	415.95	144.07	399.01	129.73	389.88	120.74
401.56	130.08	416.05	144.83	399.03	131.58	389.90	112.35
401.59	124.04	416.10	143.41	399.03	123.67	389.93	124.27
401.72	121.83	416.10	143.62	399.18	132.83	390.04	122.92
401.74	119.42	416.11	145.82	399.20	128.39	390.09	109.35
401.77	128.60	416.13	139.85	399.28	130.02	390.26	120.45
401.78	117.42	416.16	140.51	399.37	133.17	390.30	115.40
401.79	121.31	416.18	145.67	399.47	129.22	390.41	126.26
401.86	130.50	416.27	143.01	399.48	129.05	390.43	119.14
401.92	134.73	416.30	143.20	399.49	130.39	390.45	119.13
401.94	118.27	416.46	142.92	399.51	131.26	390.46	121.32
402.04	123.00	416.47	146.34	399.53	132.89	390.54	114.36
402.14	129.21	416.58	139.72	399.69	128.80	390.60	121.21
402.16	127.37	416.64	143.46	399.73	132.35	390.69	117.40
402.17	123.00	416.66	149.74	399.74	129.12	390.69	122.79
402.19	129.31	416.68	142.40	399.81	128.17	390.82	120.62
402.26	129.39	416.74	141.13	399.85	119.18	390.87	127.03
402.40	129.13	416.76	144.74	399.95	129.08	390.94	124.82
402.60	132.38	416.84	138.29	399.97	132.75	391.02	120.84
402.62	121.03	416.93	143.02	399.98	136.13	391.09	126.90
402.66	124.07	416.93	149.49	400.05	131.61	391.22	112.89
402.78	125.56	416.96	142.96	400.14	118.60	391.32	128.32
402.79	119.82	417.02	139.07	400.18	124.68	391.36	115.34
402.82	129.22	417.07	143.56	400.18	133.51	391.43	118.46
402.83	122.02	417.28	139.53	400.18	120.60	391.50	117.39
402.84	118.67	417.29	143.57	400.20	128.81	391.60	123.62
402.90	130.92	417.31	136.65	400.56	131.83	391.63	121.44
402.95	132.58	417.43	147.80	400.61	133.19	391.64	120.81

403.00	119.09	417.44	142.16	400.62	134.42	391.66	120.52
403.09	125.50	417.59	147.15	400.64	131.91	391.67	122.26
403.20	132.89	417.61	145.70	400.64	120.67	391.69	123.95
403.22	125.03	417.79	148.09	400.70	131.02	391.77	121.04
403.23	130.67	417.96	139.51	400.73	120.57	391.83	124.49
403.25	129.42	417.97	147.69	400.84	131.06	391.87	117.01
403.31	124.72	418.02	147.88	400.98	133.34	391.93	124.11
403.44	129.16	418.14	149.01	401.01	133.27	391.94	123.93
403.65	132.63	418.17	143.15	401.08	131.28	391.95	109.33
403.65	120.86	418.19	146.32	401.11	127.86	391.95	122.24
403.72	124.03	418.21	141.22	401.13	133.44	391.96	122.16
403.83	126.03	418.22	142.01	401.26	133.33	391.97	118.75
403.84	119.65	418.23	143.22	401.30	129.40	391.98	124.56
403.88	132.97	418.25	146.35	401.35	129.63	392.11	124.93
403.88	122.04	418.33	146.45	401.42	135.44	392.18	110.35
403.89	121.03	418.37	146.52	401.55	131.26	392.33	118.98
403.95	130.42	418.54	149.07	401.56	130.93	392.36	118.65
404.01	130.65	418.54	144.83	401.57	135.62	392.48	125.79
404.06	119.83	418.66	142.91	401.59	131.75	392.50	122.79
404.14	124.06	418.70	144.58	401.61	131.69	392.52	119.52
404.24	131.36	418.72	147.49	401.75	132.48	392.53	121.32
404.27	130.94	418.73	140.73	401.81	134.24	392.63	114.55
404.28	124.06	418.84	143.83	401.84	129.11	392.67	121.05
404.29	130.40	418.84	143.00	401.90	130.95	392.75	122.60
404.34	127.22	418.92	139.39	401.92	120.76	392.78	123.61
404.51	127.80	418.99	146.87	402.02	132.10	392.87	119.29
404.71	132.21	419.00	146.26	402.04	131.00	392.92	124.83
404.73	122.18	419.05	140.73	402.05	136.05	393.01	128.86
404.78	124.66	419.08	140.48	402.12	133.08	393.09	124.44
404.89	125.21	419.15	146.81	402.21	119.98	393.15	129.02
404.92	121.24	419.34	143.55	402.24	124.63	393.29	114.32
404.93	131.13	419.35	142.41	402.26	130.34	393.38	129.21
404.94	122.39	419.37	138.49	402.28	135.03	393.44	113.82
404.95	119.68	419.50	140.62	402.28	121.53	393.49	121.40
405.00	133.95	419.52	149.53	402.65	133.25	393.57	121.91
405.08	129.51	419.66	147.61	402.70	135.03	393.69	119.16
405.11	120.62	419.67	145.68	402.70	121.53	393.70	125.35
405.19	124.07	419.87	149.53	402.71	134.81	393.71	120.41
405.29	134.16			402.72	133.11	393.74	120.47
405.32	134.12			402.78	131.11	393.74	120.33
405.35	128.31			402.80	120.77	393.76	125.70
405.36	136.58			402.92	133.20	393.84	124.83

