JACS
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY

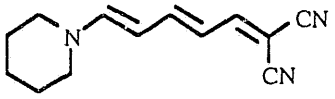
Supporting Information for *J. Am. Chem. Soc.*, **1993**, 115(6), 2524-2526, DOI: 10.1021/ja00059a067

MARDER

2524-2526

SUPPLEMENTARY MATERIAL FOR COMPOUND **1**

1,1-dicyano-6-(1-piperidinyl)-1,3,5-hexatriene



J. Am. Chem. Soc. v. 115
p. 2524 Marder

J.a526-m2

wps code	Pip-II-DCV
Name	1,1-dicyano-6-(1-piperidinyl)-1,3,5-hexatriene
Formula	$C_{13}H_{15}N_3$
Formula Weight	213.28
Crystal System	triclinic
Space Group	$P\bar{1}$
Cell Dimensions a, Å	5.332 (3)
b, Å	10.865 (3)
c, Å	11.790 (5)
α, °	72.25 (3)
β, °	79.41 (4)
γ, °	86.92 (3)
V, Å^3	639.4 (5)
Z	2
Density, calc, g cm^{-3}	1.11
Crystal color, habit	thin orange, parallelepiped
Crystal size, mm^3	0.07 x 0.09 x 0.21
μ, cm^{-1}	0.063
μr_{max}	0.0132
maximum 2θ (scan type)	25°
range of h,k, l	-6-6, -12-12, -14-14
# of reflections measured	4551
# of independent reflections	2244
# reflections, $F_o^2 > 0$	1801
# reflections, $F_o^2 > 3\sigma(F_o^2)$	791
GOF, merge	???
R(merge) for refs meas. twice	0.081
secondary extinction (x 10^{-6})	0.9(4)
R, $F_o^2 > 0$	0.171
R, $F_o^2 > 3\sigma (F_o^2)$	0.077
GOF (number of parameters)	1.62, (1.46)
$(\Delta/\sigma)_{max}$ in final least squares	0.01
Final Difference map:	
Maximum, eÅ^{-3}	+ 0.42
Minimum, eÅ^{-3}	- 0.40

Data was collected at 294 K.
Hydrogen positions were assumed, C-H 0.95 Å, and repositioned once near the end of refinement.
Structure solved using MULTAN 88.

J-2526-M3

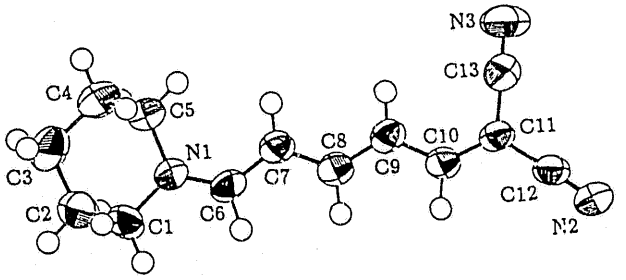


Figure 1

Schaefer, Tiemann and Marder

Figure 1: An ORTEP drawing of the molecule with 50% probability elipsoids showing the numbering system. Hydrogen atoms are drawn as circles of arbitrary small size.

J-2526-mn4

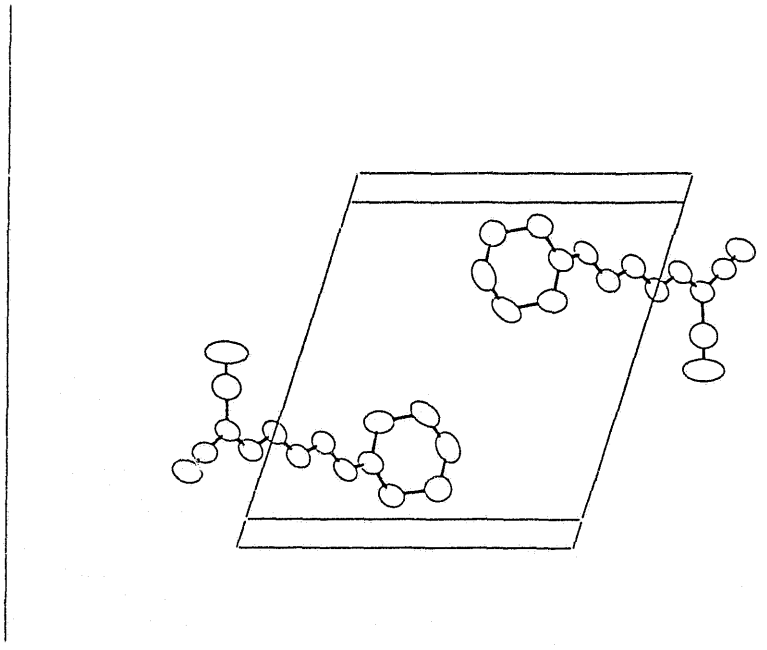


Figure 2.

Schaefer, Tiemann and Marder

Figure 2: An ORTEP drawing of the contents of a unit cell, with a unit cell outlined. Hydrogen atoms are not shown.

Table 1. Final Heavy Atom Parameters for 1-(6,6-Dicyanohexa-1,3,5-triene)piperidine.

x, y, z and U_{eq}[a] $\times 10^4$

Atom	x	y	z	U_{eq}
N1	2912(8)	3116(4)	2228(3)	652(12)
C1	1552(10)	4066(5)	1385(4)	761(16)
C2	1615(11)	5378(5)	1585(5)	873(18)
C3	434(12)	5267(6)	2886(6)	990(20)
C4	1887(12)	4262(6)	3747(5)	989(20)
C5	1872(10)	2984(5)	3503(4)	846(18)
C6	4811(10)	2427(5)	1870(4)	648(15)
C7	6269(10)	1517(5)	2540(4)	612(15)
C8	8225(10)	905(5)	1973(4)	625(14)
C9	9884(10)	1(5)	2519(4)	613(15)
C10	11787(10)	−533(5)	1851(4)	620(15)
C11	13653(9)	−1376(5)	2252(4)	580(15)
C12	15538(10)	−1837(5)	1451(4)	635(16)
N2	17041(9)	−2173(4)	779(4)	884(15)
C13	13805(10)	−1836(5)	3504(5)	772(18)
N3	13880(10)	−2165(6)	4504(4)	1251(22)

[a] $U_{eq} = \frac{1}{3} \sum_i \sum_j [U_{ij}(a_i^* a_j^*)(\vec{a}_i \cdot \vec{a}_j)]$

J. Am. Chem. Soc. v. 115
p. 2524 Marder

Table 2. Heavy Atom Distances and Angles for 1-(6,6-Dicyanohexa-1,3,5-triene)piperidine.

	Distance(Å)		Angle(°)
N1 –C1	1.463(7)	C5 –N1 –C1	113.2(4)
N1 –C5	1.469(7)	C6 –N1 –C1	122.7(4)
N1 –C6	1.311(7)	C6 –N1 –C5	124.0(4)
C1 –C2	1.517(8)	C2 –C1 –N1	110.2(4)
C2 –C3	1.518(8)	C3 –C2 –C1	109.3(5)
C3 –C4	1.531(9)	C4 –C3 –C2	109.8(5)
C4 –C5	1.502(8)	C5 –C4 –C3	110.0(5)
C6 –C7	1.369(7)	C4 –C5 –N1	110.8(5)
C7 –C8	1.384(7)	C7 –C6 –N1	129.5(5)
C8 –C9	1.376(7)	C8 –C7 –C6	120.2(5)
C9 –C10	1.381(7)	C9 –C8 –C7	126.9(5)
C10 –C11	1.365(7)	C10 –C9 –C8	121.6(5)
C11 –C12	1.428(7)	C11 –C10 –C9	128.3(5)
C11 –C13	1.422(8)	C12 –C11 –C10	122.3(5)
C12 –N2	1.147(7)	C13 –C11 –C10	120.9(5)
C13 –N3	1.131(8)	C13 –C11 –C12	116.8(5)
		N2 –C12 –C11	177.9(6)
		N3 –C13 –C11	177.6(6)

Table S1. Assigned Hydrogen Atom Parameters for 1-(6,6-Dicyanohexa-1,3,5-triene)piperidine.

x, y and $z \times 10^4$

Atom	x	y	z	B
H1A	−164	3792	1509	6.9
H1B	2357	4127	580	6.9
H2A	643	5976	1060	7.9
H2B	3315	5673	1421	7.9
H3A	−1293	5014	3038	9.0
H3B	547	6080	3021	9.0
H4A	1072	4166	4559	9.0
H4B	3590	4541	3634	9.0
H5A	171	2669	3685	7.6
H5B	2887	2386	3998	7.6
H6	5237	2580	1017	5.8
H7	5946	1309	3399	5.6
H8	8430	1129	1115	5.6
H9	9721	−258	3375	5.6
H10	11797	−280	1002	5.6

J. Am. Chem. Soc. v. 115
p. 2524 Marder

Table S2. Anisotropic Displacement Parameters for 1-(6,6-Dicyanohexa-1,3,5-triene)piperidine.

Atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
N1	744(33)	741(33)	553(27)	149(27)	−188(24)	−296(24)
C1	965(46)	773(42)	710(37)	195(35)	−428(33)	−333(32)
C2	1113(50)	800(44)	762(40)	141(36)	−297(35)	−263(34)
C3	1274(57)	820(46)	1017(48)	116(41)	−150(43)	−532(39)
C4	1327(59)	1117(54)	750(42)	218(45)	−272(38)	−596(40)
C5	977(47)	963(47)	549(35)	215(36)	−71(31)	−228(33)
C6	779(44)	744(42)	561(33)	55(34)	−168(30)	−383(31)
C7	689(41)	653(39)	573(33)	5(33)	−144(30)	−281(31)
C8	703(41)	663(38)	619(33)	−35(32)	−205(30)	−297(30)
C9	649(41)	685(43)	609(35)	3(33)	−142(30)	−327(31)
C10	735(41)	680(39)	563(34)	6(32)	−218(30)	−301(30)
C11	601(39)	704(40)	478(32)	−10(32)	−108(28)	−233(29)
C12	767(44)	680(40)	485(33)	10(33)	−181(30)	−175(30)
N2	1084(42)	1044(39)	602(30)	284(32)	−194(28)	−381(28)
C13	716(42)	907(46)	680(39)	79(33)	−72(34)	−264(37)
N3	1194(47)	1904(60)	566(32)	306(39)	−194(30)	−268(36)

$U_{i,j}$ values have been multiplied by 10^4

The form of the displacement factor is:

$$\exp -2\pi^2(U_{11}h^2a^{*^2} + U_{22}k^2b^{*^2} + U_{33}\ell^2c^{*^2} + 2U_{12}hka^*b^* + 2U_{13}h\ell a^*c^* + 2U_{23}k\ell b^*c^*)$$

J. Am. Chem. Soc. v. 115
p. 2524 Marder

Table S3. Complete Distances and Angles for 1-(6,6-Dicyanohexa-1,3,5-triene)piperidine.

Distance(Å)		Angle(°)	
N1 –C1	1.463(7)	C5 –N1 –C1	113.2(4)
N1 –C5	1.469(7)	C6 –N1 –C1	122.7(4)
N1 –C6	1.311(7)	C6 –N1 –C5	124.0(4)
C1 –C2	1.517(8)	C2 –C1 –N1	110.2(4)
C1 –H1A	0.949	H1A –C1 –N1	109.1
C1 –H1B	0.951	H1B –C1 –N1	108.9
C2 –C3	1.518(8)	H1A –C1 –C2	109.8
C2 –H2A	0.954	H1B –C1 –C2	109.4
C2 –H2B	0.944	H1B –C1 –H1A	109.4
C3 –C4	1.531(9)	C3 –C2 –C1	109.3(5)
C3 –H3A	0.945	H2A –C2 –C1	109.2
C3 –H3B	0.952	H2B –C2 –C1	110.0
C4 –C5	1.502(8)	H2A –C2 –C3	108.9
C4 –H4A	0.953	H2B –C2 –C3	109.9
C4 –H4B	0.946	H2B –C2 –H2A	109.6
C5 –H5A	0.950	C4 –C3 –C2	109.8(5)
C5 –H5B	0.950	H3A –C3 –C2	109.9
C6 –C7	1.369(7)	H3B –C3 –C2	109.2
C6 –H6	0.953	H3A –C3 –C4	109.4
C7 –C8	1.384(7)	H3B –C3 –C4	108.8
C7 –H7	0.952	H3B –C3 –H3A	109.8
C8 –C9	1.376(7)	C5 –C4 –C3	110.0(5)
C8 –H8	0.952	H4A –C4 –C3	108.9
C9 –C10	1.381(7)	H4B –C4 –C3	109.6
C9 –H9	0.951	H4A –C4 –C5	109.1
C10 –C11	1.365(7)	H4B –C4 –C5	109.6
C10 –H10	0.952	H4B –C4 –H4A	109.6
C11 –C12	1.428(7)	C4 –C5 –N1	110.8(5)
C11 –C13	1.422(8)	H5A –C5 –N1	109.0
C12 –N2	1.147(7)	H5B –C5 –N1	108.9
C13 –N3	1.131(8)	H5A –C5 –C4	109.4
		H5B –C5 –C4	109.2
		H5B –C5 –H5A	109.5
		C7 –C6 –N1	129.5(5)
		H6 –C6 –N1	115.3
		H6 –C6 –C7	115.2
		C8 –C7 –C6	120.2(5)
		H7 –C7 –C6	119.9
		H7 –C7 –C8	119.9
		C9 –C8 –C7	126.9(5)

J. Am. Chem. Soc. v. 115
p. 2524 Marder

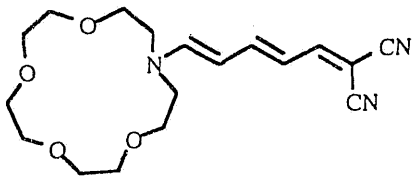
Table S3. (Cont.)