405.41	126.20	403.05	133.25	393.92	126.09
405.55	129.96	403.06	131.90	393.92	118.02
405.76	131.43	403.18	133.16	394.01	126.80
405.76	121.47	403.19	133.18	394.01	129.25
405.83	125.09	403.21	130.65	394.02	122.81
405.93	124.64	403.34	137.96	394.03	112.56
405.96	121.28	403.37	130.65	394.03	123.67
405.98	129.40	403.42	133.41	394.04	119.50
405.99	123.03	403.50	135.37	394.06	125.27
406.00	119.56	403.61	131.86	394.19	124.41
406.06	133.32	403.63	132.50	394.26	113.57
406.11	132.32	403.64	134.04	394.41	122.00
406.16	123.71	403.68	133.05	394.44	120.29
406.26	128.34	403.70	132.60	394.55	124.78
406.34	134.91	403.84	134.80	394.58	122.79
406.37	132.67	403.90	130.44	394.60	122.85
406.38	126.66	403.91	135.85	394.62	122.68
406.40	133.08	403.96	131.13	394.69	120.35
406.45	124.79	404.03	128.86	394.74	122.69
406.60	129.05	404.10	133.42	394.83	126.53
406.81	122.06	404.12	134.80	394.85	122.99
406.82	132.32	404.13	137.22	394.95	123.31
406.86	127.20	404.22	132.38	395.00	127.03
407.00	126.39	404.28	121.57	395.09	127.25
407.00	122.57	404.33	123.40	395.16	125.71
407.05	122.95	404.34	135.15	395.22	129.13
407.05	133.05	404.36	130.36	395.38	112.66
407.07	124.00	404.37	127.89	395.45	128.43
407.12	136.85	404.72	136.84	395.51	116.71
407.16	132.40	404.75	135.15	395.56	122.77
407.20	121.81	404.77	135.92	395.64	122.84
407.29	127.60	404.78	124.58	395.76	120.46
407.39	133.27	404.79	134.93	395.77	126.68
407.42	133.58	404.85	133.60	395.80	121.20
407.44	126.31	404.87	122.61	395.82	123.26
407.45	133.78	405.00	133.31	395.83	124.50
407.50	127.71	405.12	135.10	395.84	131.15
407.66	135.65	405.15	131.17	395.91	121.25
407.86	131.16	405.24	133.09	396.01	133.89
407.86	124.15	405.26	136.49	396.03	117.61
407.92	128.52	405.26	127.89	396.08	127.90
408.05	122.70	405.42	137.45	396.09	126.93

408.05	126.77	405.45	131.49	396.10	124.34
408.09	129.77	405.50	134.80	396.10	120.02
408.10	120.86	405.58	137.31	396.11	123.52
408.11	123.56	405.69	133.25	396.12	115.39
408.18	134.26	405.70	133.83	396.14	128.24
408.21	130.96	405.74	137.40	396.26	126.91
408.28	126.50	405.76	137.14	396.32	113.51
408.34	128.81	405.77	136.29	396.51	124.98
408.45	136.37	405.90	133.21	396.53	120.52
408.49	128.89	405.96	137.40	396.63	128.84
408.50	135.80	405.97	130.00	396.65	123.20
408.50	132.73	406.03	131.10	396.68	125.01
408.56	128.31	406.08	123.29	396.69	121.95
408.71	130.33	406.18	133.10	396.79	116.22
408.91	123.07	406.21	135.59	396.82	123.72
408.92	135.95	406.22	137.45	396.90	124.90
408.98	127.42	406.30	135.20	396.93	120.29
409.10	122.86	406.35	122.53	397.02	124.71
409.11	127.65	406.40	125.06	397.08	125.99
409.14	132.49	406.41	137.03	397.17	129.14
409.16	121.79	406.42	133.67	397.23	124.51
409.17	124.82	406.44	124.23	397.30	131.31
409.21	134.50	406.80	135.39	397.45	114.52
409.26	136.26	406.82	135.36	397.53	126.87
409.34	123.07	406.85	123.70	397.58	116.24
409.39	127.83	406.86	133.53	397.63	122.65
409.50	134.54	406.87	137.37	397.72	121.17
409.52	134.44	406.93	132.83	397.83	127.06
409.55	128.32	406.94	125.15	397.86	125.53
409.55	135.21	407.07	134.22	397.86	122.95
409.62	130.00	407.19	136.34	397.90	124.87
409.77	130.82	407.24	132.65	397.91	124.39
409.96	133.28	407.31	135.60	397.93	128.95
409.96	124.33	407.34	132.43	397.98	124.66
410.03	128.19	407.36	137.42	398.09	133.19
410.15	130.20	407.50	138.29	398.11	119.28
410.16	122.88	407.52	130.99	398.16	129.75
410.20	132.79	407.58	137.18	398.17	128.93
410.21	124.01	407.65	138.12	398.17	125.39
410.21	125.14	407.77	132.78	398.19	119.78
410.29	135.68	407.77	135.43	398.19	114.76
410.32	134.86	407.83	141.52	398.20	123.59

410.39	123.67	407.83	135.41	398.21	128.50
410.47	129.04	407.84	140.40	398.34	127.12
410.57	135.47	407.97	135.26	398.39	114.28
410.58	134.78	408.06	132.52	398.58	124.70
410.61	135.56	408.07	143.20	398.59	119.71
410.62	132.18	408.13	133.70	398.70	129.50
410.66	130.17	408.16	126.11	398.75	124.80
410.81	133.47	408.25	136.94	398.75	126.31
411.02	124.04	408.27	135.12	398.77	126.45
411.03	137.56	408.29	139.83	398.84	116.06
411.08	130.43	408.39	135.20	398.89	123.82
411.20	128.96	408.44	124.61	398.97	126.34
411.21	123.83	408.48	138.03	399.00	124.96
411.24	133.03	408.49	131.46	399.09	126.03
411.26	125.18	408.52	126.11	399.15	127.91
411.28	126.68	408.52	135.05	399.24	129.67
411.34	134.55	408.86	136.43	399.32	127.03
411.36	137.76	408.90	137.24	399.37	131.20
411.42	124.06	408.93	126.20	399.52	118.37
411.50	129.32	408.94	138.75	399.62	131.18
411.61	136.26	408.94	138.19	399.66	116.66
411.65	129.31	408.99	133.38	399.74	125.15
411.65	141.50	409.03	126.25	399.82	123.44
411.66	135.44	409.15	135.97	399.90	126.99
411.71	130.45	409.27	137.21	399.91	123.75
411.87	137.73	409.31	133.73	399.94	122.94
412.07	124.41	409.41	134.61	399.98	127.26
412.08	135.77	409.42	133.49	399.99	129.08
412.13	129.15	409.42	142.20	399.99	129.66
412.26	129.30	409.57	139.34	400.08	124.45
412.26	123.49	409.59	132.08	400.16	119.87
412.29	133.36	409.65	138.34	400.16	130.72
412.31	124.74	409.73	139.12	400.24	126.58
412.31	125.13	409.85	137.52	400.25	134.38
412.40	136.48	409.86	137.42	400.25	128.82
412.42	139.84	409.90	136.22	400.26	122.73
412.49	124.87	409.90	142.03	400.26	121.67
412.55	129.89	409.91	141.32	400.28	114.80
412.68	136.41	410.05	135.11	400.29	130.71
412.68	139.12	410.13	143.60	400.44	127.55
412.70	135.92	410.13	135.15	400.47	115.74
412.71	131.08	410.19	133.14	400.64	125.63