			Angle(°)
H8	–C8	–C7	116.4
H8	–C8	–C9	116.7
C10	–C9	–C8	121.6(5)
H9	–C9	–C8	119.1
H9	–C9	–C10	119.3
C11	–C10	–C9	128.3(5)
H10	–C10	–C9	115.8
H10	–C10	–C11	115.9
C12	–C11	–C10	122.3(5)
C13	–C11	–C10	120.9(5)
C13	–C11	–C12	116.8(5)
N2	–C12	–C11	177.9(6)
N3	–C13	–C11	177.6(6)

J. Am. Chem. Soc. v. 115
p. 2524 Marder

SUPPLEMENTARY MATERIAL FOR COMPOUND **2**

1,1-dicyano-6-(N-aza-15-crown-5)-1,3,5-hexatriene



wps code	aza-15-crown-5 DCV
Name	1,1-dicyano-6-(N-aza-15-crown-5)-1,3,5-hexatriene
Formula	$C_{18}H_{25}N_3O_4$
Formula Weight	347.41
Crystal System	Monoclinic
Space Group	$P2_1/c$, #14
Cell Dimensions a, Å	12.379 (2)
b, Å	15.629 (4)
c, Å	9.700
α, °	90.0
β, °	99.73 (2)
γ, °	90.0
V, Å^3	1849.7 (8)
Z	4
Density, calc, g cm^{-3}	1.248
Crystal color, habit	orange-red, chunky rectangles
Crystal size, mm^3	0.19 x 0.22 x 0.22
μ, cm^{-1}	0.832
μ r_{max}	0.015
maximum 2θ (scan type)	25°
range of h,k, l	-16 - 16, -10 - 10, 0 - 17
# of reflections measured	6974
# of independent reflections	2517
# reflections, $F_o^2 > 0$	2971
# reflections, $F_o^2 > 3\sigma(F_o^2)$	2215
GOF, merge	1.48
R(merge) for refs meas. twice	0.034
secondary extinction (x 10^{-6})	1.48 (10)
R, $F_o^2 > 0$	0.054
R, $F_o^2 > 3\sigma (F_o^2)$	0.0358
GOF (number of parameters)	1.48, (327)
$(\Delta/\sigma)_{max}$ in final least squares	0.03
Final Difference map:	
Maximum, eÅ^{-3}	+ 0.19
Minimum, eÅ^{-3}	- 0.21

Data was collected at 225 K.
Hydrogen atoms were refined isotropically
Structure solved using MULTAN 88.

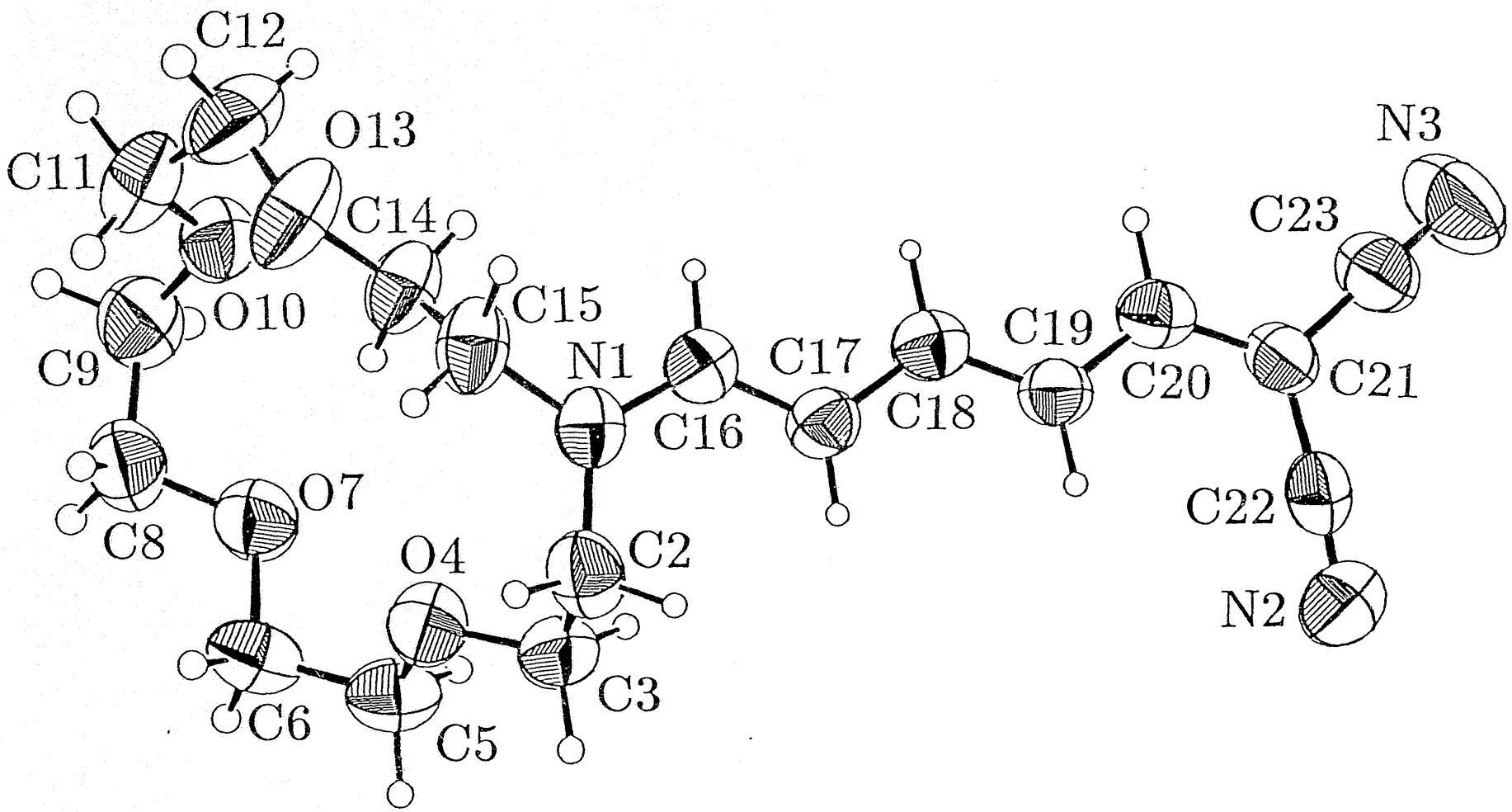


Figure 1: An ORTEP drawing of the molecule with 75% probability elipsoids showing the numbering system. Hydogen atoms are shown with thermal parameters one-tenth of their actual value.

J-2524 M13

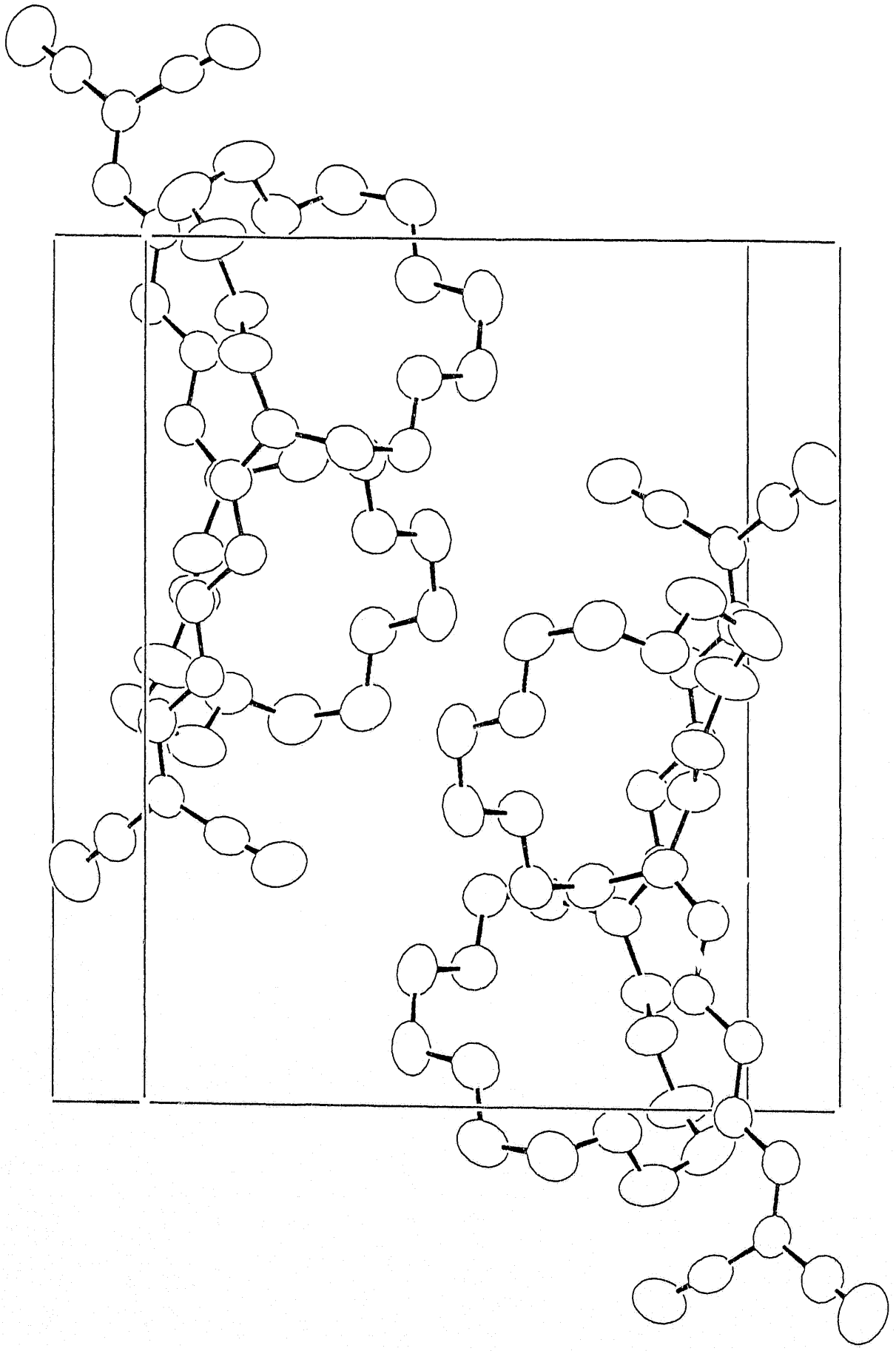


Figure 2: An ORTEP drawing of the contents of a unit cell, with a unit cell outlined. Atoms are shown as 75% probability elipsoids; hydogen atoms are not shown The view is perpendicular to the a b plane.

Table 1. Final Refined Parameters for Azo-15-Crown-5-Cyanine.

x, y, z and $U_{eq}{}^{a} \times 10^4$

Atom	x	y	z	U_{eq} or B
N1	2403(1)	7783(1)	4137(1)	341(3)
C2	3389(1)	7570(1)	3565(2)	401(4)
C3	4406(2)	7550(1)	4668(2)	394(4)
O4	4630(1)	8389(1)	5173(1)	406(3)
C5	5588(2)	8429(1)	6220(2)	423(5)
C6	5741(2)	9330(1)	6723(2)	431(5)
O7	4919(1)	9528(1)	7528(1)	448(3)
C8	4841(2)	10415(1)	7776(2)	476(5)
C9	3936(2)	10555(1)	8609(2)	489(5)
O10	2905(1)	10260(1)	7900(1)	418(3)
C11	2331(2)	10875(1)	6985(2)	514(5)
C12	1369(2)	10462(1)	6101(3)	579(6)
O13	1631(1)	9962(1)	4991(1)	568(4)
C14	2090(2)	9144(1)	5368(2)	421(5)
C15	1973(2)	8660(1)	4013(2)	420(5)
C16	1860(1)	7187(1)	4720(2)	316(4)
C17	2088(1)	6329(1)	4844(2)	325(4)
C18	1459(1)	5784(1)	5524(2)	312(4)
C19	1618(1)	4921(1)	5690(2)	318(4)
C20	1030(1)	4409(1)	6479(2)	332(4)

Table 1. (Cont.)

Atom	x	y	z	U_{eq} or B
C21	1182(1)	3547(1)	6700(2)	340(4)
C22	1987(1)	3103(1)	6087(2)	406(4)
N2	2652(1)	2784(1)	5574(2)	616(5)
C23	567(1)	3065(1)	7542(2)	434(5)
N3	71(1)	2674(1)	8213(2)	670(5)
H2A	3300(12)	6990(10)	3120(16)	2.8(4)*
H2B	3481(13)	7997(11)	2876(18)	3.4(4)*
H3A	4299(13)	7147(10)	5469(18)	3.2(4)*
H3B	5019(13)	7315(10)	4263(17)	3.3(4)*
H5A	5486(13)	8032(10)	7016(19)	3.6(4)*
H5B	6224(14)	8230(10)	5835(17)	3.3(4)*
H6A	6477(14)	9362(10)	7315(18)	3.8(4)*
H6B	5694(14)	9728(11)	5921(19)	4.1(4)*
H8A	5563(15)	10634(11)	8344(19)	4.4(4)*
H8B	4672(14)	10735(11)	6886(20)	4.1(4)*
H9A	4117(15)	10214(12)	9504(20)	4.9(5)*
H9B	3904(14)	11196(12)	8830(18)	4.3(4)*
H11A	2050(14)	11354(12)	7542(20)	4.8(5)*
H11B	2811(16)	11109(12)	6382(22)	5.8(6)*
H12A	970(14)	10113(12)	6704(20)	4.4(5)*

Table 1. (Cont.)

Atom	x	y	z	U_{eq} or B
H12B	895(16)	10923(13)	5659(21)	5.6(5)*
H14A	2848(15)	9193(10)	5800(18)	3.9(4)*
H14B	1669(14)	8856(11)	6033(19)	4.1(4)*
H15A	1169(15)	8628(10)	3570(18)	3.8(4)*
H15B	2352(14)	8957(11)	3348(19)	4.1(4)*
H16	1237(12)	7383(9)	5106(16)	2.4(3)*
H17	2673(12)	6095(9)	4480(16)	2.4(3)*
H18	874(12)	6059(9)	5926(15)	1.9(3)*
H19	2168(12)	4649(9)	5248(16)	2.6(3)*
H20	472(13)	4676(10)	6935(16)	3.1(4)*

[a] $U_{eq} = \frac{1}{3}\sum_i \sum_j [U_{ij}(a_i^* a_j^*)(\vec{a}_i \cdot \vec{a}_j)]$

* Isotropic displacement parameter, B

Table 2. Anisotropic Dispalcement Parameters for Azo-15-Crown-5-Cyanine.

Atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
N1	380(8)	302(8)	334(8)	−22(6)	36(7)	21(6)
C2	487(11)	402(11)	340(11)	−77(9)	144(9)	−25(9)
C3	400(10)	381(10)	426(12)	28(9)	145(9)	−14(9)
O4	384(7)	402(7)	409(7)	11(5)	−3(6)	−2(6)
C5	317(10)	549(12)	394(11)	66(9)	36(9)	−20(10)
C6	304(10)	589(13)	403(11)	−37(9)	69(9)	−29(10)
O7	467(7)	437(8)	477(8)	−44(6)	185(6)	−42(6)
C8	526(13)	433(12)	491(13)	−103(9)	151(11)	−57(10)
C9	534(12)	493(13)	455(12)	−75(10)	123(10)	−102(10)
O10	465(7)	351(6)	452(8)	−8(6)	121(6)	35(6)
C11	684(14)	343(11)	518(13)	81(10)	108(12)	7(10)
C12	546(13)	483(13)	695(16)	199(11)	66(12)	−35(12)
O13	761(9)	362(7)	535(9)	180(7)	−23(7)	−1(6)
C14	490(12)	317(10)	429(12)	73(9)	1(10)	20(9)
C15	497(12)	322(10)	408(12)	2(9)	−20(10)	57(9)
C16	315(9)	332(10)	291(10)	−1(8)	20(8)	−22(7)
C17	318(9)	322(10)	338(10)	6(8)	63(8)	−33(8)
C18	284(9)	362(10)	298(9)	11(7)	23(8)	−34(8)
C19	291(9)	337(10)	333(10)	5(7)	73(8)	−23(8)
C20	276(9)	381(10)	340(10)	7(7)	51(8)	−21(8)
C21	284(9)	362(10)	381(10)	−27(7)	79(8)	41(8)
C22	406(11)	291(9)	534(12)	−41(8)	117(9)	70(9)
N2	631(11)	403(10)	894(14)	82(8)	363(11)	56(9)
C23	334(10)	460(11)	511(12)	−13(8)	76(9)	95(9)
N3	533(10)	744(13)	771(13)	−82(9)	216(10)	279(11)

$U_{i,j}$ values have been multiplied by 10^4

The form of the displacement factor is:

$$\exp -2\pi^2(U_{11}h^2a^{*^2} + U_{22}k^2b^{*^2} + U_{33}\ell^2c^{*^2} + 2U_{12}hka^*b^* + 2U_{13}h\ell a^*c^* + 2U_{23}k\ell b^*c^*)$$

Table 3. Complete Distances and Angles for Azo-15-Crown-5-Cyanine.

	Distance(Å)		Distance(Å)
N1 –C2	1.463(2)	C18 –C19	1.369(2)
N1 –C15	1.469(2)	C18 –H18	0.978(14)
N1 –C16	1.330(2)	C19 –C20	1.394(2)
C2 –C3	1.508(3)	C19 –H19	0.962(15)
C2 –H2A	1.002(16)	C20 –C21	1.372(2)
C2 –H2B	0.964(17)	C20 –H20	0.976(15)
C3 –O4	1.411(2)	C21 –C22	1.424(2)
C3 –H3A	1.026(16)	C21 –C23	1.422(2)
C3 –H3B	0.983(16)	C22 –N2	1.146(2)
O4 –C5	1.426(2)	C23 –N3	1.144(3)
C5 –C6	1.492(3)		
C5 –H5A	1.016(17)		
C5 –H5B	0.978(16)		
C6 –O7	1.419(2)		
C6 –H6A	0.993(17)		
C6 –H6B	0.990(17)		
O7 –C8	1.413(2)		
C8 –C9	1.503(3)		
C8 –H8A	1.026(18)		
C8 –H8B	0.989(18)		
C9 –O10	1.421(2)		
C9 –H9A	1.011(19)		
C9 –H9B	1.026(18)		
O10 –C11	1.416(2)		
C11 –C12	1.491(3)		
C11 –H11A	1.018(18)		
C11 –H11B	0.97(2)		
C12 –O13	1.412(3)		
C12 –H12A	0.990(18)		
C12 –H12B	0.98(2)		
O13 –C14	1.421(2)		
C14 –C15	1.502(3)		
C14 –H14A	0.963(17)		
C14 –H14B	1.002(17)		
C15 –H15A	1.017(17)		
C15 –H15B	0.976(18)		
C16 –C17	1.370(2)		
C16 –H16	0.963(15)		
C17 –C18	1.394(2)		
C17 –H17	0.932(15)		

Table 3. (Cont.)

	Angle(°)		Angle(°)
C15 –N1 –C2	119.7(1)	H9B –C9 –H9A	110.2(14)
C16 –N1 –C2	121.1(1)	C11 –O10 –C9	113.4(1)
C16 –N1 –C15	119.2(1)	C12 –C11 –O10	109.5(2)
C3 –C2 –N1	112.7(1)	H11A –C11 –O10	110.3(10)
H2A –C2 –N1	109.3(9)	H11B –C11 –O10	109.8(12)
H2B –C2 –N1	108.0(10)	H11A –C11 –C12	108.2(10)
H2A –C2 –C3	107.8(9)	H11B –C11 –C12	109.1(12)
H2B –C2 –C3	108.9(10)	H11B –C11 –H11A	109.9(16)
H2B –C2 –H2A	110.2(13)	O13 –C12 –C11	114.5(2)
O4 –C3 –C2	108.6(1)	H12A –C12 –C11	109.1(11)
H3A –C3 –C2	110.6(9)	H12B –C12 –C11	107.1(12)
H3B –C3 –C2	109.4(9)	H12A –C12 –O13	110.3(11)
H3A –C3 –O4	110.6(9)	H12B –C12 –O13	105.7(12)
H3B –C3 –O4	111.5(9)	H12B –C12 –H12A	110.0(16)
H3B –C3 –H3A	106.3(13)	C14 –O13 –C12	115.8(1)
C5 –O4 –C3	112.3(1)	C15 –C14 –O13	104.6(1)
C6 –C5 –O4	108.5(1)	H14A –C14 –O13	111.0(10)
H5A –C5 –O4	108.6(10)	H14B –C14 –O13	109.9(10)
H5B –C5 –O4	109.9(10)	H14A –C14 –C15	111.3(10)
H5A –C5 –C6	110.7(10)	H14B –C14 –C15	110.7(10)
H5B –C5 –C6	111.1(10)	H14B –C14 –H14A	109.3(14)
H5B –C5 –H5A	107.9(13)	C14 –C15 –N1	114.7(2)
O7 –C6 –C5	108.8(1)	H15A –C15 –N1	107.7(10)
H6A –C6 –C5	106.8(10)	H15B –C15 –N1	106.8(10)
H6B –C6 –C5	110.4(10)	H15A –C15 –C14	109.8(10)
H6A –C6 –O7	110.1(10)	H15B –C15 –C14	110.7(10)
H6B –C6 –O7	110.1(10)	H15B –C15 –H15A	106.8(14)
H6B –C6 –H6A	110.5(14)	C17 –C16 –N1	127.7(2)
C8 –O7 –C6	112.6(1)	H16 –C16 –N1	115.9(9)
C9 –C8 –O7	108.2(2)	H16 –C16 –C17	116.4(9)
H8A –C8 –O7	109.9(10)	C18 –C17 –C16	121.1(1)
H8B –C8 –O7	110.9(10)	H17 –C17 –C16	120.8(9)
H8A –C8 –C9	108.8(10)	H17 –C17 –C18	118.1(9)
H8B –C8 –C9	109.2(10)	C19 –C18 –C17	125.2(2)
H8B –C8 –H8A	109.7(14)	H18 –C18 –C17	115.5(8)
O10 –C9 –C8	112.5(2)	H18 –C18 –C19	119.3(8)
H9A –C9 –C8	107.9(11)	C20 –C19 –C18	123.5(2)
H9B –C9 –C8	108.3(10)	H19 –C19 –C18	118.8(9)
H9A –C9 –O10	107.1(11)	H19 –C19 –C20	117.8(9)
H9B –C9 –O10	110.8(10)	C21 –C20 –C19	125.4(2)

Table 3. (Cont.)

			Angle(°)
H20	–C20	–C19	118.6(9)
H20	–C20	–C21	116.0(9)
C22	–C21	–C20	119.9(1)
C23	–C21	–C20	122.5(2)
C23	–C21	–C22	117.6(1)
N2	–C22	–C21	176.7(2)
N3	–C23	–C21	179.6(2)

Table 4. Intermolecular Distances Less Than 3.5 Å for Azo-15-Crown-5-Cyanine.

	Distance(Å)		Distance(Å)
C2 –H3A	3.409(16)	C17 –H15B	3.389(17)
C2 –H5A	3.346(17)	C17 –H8A	3.316(18)
C3 –H5A	3.225(17)	C18 –H15A	3.171(17)
C3 –H8B	3.369(18)	C18 –H15B	2.805(17)
C3 –H9B	3.154(17)	C18 –C20	3.366(2)
O4 –H6B	3.130(17)	C18 –H20	3.161(15)
O4 –H8B	2.682(18)	C19 –H15B	3.124(17)
C5 –H3B	3.357(16)	C19 –H9A	3.484(19)
C5 –H8B	3.250(18)	C19 –H20	3.369(15)
C6 –H6B	3.218(17)	C19 –H6A	2.920(17)
C6 –H8B	3.453(18)	C20 –H15B	3.390(17)
O7 –H2A	3.219(15)	C20 –H18	3.110(14)
O7 –H3B	3.327(16)	C20 –H12A	3.454(18)
O7 –H9A	2.952(19)	C20 –H6A	3.111(17)
C8 –H2B	3.365(17)	C21 –H18	3.340(14)
C8 –H9A	2.905(19)	C21 –H6A	3.162(17)
C8 –H3A	3.279(16)	C22 –H11A	3.072(18)
C9 –H17	3.203(15)	C22 –H11B	3.28(2)
C9 –H19	2.931(15)	C22 –H5A	3.353(17)
C9 –H8A	3.457(18)	C22 –H5B	3.409(16)
C9 –H9A	3.019(19)	C22 –H6A	2.982(17)
C9 –H3A	3.332(16)	N2 –H11A	3.111(18)
O10 –C17	3.375(2)	N2 –H11B	2.73(2)
O10 –C19	3.375(2)	N2 –H9B	2.948(17)
O10 –H17	2.658(15)	N2 –H11A	3.206(18)
O10 –H19	2.595(15)	N2 –H3B	2.865(16)
C11 –N2	3.334(3)	N2 –H5B	2.637(16)
C11 –H19	3.308(15)	N2 –H5A	3.018(17)
C12 –H20	3.434(15)	N2 –H6A	3.270(17)
O13 –H20	3.119(15)	C23 –H11A	3.244(18)
O13 –H12A	3.361(18)	C23 –H12B	3.37(2)
O13 –H12B	3.38(2)	C23 –H15A	3.464(17)
C14 –H2A	3.340(16)	C23 –H16	3.183(15)
C15 –C18	3.447(2)	N3 –H11A	3.350(18)
C15 –H18	3.104(14)	N3 –H12B	3.26(2)
C16 –H2B	3.377(17)	N3 –H15A	2.931(17)
C16 –C23	3.431(2)	N3 –H16	3.351(15)
C16 –N3	3.400(2)	N3 –H14B	3.019(17)
C16 –N3	3.454(2)	N3 –H16	2.526(15)
C17 –H2B	3.320(17)	N3 –H18	2.961(14)

Table 4. (Cont.)

	Distance(Å)		Distance(Å)
H2A –H3A	3.32(2)	H12B –H15A	2.87(3)
H2A –H5A	3.07(2)	H14B –H17	3.37(2)
H2A –H14A	2.89(2)	H15A –H18	2.58(2)
H2A –H14B	2.92(2)	H15A –H20	3.13(2)
H2B –H3A	2.71(2)	H15B –H18	2.72(2)
H2B –H5A	3.18(2)	H15B –H20	3.28(2)
H2B –H8A	2.80(2)	H18 –H20	3.20(2)
H2B –H8B	3.01(2)		
H3A –H8A	2.62(2)		
H3A –H8B	3.46(2)		
H3A –H9B	2.67(2)		
H3B –H5A	2.41(2)		
H3B –H8B	3.29(2)		
H3B –H9B	2.72(2)		
H5A –H9B	3.11(2)		
H5B –H8B	3.13(2)		
H5B –H11B	2.83(3)		
H5B –H9B	3.20(2)		
H6A –H15B	3.12(2)		
H6A –H9A	3.36(3)		
H6A –H19	2.70(2)		
H6B –H6B	2.41(2)		
H6B –H8B	2.78(3)		
H6B –H11B	3.39(3)		
H6B –H14A	3.15(2)		
H6B –H15B	3.16(3)		
H8A –H15B	3.35(3)		
H8A –H9A	2.45(3)		
H8A –H17	2.86(2)		
H8A –H19	3.29(2)		
H9A –H17	2.71(2)		
H9A –H19	2.64(2)		
H9A –H9A	2.33(3)		
H9A –H9B	3.48(3)		
H9B –H19	3.04(2)		
H11A –H19	3.04(2)		
H12A –H12B	3.38(3)		
H12A –H15A	3.27(3)		
H12A –H20	2.49(2)		
H12B –H14B	3.34(3)		

J-2526-M24

Scattering Factors and f', f'':

Cromer, D. T. (1974). *International Tables For X-ray Crystallography*, Vol. IV, pp. 149–151. Birmingham: Kynoch Press. (Present distributor Kluwer Academic Publishers, Dordrecht.)

Cromer, D. T. & Waber, J. T. (1974). *International Tables For X-ray Crystallography*, Vol. IV, pp. 99–101. Birmingham: Kynoch Press. (Present distributor Kluwer Academic Publishers, Dordrecht.)

Any additional Data:

Weights w are calculated as $1/\sigma^2(F_o^2)$; variances ($\sigma^2(F_o^2)$) were derived from counting statistics plus an additional term, $(0.014I)^2$; variances of the merged data were obtained by propagation of error plus another additional term, $(0.014\bar{I})^2$.

Definitions:

$$R = \frac{\Sigma||F_o| - |F_c||}{\Sigma F_o}; \quad R_w = \frac{\Sigma w(F_o^2 - F_c^2)}{\Sigma w F_o^2}$$

$$S = \left\{ \frac{\Sigma w(F_o^2 - F_c^2)^2}{n - p} \right\}^{\frac{1}{2}}$$

where n = number of data,

p = number of parameters refined.