412.76	129.56	410.24	127.96	400.68	122.36
412.91	134.65	410.33	138.61	400.78	129.46
413.12	125.23	410.35	140.77	400.82	123.73
413.13	137.88	410.37	140.51	400.83	124.81
413.19	130.32	410.45	137.54	400.84	126.96
413.31	129.19	410.52	130.13	400.92	121.22
413.31	123.75	410.55	127.95	400.97	126.63
413.35	137.87	410.56	139.29	401.04	124.51
413.37	126.25	410.57	133.95	401.07	124.52
413.39	124.77	410.58	127.45	401.17	124.90
413.44	137.06	410.94	140.79	401.23	130.18
413.48	137.06	410.97	137.48	401.32	135.97
413.53	124.64	411.01	138.85	401.41	127.86
413.61	132.81	411.01	139.25	401.44	130.54
413.73	137.22	411.02	128.00	401.62	118.05
413.74	136.83	411.08	136.32	401.70	130.51
413.75	131.04	411.11	126.95	401.74	119.01
413.76	134.79	411.22	136.61	401.79	126.83
413.83	130.46	411.36	139.73	401.90	123.47
413.98	140.36	411.38	134.36	401.98	127.05
414.18	135.79	411.48	137.25	402.01	124.38
414.19	126.72	411.49	131.90	402.02	125.90
414.24	132.91	411.50	141.92	402.06	133.25
414.36	129.66	411.67	142.02	402.07	126.09
414.36	124.43	411.69	136.24	402.08	133.09
414.40	138.74	411.73	138.38	402.17	125.56
414.42	126.90	411.80	140.14	402.23	132.33
414.45	124.54	411.93	138.85	402.24	121.45
414.49	139.17	411.95	138.53	402.32	131.58
414.54	135.79	411.96	139.40	402.32	128.92
414.60	129.35	411.97	137.51	402.33	126.76
414.65	131.65	411.99	139.37	402.33	131.18
414.77	137.87	412.14	135.85	402.33	118.07
414.79	135.96	412.19	141.30	402.34	123.38
414.81	135.27	412.23	134.57	402.36	131.10
414.81	134.41	412.29	139.40	402.50	128.46
414.87	133.41	412.31	128.11	402.56	118.28
415.05	142.03	412.40	137.60	402.72	125.96
415.22	126.27	412.44	141.44	402.76	124.18
415.23	139.60	412.44	141.47	402.85	131.70
415.28	131.62	412.52	138.13	402.90	130.49
415.43	133.73	412.60	127.76	402.91	128.62

415.44	128.80	412.62	129.37	402.94	129.41
415.45	133.81	412.65	141.58	403.00	119.06
415.46	129.78	412.66	134.67	403.04	128.26
415.48	126.52	412.66	129.08	403.13	126.98
415.55	138.80	413.01	138.39	403.17	125.19
415.58	141.69	413.05	142.19	403.27	129.91
415.64	128.23	413.08	138.19	403.30	129.08
415.71	133.85	413.09	139.33	403.40	136.98
415.82	138.41	413.10	131.95	403.47	129.10
415.84	136.86	413.16	137.32	403.55	134.21
415.86	132.53	413.18	129.12	403.68	119.32
415.86	137.41	413.30	137.00	403.78	134.53
415.92	133.95	413.43	141.18	403.82	116.31
416.09	135.07	413.47	135.81	403.87	127.00
416.29	138.75	413.54	136.76	403.95	126.17
416.31	131.80	413.56	133.04	404.07	125.62
416.34	134.49	413.58	141.14	404.08	131.00
416.47	133.23	413.72	142.73	404.09	125.11
416.49	128.90	413.75	135.79	404.13	128.58
416.51	128.06	413.83	140.70	404.14	126.65
416.52	136.86	413.87	143.62	404.14	132.52
416.53	127.18	414.01	137.61	404.25	126.93
416.60	137.55	414.02	138.58	404.30	133.27
416.64	137.60	414.04	139.51	404.32	126.19
416.69	126.94	414.06	140.96	404.40	130.14
416.76	133.42	414.07	141.85	404.40	131.18
416.87	139.21	414.21	139.99	404.41	118.54
416.91	138.78	414.27	143.26	404.41	125.86
416.91	133.90	414.28	133.61	404.41	135.33
416.94	139.86	414.38	142.40	404.42	128.58
416.97	133.00	414.40	129.14	404.46	130.61
417.14	140.97	414.50	141.30	404.58	130.33
417.34	137.77	414.50	140.59	404.62	118.25
417.35	127.55	414.51	142.82	404.79	126.63
417.39	134.76	414.59	137.29	404.83	124.51
417.53	128.26	414.66	128.15	404.94	131.56
417.53	132.34	414.71	129.94	404.97	131.28
417.56	137.11	414.71	141.52	405.00	129.62
417.58	128.35	414.72	137.03	405.00	128.03
417.60	127.22	414.75	130.02	405.07	120.84
417.66	139.85	415.11	141.22	405.14	132.81
417.68	139.83	415.14	144.96	405.20	130.46