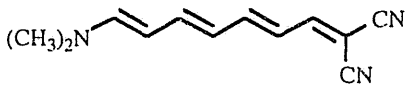
J. Am. Chem. Soc. v. 115
p. 2524 Marder

J-2526-M25

JA932907

SUPPLEMENTARY MATERIAL FOR COMPOUND **4**

1,1-dicyano-8-(dimethylamino)-octa-1,3,5,7-tetraene



wps code	Me2N-III-DCV
Name	1,1-dicyano-8-(dimethylamino)-octa-1,3,5,7-tetraene
Formula	$C_{12}H_{13}N_3$
Formula Weight	199.25
Crystal System	Monoclinic
Space Group	$P2_1/c$, #14
Cell Dimensions a, Å	9.242 (6)
b, Å	16.096 (7)
c, Å	8.188 (3)
α, °	90.0
β, °	105.38 (4)
γ, °	90.0
V, Å^3	1174.4 (0)
Z	4
Density, calc, g cm^{-3}	1.13
Crystal color, habit	dark, wide blade
Crystal size, mm^3	0.19 x 0.36 x 0.70
μ, cm^{-1}	0.65
μ r_{max}	0.455
maximum 2θ (scan type)	25°
range of h, k, l	-9 - 9, -19 - 19, 0 - 11
# of reflections measured	4672
# of independent reflections	2060
# reflections, $F_o^2 > 0$	1797
# reflections, $F_o^2 > 3\sigma(F_o^2)$	1390
GOF, merge	1.02
R(merge) for refs meas. twice	0.025
secondary extinction (x 10^{-6})	1.9 (4)
R, $F_o^2 > 0$	0.065
R, $F_o^2 > 3\sigma(F_o^2)$	0.051
GOF (number of parameters)	2.66, (137)
$(\Delta/\sigma)_{max}$ in final least squares	0.02
Final Difference map:	
Maximum, eÅ^{-3}	+ 0.21
Minimum, eÅ^{-3}	- 0.19

Data was collected at 225 K.
Hydrogen atoms were refined isotropically
Structure solved using MULTAN 88.

J. Am. Chem. Soc. v. 115
p. 2524 Marder

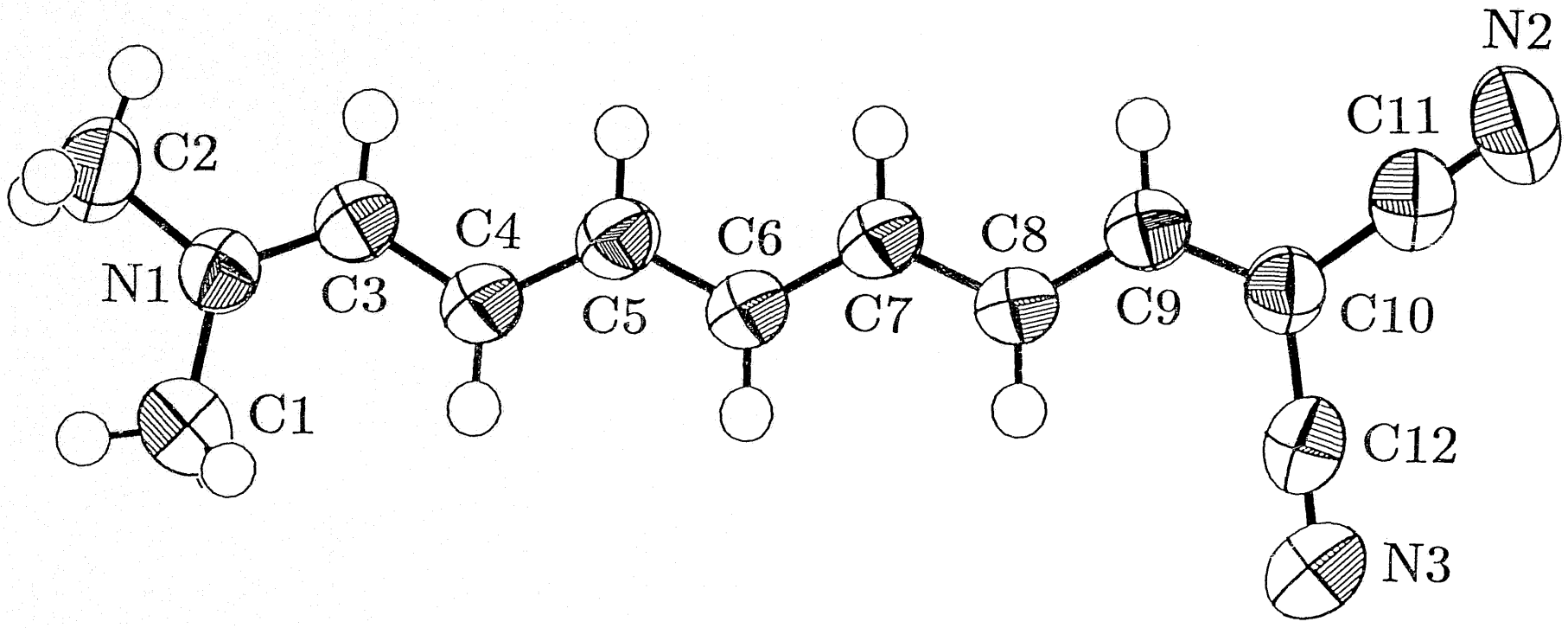


Figure 1: An ORTEP drawing of the molecule with 50% probability elipsoids showing the numbering system. Hydogen atoms are shown as spheres of of small, srbitrary size.

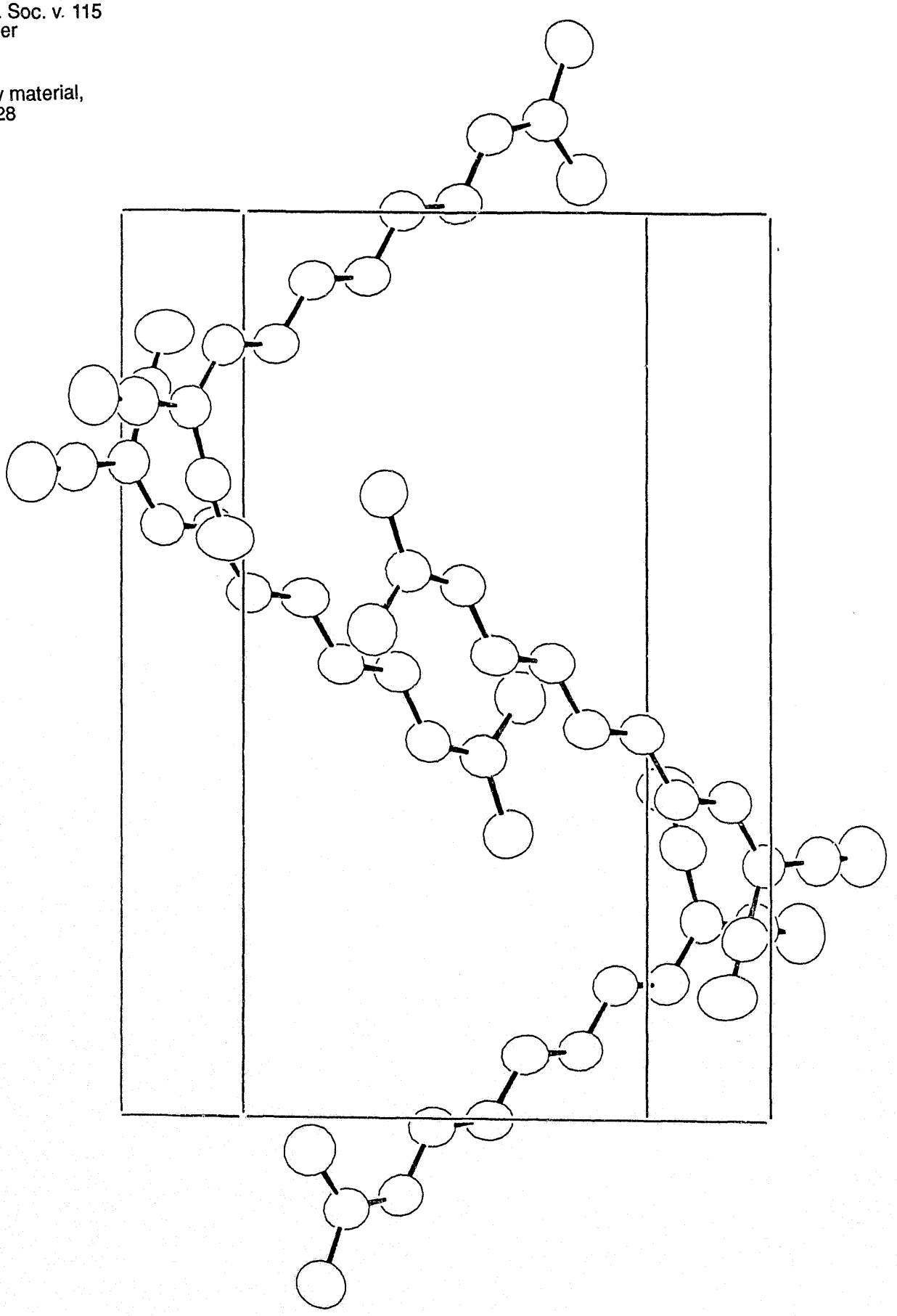


Figure 2: An ORTEP drawing of the contents of a unit cell, with a unit cell outlined. Atoms are shown as 50% probability elipsoids; Hydrogen atoms are not shown.

J-2526-m29

Table 1. Final Refined Parameters for 2-Aza-2-Methyl-10,10-Dicyanodec-3,5,7,9-tetraene.

x, y, z and $U_{eq}{}^{a} \times 10^4$

Atom	x	y	z	U_{eq}
C1	7476(3)	367(2)	4559(3)	863(6)
C2	7098(3)	1864(1)	3920(3)	842(6)
N1	6555(2)	1015(1)	3588(2)	668(4)
C3	5258(2)	858(1)	2499(2)	633(5)
C4	4574(2)	96(1)	2126(2)	638(5)
C5	3216(2)	15(1)	924(2)	629(5)
C6	2436(2)	−712(1)	456(2)	642(5)
C7	1092(2)	−761(1)	−788(2)	619(5)
C8	292(2)	−1477(1)	−1341(2)	614(5)
C9	−1012(2)	−1498(1)	−2636(2)	615(5)
C10	−1820(2)	−2191(1)	−3319(2)	630(5)
C11	−3158(3)	−2130(1)	−4650(3)	745(6)
N2	−4234(2)	−2071(1)	−5728(3)	1013(6)
C12	−1325(2)	−2999(1)	−2733(3)	705(6)
N3	−883(2)	−3640(1)	−2245(3)	971(7)

[a] $U_{eq} = \frac{1}{3} \sum_i \sum_j [U_{ij}(a_i^* a_j^*)(\vec{a}_i \cdot \vec{a}_j)]$

Table 2. Assigned Hydrogen Atom Parameters for 2-Aza-2-Methyl-10,10-Dicyanodec-3,5,7,9-tetraene.

x, y and $z \times 10^4$

Atom	x	y	z	B
H1 A	8353	610	5262	7.0
H1 B	7725	−17	3793	7.0
H1 C	6915	96	5222	7.0
H2 A	7973	1924	3527	7.0
H2 B	7324	1961	5099	7.0
H2 C	6334	2230	3325	7.0
H3	4730	1321	1903	6.0
H4	5051	−385	2708	6.0
H5	2778	509	367	6.0
H6	2844	−1209	1017	6.0
H7	676	−254	−1308	6.0
H8	668	−1985	−797	6.0
H9	−1398	−976	−3108	6.0

J. Am. Chem. Soc. v. 115
p. 2524 Marder

J-2526-M31

Table 3. Anisotropic Displacement Parameters for 2-Aza-2-Methyl-10,10-Dicyanodec-3,5,7,9-tetraene.

Atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
C1	749(15)	897(16)	865(15)	40(13)	78(12)	40(13)
C2	729(15)	760(14)	1008(17)	−111(12)	180(13)	−171(13)
N1	628(11)	593(10)	738(11)	−1(8)	101(9)	−74(8)
C3	640(13)	571(12)	660(12)	31(10)	125(11)	−37(10)
C4	681(13)	540(12)	658(12)	24(10)	115(11)	−29(9)
C5	695(13)	535(11)	650(12)	12(10)	164(11)	−25(9)
C6	694(13)	516(11)	684(13)	17(10)	127(11)	−6(9)
C7	666(13)	522(11)	664(12)	26(10)	170(11)	−18(9)
C8	636(13)	531(11)	650(12)	34(10)	126(11)	13(9)
C9	634(13)	572(12)	649(12)	40(10)	190(11)	7(10)
C10	578(13)	631(13)	678(13)	−23(10)	163(11)	−65(10)
C11	664(15)	798(16)	776(15)	−64(12)	198(13)	−127(12)
N2	723(13)	1210(17)	998(15)	−60(12)	37(12)	−185(13)
C12	715(14)	671(15)	733(14)	−102(12)	200(11)	−115(12)
N3	1094(17)	666(13)	1110(16)	−42(12)	215(13)	−56(12)

$U_{i,j}$ values have been multiplied by 10^4

The form of the displacement factor is:

$$\exp -2\pi^2(U_{11}h^2a^{*^2} + U_{22}k^2b^{*^2} + U_{33}\ell^2c^{*^2} + 2U_{12}hka^*b^* + 2U_{13}h\ell a^*c^* + 2U_{23}k\ell b^*c^*)$$

J-2526-m32

Table 4. Complete Distances and Angles for 2-Aza-2-Methyl-10,10-Dicyanodec-3,5,7,9-tetraene.

	Distance(Å)		Angle(°)
C1 –N1	1.446(3)	C2 –N1 –C1	116.8(2)
C2 –N1	1.455(3)	C3 –N1 –C1	122.1(2)
N1 –C3	1.315(2)	C3 –N1 –C2	121.0(2)
C3 –C4	1.376(3)	C4 –C3 –N1	127.2(2)
C4 –C5	1.380(3)	C5 –C4 –C3	121.3(2)
C5 –C6	1.374(3)	C6 –C5 –C4	126.2(2)
C6 –C7	1.383(3)	C7 –C6 –C5	123.8(2)
C7 –C8	1.379(3)	C8 –C7 –C6	126.0(2)
C8 –C9	1.378(3)	C9 –C8 –C7	123.8(2)
C9 –C10	1.375(3)	C10 –C9 –C8	127.1(2)
C10 –C11	1.419(3)	C11 –C10 –C9	121.7(2)
C10 –C12	1.420(3)	C12 –C10 –C9	120.9(2)
C11 –N2	1.145(3)	C12 –C10 –C11	117.4(2)
C12 –N3	1.142(3)	N2 –C11 –C10	179.1(2)
C1 –H1 A	0.946	N3 –C12 –C10	177.9(2)
C1 –H1 B	0.951	H1 A –C1 –N1	108.7
C1 –H1 C	0.951	H1 B –C1 –N1	108.4
C2 –H2 A	0.951	H1 C –C1 –N1	108.3
C2 –H2 B	0.945	H1 B –C1 –H1 A	110.6
C2 –H2 C	0.949	H1 C –C1 –H1 A	110.7
C3 –H3	0.952	H1 C –C1 –H1 B	110.1
C4 –H4	0.953	H2 A –C2 –N1	108.3
C5 –H5	0.953	H2 B –C2 –N1	108.5
C6 –H6	0.950	H2 C –C2 –N1	108.3
C7 –H7	0.953	H2 B –C2 –H2 A	110.6
C8 –H8	0.952	H2 C –C2 –H2 A	110.3
C9 –H9	0.953	H2 C –C2 –H2 B	110.8
		H3 –C3 –N1	116.6
		H3 –C3 –C4	116.2
		H4 –C4 –C3	119.2
		H4 –C4 –C5	119.5
		H5 –C5 –C4	116.9
		H5 –C5 –C6	116.9
		H6 –C6 –C5	118.0
		H6 –C6 –C7	118.2
		H7 –C7 –C6	117.2
		H7 –C7 –C8	116.8
		H8 –C8 –C7	117.8
		H8 –C8 –C9	118.3
		H9 –C9 –C8	116.5
		H9 –C9 –C10	116.4

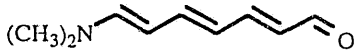
J. Am. Chem. Soc. v. 115
p. 2524 Marder

Table 5. Intermolecular Distances Less Than 3.5 Åfor 2-Aza-2-Methyl-10,10-Dicyanodec-3,5,7,9-tetraene.

		Distance(Å)			Distance(Å)
C1	–H9	2.889	H1 C	–H9	2.480
C2	–N2	3.375(3)	H1 C	–H1 C	3.474
C2	–H6	3.103	H1 C	–H4	2.832
C2	–H8	2.894	H2 A	–H2 B	3.251
C3	–H1 C	3.443	H2 A	–H8	2.842
C4	–H1 C	2.879	H2 A	–H6	3.145
C5	–H9	3.164	H2 A	–H8	2.623
C5	–H1 C	3.194	H2 B	–H2 C	3.285
C6	–H7	3.499	H2 B	–H6	3.444
C7	–H7	3.126	H2 B	–H6	3.076
C7	–H1 B	3.200	H2 B	–H8	2.468
C7	–H2 A	3.211	H2 C	–H6	2.639
C8	–H2 A	2.795	H2 C	–H8	3.224
C8	–H2 B	3.321	H5	–H9	2.958
C9	–H1 C	3.398	H7	–H7	2.871
C9	–H5	3.203			
C9	–H2 A	3.159			
C10	–H3	3.492			
C11	–C12	3.399(3)			
C11	–H2 C	3.392			
C11	–H3	3.256			
C11	–H3	3.210			
N2	–H4	2.999			
N2	–H2 B	3.038			
N2	–H2 C	3.120			
N2	–H3	3.499			
N2	–H2 C	2.714			
N2	–H3	2.757			
C12	–H8	3.484			
C12	–H5	3.268			
N3	–H1 B	2.762			
N3	–H5	3.017			
N3	–H7	2.882			
N3	–H1 A	2.747			
N3	–H2 B	3.432			
H1 A	–H7	3.352			
H1 A	–H9	2.862			
H1 B	–H9	2.897			
H1 B	–H5	3.406			
H1 B	–H7	2.847			

SUPPLEMENTARY MATERIAL FOR COMPOUND **5**

7-dimethylamino-hepta-2,4,6-triene-1-al



J. Am. Chem. Soc. v. 115
p. 2524 Marder

J-2526-m35

wps code	Me2N-III-CHO
Name	7-dimethylamino-hepta-2,4,6-triene-1-al
Formula	$C_9H_{13}NO$
Formula Weight	151.21
Crystal System	Orthorhombic
Space Group	Pbca, #61
Cell Dimensions a, Å	8.189 (3)
b, Å	7.558 (2)
c, Å	28.295 (12)
α, °	90.0
β, °	90.0
γ, °	90.0
V, $Å^3$	1751.2 (12)
Z	8
Density, calc, g cm^{-3}	1.147
Crystal color, habit	orange plate
Crystal size, mm^3	0.03 x 0.67 x 0.73
μ, cm^{-1}	0.70
μr_{max}	0.511
maximum 2θ (scan type)	25°
range of h, k, l	0-9, 0-9, -33-33
# of reflections measured	3680
# of independent reflections	1545
# reflections, $F_o^2 > 0$	1370
# reflections, $F_o^2 > 3\sigma(F_o^2)$	904
GOF, merge	0.937
R(merge) for refs meas. twice	0.038
secondary extinction (x 10^{-6})	0.32(6)
R, $F_o^2 > 0$	0.063
R, $F_o^2 > 3\sigma (F_o^2)$	0.035
GOF (number of parameters)	1.44, (153)
$(\Delta/\sigma)_{max}$ in final least squares	0.01
Final Difference map:	
Maximum, $eÅ^{-3}$	+ 0.21
Minimum, $eÅ^{-3}$	- 0.23

Data was collected at 225 K.
Hydrogen atoms were refined isotropically
Structure solved using MULTAN 88.

J. Am. Chem. Soc. v. 115
p. 2524 Marder

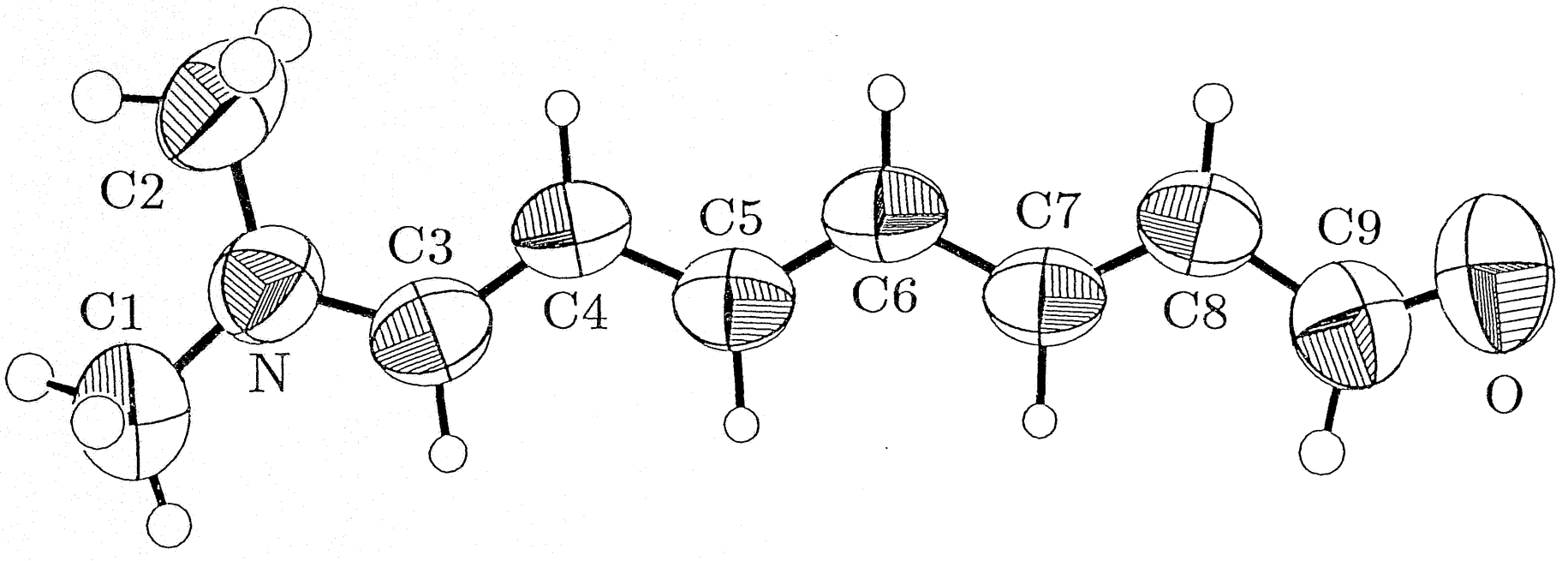


Figure 1: An ORTEP drawing of the molecule with 80% probability elipsoids showing the numbering system. Hydrogen atoms are shown as one tenth actual size.

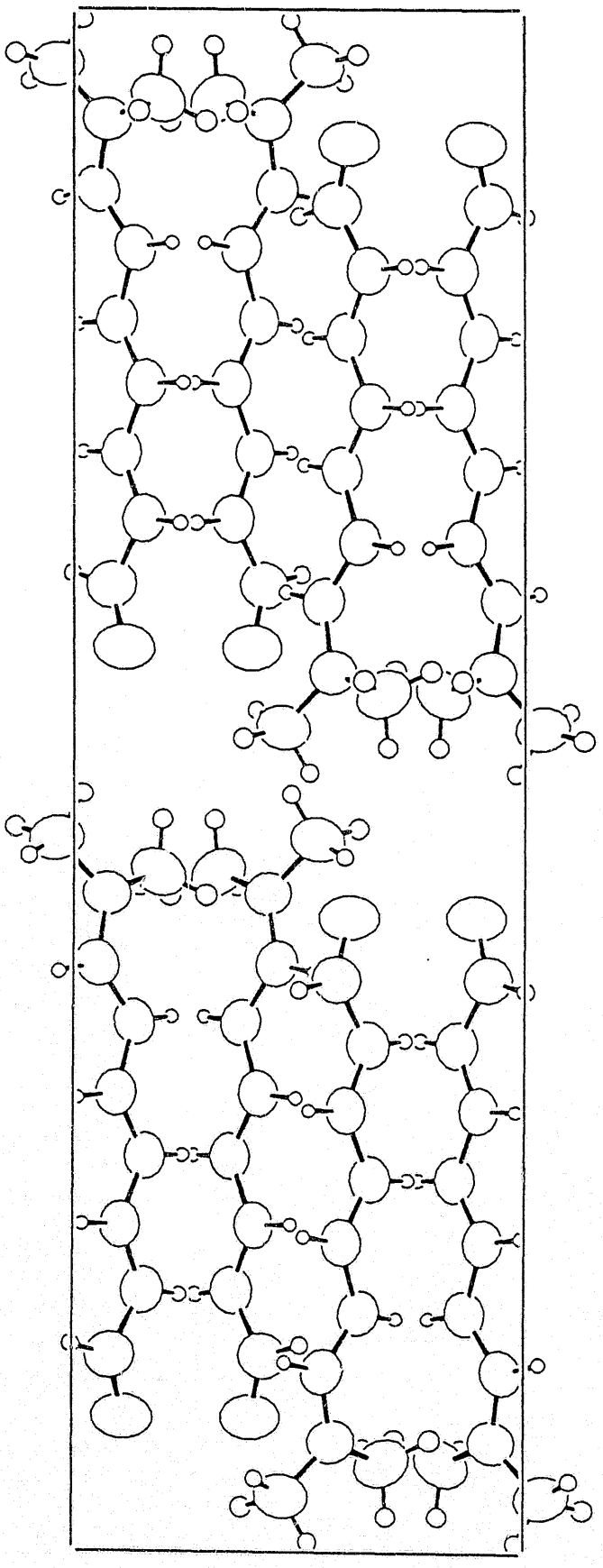


Figure 2: An ORTEP drawing of the contents of a unit cell, with a unit cell outlined. Atoms are shown as 70% probability elipsoids; hydrogen atoms are shown at one-tenth actual size.

Table 1. Final Refined Parameters for $Me_2N - III - CHO$.

x, y, z and $U_{eq}{}^a \times 10^4$

Atom	x	y	z	U_{eq} or B
C1	10387(3)	2798(3)	364(1)	594(6)
C2	8157(3)	736(3)	581(1)	571(6)
N	9277(2)	2129(2)	719	452(4)
C3	9479(2)	2553(3)	1174(1)	410(4)
C4	8673(2)	1886(2)	1556(1)	391(4)
C5	9068(2)	2443(3)	2017(1)	390(4)
C6	8438(2)	1812(2)	2427(1)	389(4)
C7	8971(2)	2394(2)	2876(1)	382(4)
C8	8484(2)	1790(3)	3301(1)	418(5)
C9	9182(2)	2469(3)	3726(1)	493(5)
O	8912(2)	1955(2)	4127	683(4)
HC1a	10997(21)	3786(25)	476(6)	5.0(5)*
HC1b	11296(24)	1876(29)	292(6)	7.4(6)*
HC1c	9795(25)	3015(24)	69(7)	5.8(5)*
HC2a	7104(30)	915(29)	730(7)	8.0(7)*
HC2b	8585(26)	−387(30)	666(7)	8.0(7)*
HC2c	8068(22)	768(26)	235(7)	6.7(6)*
HC3	10325(18)	3397(21)	1232(5)	3.6(4)*
HC4	7856(18)	1029(20)	1519(4)	3.1(4)*
HC5	9914(19)	3340(20)	2048(5)	3.2(4)*

Table 1. (Cont.)

Atom	x	y	z	U_{eq} or B
HC6	7619(21)	952(20)	2421(5)	3.3(4)*
HC7	9798(18)	3304(20)	2871(5)	3.0(4)*
HC8	7677(20)	914(23)	3330(5)	3.8(4)*
HC9	10025(21)	3421(23)	3656(6)	5.2(5)*

[a] $U_{eq} = \frac{1}{3}\sum_i \sum_j [U_{ij}(a_i^* a_j^*)(\vec{a}_i \cdot \vec{a}_j)]$

* Isotropic displacement parameter, B

Table 2. Anisotropic Displacement Parameters for Me_2N – III – CHO.

Atom	U_{11}	U_{22}	U_{33}	U_{12}	U_{13}	U_{23}
C1	676(14)	652(16)	453(12)	−60(14)	38(11)	−11(11)
C2	655(15)	522(14)	535(14)	−25(13)	−128(12)	−86(11)
N	507(9)	421(9)	427(8)	−2(8)	−22(7)	−40(7)
C3	402(10)	342(10)	487(11)	8(10)	−38(9)	−32(9)
C4	366(10)	329(11)	479(11)	−26(9)	−30(8)	−21(9)
C5	363(9)	302(11)	505(11)	14(10)	12(8)	−18(9)
C6	354(9)	309(10)	504(12)	−28(9)	5(9)	−24(9)
C7	345(9)	294(10)	506(11)	−3(9)	9(9)	−2(9)
C8	399(11)	342(11)	512(12)	−2(10)	14(9)	34(9)
C9	537(11)	449(12)	494(11)	51(11)	19(10)	31(10)
O	828(10)	759(10)	463(8)	52(9)	−14(7)	110(7)

$U_{i,j}$ values have been multiplied by 10^4
The form of the displacement factor is:

$$\exp -2\pi^2(U_{11}h^2a^{*^2} + U_{22}k^2b^{*^2} + U_{33}\ell^2c^{*^2} + 2U_{12}hka^*b^* + 2U_{13}h\ell a^*c^* + 2U_{23}k\ell b^*c^*)$$

J-2536-mmo

Table 3. Complete Distances and Angles for $Me_2N - III - CHO$.