417.75	128.31	415.16	141.57	405.23	126.41
417.83	137.52	415.17	143.46	405.32	128.51
417.94	141.94	415.18	130.97	405.38	132.11
417.96	136.52	415.22	135.91	405.49	135.42
417.97	139.92	415.26	128.75	405.54	129.03
417.99	139.88	415.39	141.58	405.63	134.42
418.02	135.30	415.50	142.12	405.76	118.70
418.20	136.75	415.54	136.93	405.84	134.43
418.39	128.32	415.62	137.09	405.92	122.09
418.40	138.83	415.64	133.93	405.95	129.41
418.45	134.28	415.68	144.17	406.03	128.31
418.59	127.80	415.80	143.63	406.15	127.19
418.60	136.52	415.82	136.33	406.17	129.12
418.62	135.78	415.88	139.41	406.17	127.47
418.62	130.87	415.95	143.33	406.21	131.05
418.66	127.49	416.09	139.64	406.21	136.47
418.70	139.76	416.10	141.64	406.21	129.21
418.73	138.74	416.11	144.15	406.32	127.55
418.79	128.72	416.13	141.62	406.39	135.49
418.87	134.65	416.14	144.75	406.40	126.05
418.99	140.38	416.28	139.19	406.47	129.66
419.01	137.67	416.34	146.89	406.47	131.26
419.02	135.68	416.37	136.63	406.48	125.92
419.04	136.78	416.43	140.07	406.49	136.68
419.09	140.82	416.46	130.41	406.50	130.02
419.25	143.58	416.56	141.64	406.51	134.03
419.44	140.68	416.58	144.37	406.52	122.23
419.45	129.88	416.60	147.43	406.66	131.13
419.49	134.75	416.68	140.28	406.70	118.51
419.63	129.89	416.74	130.42	406.86	131.00
419.64	136.89	416.77	131.37	406.90	126.53
419.68	129.39	416.81	140.74	407.00	133.23
419.69	144.11	416.81	144.14	407.05	128.94
419.71	128.22	416.84	130.58	407.07	131.14
419.78	141.53	417.18	143.64	407.08	132.01
419.79	141.60	417.21	141.72	407.16	122.68
419.84	129.04	417.25	141.24	407.20	130.08
419.92	135.10	417.25	143.35	407.27	129.55
		417.26	126.44	407.33	133.08
		417.33	137.25	407.42	132.60
		417.36	132.08	407.45	131.89
		417.48	139.53	407.56	135.20

417.59	143.57	407.61	130.09
417.61	137.15	407.68	135.04
417.70	138.30	407.83	122.68
417.72	137.95	407.91	134.38
417.74	144.59	407.99	123.62
417.90	150.35	408.02	128.09
417.91	142.03	408.10	126.45
417.97	143.45	408.24	131.30
418.02	143.76	408.24	129.16
418.17	140.33	408.24	130.46
418.18	143.56	408.29	134.69
418.20	147.22	408.29	132.97
418.21	141.76	408.29	131.20
418.21	143.33	408.41	128.75
418.37	140.36	408.48	135.76
418.42	145.56	408.49	126.60
418.45	137.37	408.54	129.17
418.50	140.48	408.55	136.92
418.53	131.87	408.56	127.26
418.63	141.27	408.56	130.84
418.67	143.34	408.57	132.82
418.68	145.62	408.57	121.69
418.74	139.07	408.61	138.33
418.81	131.74	408.72	133.37
418.85	136.63	408.77	122.05
418.88	142.59	408.94	131.17
418.91	143.13	408.98	127.04
418.91	137.50	409.08	134.69
419.25	141.51	409.14	131.15
419.29	143.17	409.15	135.89
419.31	144.51	409.15	134.36
419.33	127.35	409.22	126.62
419.33	146.73	409.28	133.21
419.40	138.49	409.35	130.76
419.41	132.11	409.38	131.10
419.53	142.08	409.49	134.46
419.65	144.26	409.53	135.14
419.70	138.36	409.63	138.45
419.78	143.92	409.69	130.93
419.79	138.70	409.76	136.15
419.81	143.28	409.93	124.05
419.96	147.92	409.99	135.22