	Distance(Å)		Angle(°)
C1 –N	1.446(3)	HC1a –C1 –N	111.8(11)
C1 –HC1a	0.953(18)	HC1b –C1 –N	110.6(11)
C1 –HC1b	1.04(2)	HC1c –C1 –N	109.8(12)
C1 –HC1c	0.98(2)	HC1b –C1 –HC1a	102.4(15)
C2 –N	1.450(3)	HC1c –C1 –HC1a	114.4(16)
C2 –HC2a	0.97(2)	HC1c –C1 –HC1b	107.5(16)
C2 –HC2b	0.95(2)	HC2a –C2 –N	110.1(13)
C2 –HC2c	0.979(19)	HC2b –C2 –N	110.3(13)
N –C3	1.338(2)	HC2c –C2 –N	107.3(11)
C3 –C4	1.363(2)	HC2b –C2 –HC2a	110.0(18)
C3 –HC3	0.956(15)	HC2c –C2 –HC2a	111.5(17)
C4 –C5	1.407(2)	HC2c –C2 –HC2b	107.7(17)
C4 –HC4	0.937(14)	C2 –N –C1	117.7(2)
C5 –C6	1.357(2)	C3 –N –C1	120.5(1)
C5 –HC5	0.973(15)	C3 –N –C2	120.8(2)
C6 –C7	1.413(2)	C4 –C3 –N	127.9(2)
C6 –HC6	0.934(15)	HC3 –C3 –N	114.5(9)
C7 –C8	1.347(2)	HC3 –C3 –C4	117.5(9)
C7 –HC7	0.966(14)	C5 –C4 –C3	120.8(2)
C8 –C9	1.427(2)	HC4 –C4 –C3	120.9(9)
C8 –HC8	0.939(16)	HC4 –C4 –C5	118.3(9)
C9 –O	1.219(2)	C6 –C5 –C4	126.8(2)
C9 –HC9	1.017(17)	HC5 –C5 –C4	117.2(9)
		HC5 –C5 –C6	115.9(9)
		C7 –C6 –C5	122.8(2)
		HC6 –C6 –C5	120.2(9)
		HC6 –C6 –C7	117.0(9)
		C8 –C7 –C6	127.3(2)
		HC7 –C7 –C6	115.1(9)
		HC7 –C7 –C8	117.5(9)
		C9 –C8 –C7	120.8(2)
		HC8 –C8 –C7	121.6(10)
		HC8 –C8 –C9	117.6(10)
		O –C9 –C8	126.7(2)
		HC9 –C9 –C8	111.1(10)
		HC9 –C9 –O	122.1(10)

Table 4. Intermolecular Distances Less Than 3.5 Å for $Me_2N - III - CHO$.

	Distance(Å)		Distance(Å)
C1 –O	3.288(3)	C8 –HC3	3.148(15)
C1 –HC2a	3.28(2)	C8 –HC5	3.302(15)
C1 –HC2c	2.979(19)	C8 –HC8	3.260(16)
C1 –HC2c	3.427(19)	C8 –HC3	3.045(15)
C1 –HC1c	3.40(2)	C8 –HC5	3.082(15)
C2 –HC2b	3.27(2)	C9 –HC2a	3.08(2)
C2 –N	3.400(3)	C9 –HC4	3.274(14)
C2 –HC1c	3.49(2)	C9 –HC3	3.238(15)
C2 –HC9	3.155(17)	C9 –HC8	3.218(16)
C2 –HC1a	3.493(18)	C9 –HC2b	2.99(2)
C2 –HC1b	3.42(2)	C9 –HC3	3.106(15)
C2 –HC1c	3.44(2)	O –HC2a	2.76(2)
C2 –HC1b	3.19(2)	O –HC1a	2.978(18)
N –HC2a	3.08(2)	O –HC1b	2.70(2)
N –HC2b	3.01(2)	O –HC3	3.294(15)
N –HC9	3.364(17)	O –HC1c	2.76(2)
C3 –HC8	3.219(16)	O –HC2b	2.93(2)
C3 –HC2a	3.12(2)	O –HC1a	2.646(18)
C3 –HC2b	3.28(2)	O –HC3	2.942(15)
C3 –HC4	3.393(14)	HC1a –HC2a	3.09(3)
C3 –HC9	3.186(17)	HC1a –HC1b	3.26(3)
C4 –HC8	3.375(16)	HC1a –HC2c	2.65(3)
C4 –HC9	3.260(17)	HC1a –HC1c	2.94(3)
C4 –HC4	3.375(14)	HC1b –HC1c	3.04(3)
C4 –HC7	3.395(14)	HC1b –HC2a	3.40(3)
C4 –HC9	2.890(17)	HC1b –HC2c	2.74(3)
C5 –HC8	3.321(16)	HC1b –HC2b	2.94(3)
C5 –HC4	3.437(14)	HC1b –HC2c	2.55(3)
C5 –HC6	3.202(15)	HC1c –HC2a	3.27(3)
C5 –HC7	3.279(14)	HC1c –HC2b	3.46(3)
C6 –HC5	3.445(15)	HC1c –HC2c	3.17(3)
C6 –HC7	3.296(14)	HC1c –HC2a	3.06(3)
C6 –HC6	3.247(15)	HC1c –HC2c	2.96(3)
C6 –HC5	3.303(15)	HC1c –HC2b	3.17(3)
C6 –HC7	3.135(14)	HC1c –HC2c	3.46(3)
C7 –HC6	3.289(15)	HC1c –HC1c	3.04(3)
C7 –HC5	3.405(15)	HC2a –HC9	3.08(3)
C7 –HC6	3.253(15)	HC2a –HC2b	2.86(3)
C7 –HC8	3.248(16)	HC2a –HC3	3.10(3)
C7 –HC5	3.204(15)	HC2a –HC9	3.48(3)

Table 4. (Cont.)

		Distance(Å)
HC2b	–HC2c	3.43(3)
HC2b	–HC9	2.41(3)
HC3	–HC8	2.96(2)
HC3	–HC4	3.38(2)
HC3	–HC8	2.80(2)
HC4	–HC7	3.49(2)
HC4	–HC9	2.98(2)
HC4	–HC5	3.39(2)
HC4	–HC7	3.30(2)
HC4	–HC9	2.67(2)
HC5	–HC6	3.23(2)
HC5	–HC8	3.10(2)
HC5	–HC6	3.05(2)
HC5	–HC6	3.20(2)
HC5	–HC8	2.97(2)
HC6	–HC7	3.03(2)
HC6	–HC7	3.09(2)
HC6	–HC7	3.03(2)
HC7	–HC8	3.11(2)
HC8	–HC9	3.05(2)

J-2526-M43

Table S4. Observed and Calculated Structure Factors for

1-(6,6-Dicyanohexa-1,3,5-triene)piperidine

The columns contain, in order, ℓ, $10F_{obs}$, $10F_{calc}$ and $10\left(\frac{F^2_{obs}-F^2_{calc}}{\sigma F^2_{obs}}\right)$. A minus sign preceding F_{obs} indicates that F^2_{obs} is negative.

J-2526-M44

-6 1 1

1	26	6	14

-6 2 1

1	21	2	10

-5 1 1

1	13	13	0
2	37	39	-4
3	44	24	28
4	-8	4	-2
5	-7	13	-6
6	-22	3	-13

-5 2 1

1	28	21	8
2	66	62	8
3	-13	9	-7
4	20	23	-2
5	21	2	11
6	-8	8	-3

-5 3 1

1	24	1	15
2	-9	8	-4
3	13	12	0
4	-8	7	-3
5	-11	8	-4
6	-21	0	-12

-5 4 1

1	-17	0	-8
2	29	22	8
3	25	5	15
4	20	0	9
5	21	7	9
6	18	2	7

-5 5 1

1	31	16	17
2	17	0	7
3	28	13	15
4	14	4	4
5	15	9	3

-5 6 1

1	-8	6	-2
2	8	14	-3
3	22	16	6
4	21	2	10

-5 7 1

1	16	9	4
2	-12	4	-4

-4 1 1

1	-12	9	-8
2	27	30	-5
3	23	5	13
4	20	27	-10
5	28	18	11
6	25	32	-10
7	21	11	8
8	15	10	3

-4 2 1

1	54	58	-9
2	24	13	11
3	47	43	9
4	39	34	10
5	27	5	19
6	-16	12	-12
7	-11	6	-4
8	-21	7	-14
9	-8	4	-2

-4 3 1

1	-3	3	0
2	72	71	3
3	-24	16	-29
4	-17	12	-14
5	44	47	-5
6	-14	14	-11
7	-2	13	-4
8	-22	1	-14
9	-12	4	-4

-4 4 1

1	21	1	12
2	126	126	0
3	24	31	-10
4	39	43	-8
5	15	17	-1
6	-24	20	-30
7	-13	1	-5
8	16	11	3

-4 5 1

1	14	2	6
2	29	34	-7
3	16	13	2
4	28	28	0
5	30	19	12
6	22	12	8
7	-19	2	-10
8	-21	8	-14

-4 6 1

1	23	16	7
2	40	40	0
3	24	14	9
4	23	12	9
5	19	16	3
6	-11	1	-3
7	-13	7	-6
8	-30	2	-26

-4 7 1

1	9	13	-2
2	4	16	-6
3	16	16	0
4	-1	1	0
5	43	38	8
6	10	1	2
7	-22	0	-14

-4 8 1

1	27	8	15
2	39	13	29
3	26	19	7
4	18	7	6
5	20	14	5
6	25	4	14

-4 9 1

1	-29	0	-26
2	7	18	-7
3	-14	5	-6
4	-5	9	-3

-3 1 1

1	68	63	15
2	6	18	-10
3	58	57	0
4	32	28	8
5	38	32	10
6	60	59	3
7	52	57	-12
8	-19	17	-19
9	9	27	-17
10	-21	15	-19

-3 2 1

1	24	20	4
2	-15	2	-8
3	53	50	7
4	16	23	-9
5	-18	10	-14
6	45	47	-3
7	14	22	-8
8	-17	6	-10
9	-10	22	-17
10	16	23	-7

-3 3 1

1	46	34	26
2	25	33	-14
3	64	62	7
4	13	0	6
5	-14	3	-7
6	24	34	-16
7	12	23	-11
8	39	34	7
9	17	18	0
10	-20	12	-16

-3 4 1

1	48	54	-16
2	38	29	16
3	46	55	-23
4	-8	12	-7
5	48	48	1
6	70	66	9
7	-17	12	-14
8	23	20	3
9	-30	2	-29
10	-11	12	-8

-3 5 1

1	29	22	11
2	59	58	3
3	36	38	-4
4	52	42	20
5	41	40	2
6	-23	5	-19
7	40	45	-10
8	34	29	7
9	9	9	0
10	10	23	-11

-3 6 1

1	17	16	1
2	135	138	-9
3	23	8	13
4	63	67	-9
5	51	54	-7
6	-15	8	-8
7	20	20	0
8	38	20	23
9	-22	0	-13
10	-4	4	0

-3 7 1

1	55	53	5
2	92	88	10
3	35	35	0
4	83	88	-11
5	22	15	7
6	24	31	-9
7	-1	8	-2
8	-15	6	-8
9	21	6	9

-3 8 1

1	11	16	-3
2	2	8	-2
3	20	4	10
4	23	27	-5
5	43	44	-2
6	-14	1	-6
7	-15	11	-10
8	17	3	7
9	-28	7	-24

-3 9 1

1	-21	1	-13
2	17	19	-2
3	-12	16	-11
4	-10	13	-8
5	19	30	-14
6	14	7	3
7	15	17	-2
8	16	3	6

-3 10 1

1	-20	0	-11
2	-25	5	-19
3	13	19	-4
4	22	6	11
5	-25	3	-19
6	21	3	10

-3 11 1

2	-29	9	-27
3	22	0	11

-2 1 1

1	257	251	19
2	84	85	-2
3	45	41	9
4	-7	8	-4
5	10	19	-10
6	19	24	-6
7	29	32	-5
8	80	79	2
9	59	61	-4
10	48	47	0
11	4	5	0

-2 2 1

1	98	101	-12
2	104	99	18
3	194	195	-4
4	82	79	7
5	93	93	-2
6	178	185	-23
7	9	2	2
8	57	67	-25
9	47	49	-3
10	29	30	-1

11	-15	10	-9
12	11	19	-5

-2 3 1

1	110	113	-12
2	-6	6	-3
3	119	120	-2
4	3	24	-21
5	62	68	-18
6	36	39	-6
7	24	26	-3
8	7	0	1
9	42	49	-15
10	20	17	3
11	-28	1	-24
12	44	34	14

-2 4 1

1	74	73	5
2	28	33	-10
3	39	36	6
4	-18	23	-34
5	-15	8	-10
6	103	101	6
7	45	54	-22
8	78	74	11
9	67	70	-8
10	17	20	-2
11	19	0	9
12	11	0	3

-2 5 1

1	49	45	9
2	-1	25	-23
3	34	41	-17
4	24	16	10
5	61	61	0
6	-12	17	-15
7	45	47	-5
8	39	37	3
9	32	35	-5
10	-20	1	-11
11	-28	7	-27
12	37	38	-1

-2 6 1

1	81	83	-8
2	28	20	12
3	-13	9	-10
4	41	49	-18
5	10	29	-23
6	49	54	-12
7	63	65	-2
8	63	65	-5
9	-20	4	-13
10	-20	8	-14
11	-33	5	-35

-2 7 1

1	43	45	-4
2	29	25	5
3	33	36	-6
4	19	33	-21
5	33	32	1
6	39	41	-3
7	41	39	3
8	27	15	13
9	37	31	10
10	-22	6	-15
11	23	18	4

-2 8 1

1	8	3	1
2	101	100	2
3	-13	12	-10
4	52	48	7
5	22	34	-18
6	-24	8	-21
7	49	52	-6
8	-20	4	-12
9	13	3	4
10	-6	3	-1
11	-19	0	-9

-2 9 1

1	60	58	4
2	72	73	-1
3	-18	0	-10
4	119	126	-18
5	46	42	6
6	50	58	-18
7	-28	18	-35
8	-11	13	-8
9	-16	4	-8
10	17	6	6

-2 10 1

1	-23	17	-25
2	34	18	19
3	-26	5	-23
4	-16	4	-8
5	27	15	13
6	-14	4	-5
7	27	21	7
8	9	9	0
9	-8	1	-1

-2 11 1

1	14	10	2
2	7	0	1
3	19	22	-3
4	15	15	0
5	9	7	0
6	-16	2	-7
7	28	3	17

-2 12 1

3	-13	8	-6

-1 1 1

1	168	177	-41
2	93	93	-1
3	187	192	-19
4	20	28	-14
5	125	123	6
6	-14	18	-21
7	64	71	-21
8	2	14	-6
9	75	71	9
10	7	7	0
11	28	15	14
12	19	29	-12

-1 2 1

1	62	70	-27
2	208	212	-14
3	-17	10	-15
4	81	91	-43
5	174	172	9
6	46	44	4
7	73	70	9
8	43	43	0
9	66	66	0
10	61	66	-12
11	24	9	12
12	31	18	14
13	21	29	-9

-1 3 1

1	77	77	0
2	68	71	-10
3	80	82	-5
4	58	56	8
5	31	39	-19
6	36	47	-29
7	29	27	2
8	74	80	-19
9	21	28	-10
10	104	90	35
11	39	35	6
12	-20	1	-12
13	-30	8	-28

-1 4 1

1	59	66	-25
2	245	244	2
3	235	226	30
4	90	85	17
5	97	96	5
6	76	74	7
7	43	46	-7
8	100	93	19
9	95	87	22
10	83	73	24
11	43	46	-4
12	37	32	7
13	24	0	13

-1 5 1

1	52	48	12
2	31	28	4
3	131	128	10
4	35	31	7
5	130	132	-6
6	158	151	23
7	22	15	7
8	151	146	14
9	-17	4	-10
10	10	31	-24
11	-8	9	-4
12	37	33	5
13	23	8	10

-1 6 1

1	38	39	-1
2	-15	6	-11
3	89	86	12
4	38	40	-3
5	45	45	-1
6	46	46	-1
7	67	67	-1
8	127	119	25
9	93	96	-9
10	51	47	9
11	23	25	-3
12	40	31	12

-1 7 1

1	41	51	-26
2	48	41	15
3	8	13	-4
4	30	25	8
5	40	34	10
6	-13	7	-7
7	74	73	2
8	-15	13	-12
9	23	24	0
10	-6	6	-2
11	-17	10	-11
12	19	33	-17

-1 8 1

1	78	81	-9
2	12	6	3
3	-18	4	-11
4	7	29	-25
5	27	39	-22
6	21	8	11
7	39	40	-1
8	37	41	-6
9	16	17	0
10	25	24	1
11	37	27	14
12	3	19	-8

-1 9 1

1	25	29	-7
2	-24	6	-21
3	-34	5	-43
4	12	4	4
5	25	32	-11
6	24	26	-1
7	17	16	1
8	27	36	-14
9	31	19	14
10	-12	17	-12
11	-18	9	-12

-1 10 1

1	18	3	8
2	58	53	10
3	-13	2	-5
4	20	21	0
5	-1	3	0
6	13	15	-1
7	45	36	14
8	17	4	7
9	33	27	8
10	23	20	3

-1 11 1

1	27	23	5
2	55	54	2
3	-11	9	-6
4	88	85	6
5	25	14	11
6	59	60	-1
7	37	30	10
8	7	13	-2
9	14	15	0

-1 12 1

1	30	29	1
2	-26	9	-22
3	28	24	5
4	43	28	22
5	25	2	15
6	32	21	12
7	-20	8	-12

0 0 1

1	150	126	100
2	761	692	99
3	317	291	79
4	124	120	13
5	133	114	74
6	21	22	-1
7	105	89	51
8	8	7	0

9	30	24	9	1	41	46	-13	-2	47	46	2	5	-16	7	-10
10	68	62	14	2	46	46	0	-1	99	102	-9	6	8	15	-4
11	37	25	17	3	279	260	60	0	19	15	5	7	29	32	-5
12	9	1	2	4	1	7	-1	1	44	45	-1	8	26	20	7
13	8	7	0	5	37	39	-5	2	134	135	-5	9	-9	1	-2
				6	44	48	-12	3	167	161	20	10	6	25	-16
	0 1 1			7	8	10	-1	4	163	150	46	11	41	35	10
				8	24	25	-1	5	76	68	23	12	-24	18	-24
-12	40	29	16	9	17	16	1	6	15	8	5				
-11	21	30	-12	10	26	38	-22	7	24	23	2		0 10 1		
-10	-16	3	-8	11	-21	1	-13	8	-21	0	-16				
-9	20	25	-7	12	5	15	-5	9	51	42	19	-5	21	18	2
-8	28	21	10	13	13	0	4	10	98	91	18	-4	-1	11	-3
-7	108	95	42					11	73	67	14	-3	17	8	5
-6	52	49	8		0 4 1			12	48	55	-15	-2	5	5	0
-5	33	21	21					13	24	14	9	-1	18	19	0
-4	127	119	31	-11	-32	7	-34					0	-16	9	-11
-3	344	327	66	-10	-16	11	-11		0 7 1			1	34	28	8
-2	188	188	3	-9	18	3	9					2	10	8	0
-1	211	223	-54	-8	66	61	11	-8	20	11	6	3	29	14	17
0	72	39	77	-7	32	25	10	-7	36	28	11	4	-4	8	-2
1	108	95	50	-6	5	11	-3	-6	12	9	1	5	13	17	-3
2	100	97	11	-5	29	34	-9	-5	47	56	-20	6	-11	2	-4
3	130	118	53	-4	-17	12	-17	-4	51	50	3	7	-11	12	-7
4	320	294	78	-3	19	29	-18	-3	-19	1	-12	8	-17	3	-8
5	178	162	59	-2	46	52	-18	-2	112	108	11	9	-27	2	-24
6	242	215	84	-1	171	164	26	-1	115	110	18	10	22	8	10
7	31	36	-11	0	97	103	-26	0	47	48	-2	11	26	28	-3
8	27	30	-4	1	241	244	-10	1	72	75	-10				
9	35	26	15	2	22	24	-2	2	-12	5	-7		0 11 1		
10	9	6	1	3	32	31	1	3	85	79	18				
11	10	8	1	4	-2	15	-9	4	33	23	17	-3	-10	4	-3
12	-17	0	-8	5	58	57	2	5	114	107	20	-2	-25	0	-18
13	27	25	3	6	12	6	4	6	89	85	11	-1	-13	13	-9
				7	25	30	-8	7	65	60	13	0	19	5	8
	0 2 1			8	18	6	10	8	195	196	-3	1	7	10	-1
				9	36	41	-9	9	11	7	2	2	12	3	3
-12	17	17	0	10	35	32	4	10	99	100	-2	3	13	3	4
-11	19	3	9	11	79	82	-8	11	22	26	-4	4	-2	1	0
-10	-25	0	-20	12	32	39	-12	12	22	25	-2	5	-11	4	-4
-9	79	77	4	13	24	18	6	13	-20	8	-12	6	12	5	3
-8	61	66	-12									7	25	16	9
-7	66	67	-2		0 5 1				0 8 1			8	24	22	2
-6	14	22	-10									9	16	14	1
-5	53	53	0	-10	-18	8	-11	-7	-8	5	-2	10	34	36	-2
-4	87	85	8	-9	22	9	10	-6	52	40	22				
-3	150	147	9	-8	7	4	1	-5	-1	5	0		0 12 1		
-2	148	148	-2	-7	22	33	-17	-4	64	57	16				
-1	195	200	-21	-6	-20	18	-24	-3	13	21	-8	0	-23	6	-16
0	108	105	13	-5	82	82	2	-2	-16	10	-12	1	-20	6	-12
1	350	336	41	-4	71	74	-7	-1	22	25	-4	2	18	6	7
2	231	211	78	-3	15	11	3	0	29	33	-7	3	13	5	4
3	227	211	60	-2	58	50	24	1	31	30	2	4	-6	3	-1
4	10	17	-7	-1	-15	6	-12	2	4	3	0	5	-17	2	-8
5	129	121	32	0	83	87	-13	3	28	28	0	6	-10	9	-5
6	135	120	57	1	64	67	-13	4	12	14	-1	7	-24	8	-19
7	121	112	31	2	193	192	4	5	34	37	-4	8	18	11	5
8	37	31	10	3	66	65	3	6	0	5	0				
9	17	23	-7	4	94	90	16	7	55	64	-22		1 -12 1		
10	58	55	6	5	-15	7	-11	8	36	38	-4				
11	18	16	1	6	137	131	20	9	46	48	-3	0	11	2	3
12	33	26	9	7	72	70	6	10	40	36	7				
13	31	36	-8	8	89	85	11	11	39	31	13		1 -11 1		
				9	51	53	-4	12	32	32	1				
	0 3 1			10	91	88	7					0	-7	20	-12
				11	18	13	4		0 9 1			1	27	24	3
-11	-4	1	0	12	33	24	12					2	4	2	0
-10	15	15	0	13	24	36	-18	-6	19	21	-1	3	-19	9	-12
-9	18	27	-12					-5	-16	0	-7				
-8	10	0	3		0 6 1			-4	35	21	18		1 -10 1		
-7	53	56	-8					-3	24	13	10				
-6	52	49	7	-9	19	4	8	-2	-21	2	-15	0	54	49	10
-5	65	71	-19	-8	52	48	7	-1	37	30	10	1	-19	7	-13
-4	85	81	13	-7	15	1	6	0	-17	3	-10	2	8	12	-2
-3	189	191	-10	-6	39	42	-6	1	49	45	8	3	-20	7	-13
-2	10	25	-20	-5	21	17	4	2	-19	7	-14	4	-13	0	-4
-1	44	49	-13	-4	42	38	8	3	30	26	5	5	15	10	2
0	258	262	-14	-3	10	12	-1	4	15	4	6				

1 -9 1

0	41	42	-2
1	45	45	0
2	0	8	-2
3	-13	16	-12
4	35	12	25
5	23	6	12
6	23	9	11

1 -8 1

0	16	28	-16
1	47	47	-1
2	-19	14	-18
3	12	6	3
4	-10	28	-26
5	34	33	1
6	29	25	5
7	18	22	-4

1 -7 1

0	-22	0	-18
1	73	75	-3
2	-23	8	-21
3	-25	10	-26
4	28	0	21
5	-10	7	-4
6	-12	23	-19
7	-22	0	-14
8	28	15	12

1 -6 1

0	-14	19	-23
1	73	84	-39
2	18	12	6
3	33	28	10
4	35	37	-4
5	35	42	-14
6	83	85	-6
7	9	7	0
8	8	27	-18
9	7	9	0

1 -5 1

0	37	35	4
1	71	74	-13
2	41	44	-8
3	59	58	4
4	104	102	7
5	50	49	1
6	71	63	22
7	57	58	0
8	3	22	-13
9	32	17	18
10	-18	1	-9

1 -4 1

0	71	65	24
1	221	217	13
2	191	184	27
3	86	84	4
4	213	204	31
5	25	23	3
6	24	24	0
7	44	41	7
8	45	51	-13
9	22	14	7
10	24	36	-17
11	11	9	0

1 -3 1

0	77	75	7

1	254	256	-7
2	80	85	-20
3	44	44	-1
4	134	125	32
5	65	66	-2
6	26	4	21
7	46	52	-16
8	71	77	-17
9	20	5	10
10	47	44	5
11	-15	12	-10

1 -2 1

0	136	133	14
1	158	165	-30
2	167	172	-19
3	200	198	9
4	75	73	5
5	49	43	14
6	32	36	-8
7	118	121	-7
8	113	111	7
9	32	33	0
10	33	34	0
11	5	20	-10
12	18	11	5

1 -1 1

0	146	153	-32
1	466	466	1
2	80	76	18
3	311	290	61
4	44	46	-6
5	81	81	-1
6	101	97	14
7	107	108	-2
8	17	1	9
9	65	70	-14
10	29	33	-7
11	8	22	-12
12	20	12	6

1 0 1

-12	-22	4	-14
-11	-20	6	-13
-10	35	37	-2
-9	25	9	15
-8	22	21	1
-7	60	65	-14
-6	67	70	-8
-5	162	160	8
-4	159	165	-20
-3	128	133	-25
-2	221	229	-32
-1	379	401	-82
0	42	26	32
1	393	416	-66
2	67	51	53
3	82	75	26
4	184	173	42
5	81	83	-6
6	43	40	7
7	-22	3	-21
8	68	60	21
9	98	103	-15
10	17	4	8
11	-22	0	-15
12	-21	3	-13
13	-19	7	-11

1 1 1

-12	-22	2	-14
-11	12	8	2
-10	11	28	-18

-9	5	21	-12
-8	52	55	-7
-7	28	34	-12
-6	41	40	3
-5	67	66	3
-4	148	150	-8
-3	52	44	24
-2	131	141	-45
-1	235	248	-50
0	275	294	-96
1	97	108	-55
2	101	107	-31
3	244	253	-34
4	228	234	-22
5	87	86	2
6	24	27	-4
7	41	38	7
8	33	16	25
9	11	5	2
10	-16	10	-12
11	40	41	-3
12	16	12	2
13	16	13	2

1 2 1

-11	-12	8	-5
-10	25	31	-8
-9	23	7	12
-8	33	36	-4
-7	24	37	-22
-6	19	24	-7
-5	70	70	-1
-4	57	61	-14
-3	62	71	-32
-2	145	146	-4
-1	82	90	-33
0	949	997	-59
1	143	142	2
2	853	811	54
3	324	339	-46
4	43	48	-15
5	212	218	-25
6	51	48	11
7	86	76	31
8	34	35	-1
9	66	70	-12
10	-16	4	-9
11	34	32	2
12	11	9	1
13	-7	2	-1

1 3 1

-11	0	9	-2
-10	20	17	2
-9	-23	2	-17
-8	6	9	-1
-7	66	66	-2
-6	50	43	15
-5	53	53	-2
-4	19	13	6
-3	144	155	-41
-2	50	52	-6
-1	215	222	-28
0	457	468	-25
1	32	37	-9
2	595	536	105
3	84	79	20
4	147	150	-14
5	72	77	-21
6	141	148	-25
7	68	76	-26
8	29	14	20
9	57	63	-18
10	39	42	-5
11	-14	6	-7
12	42	47	-10