419.98	143.44	410.06	124.88
		410.11	131.54
		410.18	126.95
		410.30	129.59
		410.30	128.82
		410.33	128.66
		410.36	132.18
		410.39	135.93
		410.39	135.73
		410.47	129.75
		410.54	141.90
		410.55	128.67
		410.62	132.32
		410.62	137.92
		410.64	133.24
		410.64	122.78
		410.65	130.44
		410.67	130.34
		410.67	135.71
		410.79	132.74
		410.87	122.30
		411.04	132.16
		411.05	128.64
		411.17	135.00
		411.22	134.07
		411.22	132.51
		411.23	134.81
		411.29	125.05
		411.35	132.55
		411.44	132.99
		411.47	129.03
		411.58	131.63
		411.60	134.45
		411.70	139.53
		411.77	131.20
		411.86	135.30
		411.99	124.38
		412.06	137.01
		412.13	126.22
		412.20	132.43
		412.25	131.75
		412.38	130.75

412.38	131.90
412.39	131.73
412.44	130.97
412.45	139.41
412.47	138.89
412.54	132.73
412.62	140.58
412.65	129.48
412.70	134.88
412.70	134.05
412.70	138.24
412.71	130.61
412.72	122.88
412.73	131.10
412.76	141.18
412.87	131.69
412.95	123.23
413.09	132.14
413.12	129.94
413.23	137.47
413.29	133.72
413.29	133.35
413.29	135.34
413.37	127.01
413.43	134.96
413.51	132.69
413.53	132.92
413.65	133.09
413.68	134.59
413.80	140.02
413.84	135.59
413.92	137.00
414.07	125.15
414.14	137.37
414.23	124.79
414.27	134.49
414.33	132.50
414.45	131.40
414.46	133.08
414.47	131.60
414.52	136.99
414.52	134.39

414.53	139.12
414.61	132.81
414.70	145.75
414.71	130.72
414.77	133.19
414.77	143.25
414.79	139.85
414.79	124.83
414.80	130.17
414.81	133.12
414.84	138.38
414.97	136.92
415.01	121.09
415.17	135.19
415.19	134.09
415.31	137.45
415.36	135.22
415.37	135.59
415.38	139.99
415.46	127.03
415.50	135.70
415.59	135.20
415.61	132.32
415.72	136.85
415.76	135.06
415.85	143.10
415.94	139.90
416.01	140.82
416.14	126.68
416.23	136.91
416.29	125.65
416.34	134.33
416.42	131.16
416.54	133.20
416.55	133.93
416.56	139.86
416.60	143.98
416.60	136.68
416.61	137.02
416.71	135.48
416.78	143.08
416.80	130.71

416.84	141.25
416.85	137.18
416.86	128.08
416.86	136.11
416.87	141.60
416.87	132.96
416.90	141.52
417.03	136.37
417.10	125.56
417.25	134.75
417.29	133.15
417.41	138.21
417.44	137.54
417.44	136.58
417.46	133.87
417.52	127.11
417.57	137.18
417.66	135.43
417.69	136.75
417.79	140.09
417.84	139.72
417.94	149.15
418.01	137.79
418.10	143.71
418.21	126.04
418.32	141.92
418.37	130.71
418.41	134.37
418.50	137.66
418.61	135.43
418.62	137.46
418.63	138.98
418.67	137.70
418.67	139.37
418.68	143.67
418.78	135.83
418.85	143.47
418.86	130.89
418.92	145.28
418.93	139.39
418.95	138.40
418.95	139.89

418.97	127.19
418.97	141.24
418.98	136.50
419.11	137.34
419.17	124.73
419.32	137.32
419.38	131.17
419.46	139.22
419.52	136.84
419.52	134.74
419.54	138.46
419.60	131.92
419.65	138.70
419.74	137.04
419.76	134.45
419.86	137.11
419.90	139.48

VITA

VITA

Charles E. Anklam III
Graduate School, Purdue University

Education

- 2008- Master of Public Administration, Columbus State University, Columbus, Georgia
- 2002- Bachelor of Arts, Sociology, University of Florida, Gainesville, Florida
- 1998- Associate of Arts, Southern New Hampshire College, Brunswick, Maine

Military Education

- 2009- United States Army Infantry Captains Career Course, Ft. Benning, Georgia
- 2004- Arabic Language Immersion Course, San Diego, California
- 2002- Infantry Officers Course, United States Marine Corps, Quantico, Virginia
- 2002- The Basic School, United States Marine Corps, Quantico, Virginia
- 2002- Warfighting Skills Program, non-resident
- 1999- Staff Non-Commissioned Officers Career, non-resident program
- 1998- Sergeants Career Course, resident program, Quantico, Virginia

Academic Appointments

- 2012- Associate Professor of Naval Science, Purdue University

Professional Achievements

- 2015- Member, Golden Key International Honour Society, Purdue University Chapter
- 2012- Distinguished Alumnus in Military Service Award Recipient, Columbus State University, Columbus, Georgia
- 2009- Ralph T. Pucket Leadership Award Recipient, Commanding General, U.S. Army Infantry Center, Ft. Benning, Georgia.
- 1994- Charles Anklam currently serves as a Major in the United States Marine Corps with over 20 years of active duty service. He has earned over 22 military awards and decorations and fought in both the Iraq and Afghanistan wars.

Personal Awards Include:

Bronze Star Medal (2 awards) with Combat “V”
 Purple Heart Medal
 Navy and Marine Corps Commendation Medal (2 awards) with Combat “V”
 Navy and Marine Corps Achievement Medal (3 awards), 1 with Combat “V”
 Army Achievement Medal
 Combat Action Ribbon (2 awards)
 Good Conduct Medal (2 awards)
 Military Outstanding Volunteer Service Medal
 Certificate of Commendation
 14 Letters of Appreciation

Academic Works:Publications

2014- Mitigating active shooter impact: Analysis for policy options based on agent/computer-based modeling. Selected for spring 2015, publication; Journal of Emergency Management.
 2015- Security at the Indianapolis Motor Speedway. Publication submission pending; Journal of Emergency Management.

Book Chapters

2015- Currently co-authoring four chapters in a book on Large Event Security Planning.

Presentations and Proceedings

Charles Anklam has been invited to speak at over two dozen meetings, conferences and seminars at the state, regional and national level for audiences of various sizes including over 1000 individuals. Below is a sample of such invitations:

1. 2015-Served as guest lecturer, Daughters of the American Revolution, Lafayette, Indiana chapter, “Leadership and Civic Responsibility”.
2. 2015- Served as panel member, “Cultural of Peace” seminar, Purdue University.
3. 2015- Served as guest lecturer, “Leadership and Leading” for Roche Diagnostics, Carmel, Indiana.
4. 2015- Served as guest lecturer, Department of History, Purdue University, “Modern Iraq and War”.
5. 2014- Served as guest lecturer, Department of History, Purdue University, “Contemporary Wars; Iraq and Afghanistan”.
6. 2014- Served as guest speaker, Pearl Harbor Memorial Service, combined cities of Lafayette and West Lafayette, Indiana.

7. 2014- Served as panel member, “Just War” seminar, Purdue University.
8. 2014- Honorary guest speaker and presenter, Indiana School Safety Academia, “School shootings”.
9. 2013- Honorary guest speaker and presenter, Indiana School Safety Academia. “Mitigating Active Shooter Scenarios in Schools”.
10. 2013- Served as guest lecturer, Department of Homeland Security, Purdue University.
11. 2012- Served as guest lecturer, Department of History, Purdue University, “The Iraq War”.

Courses Taught

Evolution of Warfare, Purdue University

Amphibious Warfare, Purdue University

Naval Leadership Laboratory

Served as guest instructor for over ten courses at Department of History and Homeland Security, Purdue University

Media Citations

Charles Anklam has been quoted in television, radio, internet, and print media relating to security, military, and academic affairs. A google search of his name reveals dozens of citations.