13	22	13	8

1 4 1

-10	18	7	6
-9	35	29	9
-8	23	22	1
-7	-19	22	-28
-6	30	24	8
-5	-16	0	-9
-4	-19	9	-17
-3	66	66	0
-2	86	92	-23
-1	53	47	18
0	36	42	-15
1	71	64	25
2	-19	11	-20
3	223	211	42
4	19	32	-25
5	57	68	-41
6	47	53	-20
7	11	22	-14
8	10	5	2
9	29	34	-7
10	42	45	-6
11	-6	4	-1
12	26	40	-23
13	28	21	8
14	-7	15	-7

1 5 1

-9	-19	1	-10
-8	-7	1	-1
-7	-14	3	-6
-6	21	21	0
-5	28	30	-2
-4	33	38	-9
-3	-18	16	-21
-2	88	87	5
-1	58	52	18
0	60	63	-10
1	169	169	-1
2	76	75	3
3	222	212	34
4	51	52	-1
5	31	28	5
6	50	54	-13
7	77	82	-15
8	21	21	1
9	35	49	-30
10	5	17	-8
11	21	35	-22
12	-8	10	-5
13	18	1	8

1 6 1

-9	-17	2	-8
-8	20	18	1
-7	11	7	2
-6	-11	4	-4
-5	-23	13	-23
-4	25	24	1
-3	-3	26	-24
-2	15	6	6
-1	18	26	-11
0	47	41	15
1	118	119	-3
2	25	18	10
3	94	92	9
4	27	30	-7
5	-3	0	0
6	39	38	1
7	52	54	-4
8	-4	14	-6
9	19	29	-14
10	-4	5	-1

11	47	61	-30
12	13	10	2
13	17	23	-5

1 7 1

-8	-10	7	-4
-7	4	16	-6
-6	24	25	0
-5	42	39	4
-4	28	31	-5
-3	37	34	6
-2	40	39	3
-1	25	23	3
0	29	24	7
1	27	27	0
2	26	22	6
3	63	64	-2
4	87	86	5
5	-17	21	-28
6	32	40	-17
7	48	56	-21
8	69	75	-15
9	50	58	-19
10	47	47	-1
11	23	31	-12
12	27	35	-12
13	12	18	-4

1 8 1

-7	-18	3	-9
-6	43	27	24
-5	28	21	9
-4	19	12	5
-3	10	23	-12
-2	13	10	1
-1	-19	19	-23
0	13	5	4
1	29	25	6
2	15	15	0
3	31	37	-12
4	34	30	7
5	50	48	5
6	35	21	20
7	27	0	20
8	15	3	6
9	7	13	-3
10	55	53	4
11	18	27	-9
12	60	62	-3
13	-3	28	-20

1 9 1

-6	24	7	11
-5	7	16	-5
-4	-17	9	-10
-3	-28	12	-30
-2	54	45	19
-1	38	36	2
0	65	56	20
1	65	64	2
2	-10	18	-13
3	-2	10	-3
4	4	12	-4
5	59	57	4
6	34	45	-22
7	47	52	-11
8	90	96	-16
9	-10	24	-20
10	85	96	-30
11	29	27	3
12	46	42	8

1 10 1

-4	27	26	1
-3	17	2	7
-2	37	27	14
-1	-11	7	-4
0	-15	1	-6
1	-12	3	-4
2	20	11	7
3	-12	3	-4
4	3	2	0
5	25	29	-5
6	-4	3	-1
7	40	48	-16
8	19	14	4
9	9	21	-9
10	25	26	-1
11	-27	0	-22

1 11 1

-2	-19	11	-13
-1	17	13	3
0	-3	0	0
1	-23	10	-18
2	9	2	2
3	-23	11	-20
4	-25	6	-20
5	-11	8	-5
6	-19	8	-12
7	-24	3	-18
8	22	4	11
9	23	11	10
10	24	26	-1

1 12 1

0	-24	2	-17
1	-8	3	-2
2	-14	5	-6
3	-18	1	-9
4	-12	6	-5
5	-4	3	0
6	8	3	1
7	-16	9	-10
8	19	0	9

2 -11 1

0	29	11	16
1	-27	3	-22
2	-26	5	-20

2 -10 1

0	-16	7	-9
1	-5	18	-10
2	13	1	4
3	37	22	18
4	-6	2	-1

2 -9 1

0	-27	0	-25
1	52	56	-8
2	6	3	0
3	11	24	-12
4	-2	1	0
5	-19	2	-10
6	22	6	10

2 -8 1

0	123	126	-7
1	25	26	-1
2	66	58	19
3	36	31	7
4	16	9	4
5	-23	17	-24
6	-12	1	-4
7	13	10	1

2 -7 1

0	24	29	-6
1	50	57	-16
2	35	41	-12
3	42	37	9
4	26	20	7
5	17	4	7
6	14	13	0
7	13	20	-6
8	17	7	6

2 -6 1

0	29	28	1
1	51	45	14
2	-12	1	-4
3	10	0	3
4	-21	1	-15
5	-4	17	-10
6	37	41	-7
7	43	28	23
8	-10	19	-13
9	-20	15	-18

2 -5 1

0	31	26	9
1	26	31	-9
2	13	24	-14
3	5	9	-2
4	13	7	3
5	-24	0	-19
6	-5	18	-11
7	33	40	-12
8	-24	6	-20
9	12	11	0
10	16	24	-7

2 -4 1

0	45	39	15
1	-4	10	-5
2	76	80	-13
3	58	57	3
4	14	0	7
5	44	48	-9
6	68	68	0
7	13	22	-10
8	53	56	-6
9	21	12	8
10	11	7	2
11	-24	6	-17

2 -3 1

0	73	65	27
1	12	22	-12
2	90	91	-3
3	49	42	18
4	17	11	6
5	15	22	-8
6	120	122	-9
7	30	27	4
8	86	92	-15
9	13	13	0
10	6	2	1
11	42	32	15

2 -2 1

0	56	55	4
1	131	130	5
2	130	129	5
3	179	177	8
4	363	353	24
5	31	32	-3
6	106	105	2
7	105	114	-30
8	26	12	14
9	35	44	-17
10	22	26	-5
11	26	16	10
12	35	14	22

2 -1 1

0	177	180	-10
1	166	163	10
2	52	56	-11
3	189	187	7
4	20	20	0
5	37	23	28
6	27	18	14
7	18	28	-15
8	99	102	-7
9	24	13	11
10	111	112	-3
11	12	3	3
12	-11	7	-4

2 0 1

-11	-21	15	-20
-10	33	36	-4
-9	-24	0	-18
-8	64	70	-15
-7	44	53	-21
-6	39	38	0
-5	124	123	2
-4	118	117	4
-3	61	64	-8
-2	67	70	-11
-1	-2	17	-12
0	84	83	3
1	126	132	-22
2	168	177	-39
3	70	69	3
4	29	25	8
5	63	58	15
6	87	86	3
7	146	142	12
8	86	87	0
9	54	55	-2
10	28	25	3
11	27	29	-2
12	19	14	4
13	20	18	2

2 1 1

-11	36	12	24
-10	27	18	9
-9	63	58	11
-8	17	25	-9
-7	14	20	-6
-6	-12	9	-8
-5	58	57	3
-4	-9	12	-9
-3	57	60	-8
-2	62	68	-21
-1	27	21	11
0	50	50	-1
1	341	352	-33
2	112	110	7
3	92	93	-5
4	112	106	24
5	58	62	-12
6	21	13	10
7	-4	9	-4
8	20	12	7
9	45	46	-1
10	55	61	-15
11	18	19	-1
12	5	17	-7

13	22	23	-1	11	0	4	0
				12	28	24	5
	2 2 1			13	25	19	6
-10	-9	2	-2		2 5 1		
-9	-18	10	-12				
-8	18	15	3	-9	18	1	8
-7	-25	10	-24	-8	-16	10	-10
-6	-19	4	-13	-7	26	17	9
-5	34	32	4	-6	17	11	4
-4	60	57	8	-5	38	36	4
-3	39	49	-30	-4	15	9	3
-2	-7	4	-3	-3	54	55	-1
-1	160	160	3	-2	22	4	15
0	16	8	7	-1	91	92	-3
1	119	121	-8	0	181	181	-2
2	95	100	-20	1	55	58	-10
3	73	73	0	2	405	420	-34
4	42	40	6	3	96	88	27
5	98	104	-24	4	234	219	47
6	85	93	-30	5	123	122	4
7	39	35	9	6	38	31	14
8	49	48	2	7	58	57	2
9	5	12	-3	8	-9	1	-2
10	17	15	1	9	55	62	-17
11	4	21	-11	10	-10	25	-22
12	25	4	15	11	-16	8	-9
13	-9	12	-6	12	50	55	-11
				13	8	17	-5
	2 3 1				2 6 1		
-10	10	14	-2				
-9	14	3	4	-8	24	8	12
-8	46	45	0	-7	-13	2	-4
-7	15	16	0	-6	22	4	12
-6	12	17	-5	-5	19	12	5
-5	11	26	-17	-4	-7	0	-1
-4	-14	6	-8	-3	17	25	-9
-3	14	23	-11	-2	2	18	-10
-2	58	59	-4	-1	53	53	1
-1	84	76	26	0	64	65	-4
0	37	28	19	1	26	22	7
1	41	37	8	2	71	67	9
2	160	158	7	3	64	63	2
3	22	9	16	4	13	16	-2
4	84	87	-8	5	63	58	13
5	44	48	-9	6	64	65	-3
6	22	20	2	7	29	36	-13
7	55	58	-10	8	52	52	1
8	25	3	19	9	21	30	-12
9	40	35	9	10	30	16	17
10	34	44	-19	11	-14	1	-5
11	55	58	-8	12	16	19	-3
12	-13	14	-10	13	27	8	16
13	-24	17	-27				
					2 7 1		
	2 4 1			-7	-23	10	-18
-9	17	5	6	-6	15	9	4
-8	-7	8	-3	-5	-8	3	-2
-7	-9	11	-6	-4	-21	11	-18
-6	-9	13	-8	-3	22	18	5
-5	12	20	-7	-2	22	29	-10
-4	44	51	-19	-1	-5	14	-7
-3	23	25	-3	0	23	26	-3
-2	86	83	11	1	62	64	-5
-1	29	23	11	2	-4	10	-4
0	178	188	-39	3	100	99	4
1	52	50	8	4	-18	15	-18
2	206	213	-25	5	24	15	11
3	103	91	44	6	12	1	4
4	120	115	17	7	44	44	1
5	187	195	-28	8	28	25	4
6	25	18	9	9	50	52	-4
7	56	67	-34	10	19	10	7
8	24	21	3	11	20	9	8
9	41	46	-10	12	20	4	9
10	-16	24	-27	13	19	12	5

	2 8 1			-6	13	0	4
				-5	32	13	19
				-4	16	15	0
				-3	15	7	4
				-2	-7	20	-13
				-1	16	22	-6
				0	26	12	15
				1	26	7	17
				2	30	32	-2
				3	36	29	11
				4	6	2	1
				5	-10	0	-3
				6	-10	9	-6
				7	24	32	-11
				8	12	18	-6
				9	21	19	2
				10	-8	8	-4
				11	12	12	0
				12	-21	9	-15
	2 9 1						
-5	21	12	7				
-4	-15	13	-11				
-3	7	17	-6				
-2	-20	11	-16				
-1	-6	3	-1				
0	-19	5	-12				
1	34	22	17				
2	-15	0	-7				
3	-11	0	-3				
4	8	8	0				
5	22	17	6				
6	-7	1	-1				
7	26	17	9				
8	16	21	-5				
9	26	27	-1				
10	17	13	3				
11	10	22	-10				
12	9	13	-2				
	2 10 1						
-3	34	17	19				
-2	20	9	8				
-1	23	10	11				
0	13	15	-1				
1	-14	0	-5				
2	-27	3	-23				
3	-25	3	-20				
4	-12	6	-5				
5	-15	7	-8				
6	-15	5	-7				
7	30	2	22				
8	26	10	14				
9	18	2	8				
10	35	31	5				
11	21	1	11				
	2 11 1						
-1	-18	7	-10				
0	39	19	23				
1	15	20	-4				
2	24	15	8				
3	-10	6	-4				
4	24	8	13				
5	24	21	3				
6	7	22	-11				
7	30	26	4				
8	31	36	-7				
9	27	19	9				
10	39	42	-3				
	2 12 1						

2	11	1	3
3	-21	8	-14
4	14	5	4
5	8	14	-3
6	23	2	13
7	32	29	3
	3 -10 1		
0	-13	4	-5
1	18	5	7
2	-32	9	-34
	3 -9 1		
0	4	12	-3
1	-19	3	-11
2	-17	9	-11
3	5	11	-2
4	12	3	3
	3 -8 1		
0	26	24	3
1	-10	7	-4
2	23	12	10
3	20	11	7
4	-29	5	-27
5	21	14	5
6	-8	4	-2
	3 -7 1		
0	13	3	4
1	84	87	-9
2	36	24	18
3	31	41	-18
4	20	4	10
5	9	16	-5
6	10	3	2
7	5	9	-1
	3 -6 1		
0	125	121	11
1	46	43	8
2	89	92	-10
3	53	59	-15
4	25	10	14
5	33	34	0
6	-13	5	-5
7	-19	9	-13
8	5	13	-3
	3 -5 1		
0	47	45	2
1	44	45	-4
2	11	17	-5
3	14	5	5
4	-11	9	-6
5	-2	8	-2
6	-20	8	-15
7	29	30	0
8	22	11	8
9	22	5	10
	3 -4 1		
0	40	39	3
1	16	0	9
2	44	45	-1
3	48	41	16
4	23	15	9
5	28	30	-4
6	18	4	8
7	12	7	2

8	14	24	-11
9	-25	9	-21
10	-7	9	-3

3 -3 1

0	13	8	4
1	66	65	3
2	11	3	4
3	51	43	18
4	-4	9	-3
5	27	36	-17
6	19	30	-15
7	47	53	-13
8	44	43	1
9	28	26	3
10	36	24	16
11	38	16	24

3 -2 1

0	67	67	0
1	-16	15	-20
2	72	67	14
3	114	109	18
4	40	37	6
5	40	37	7
6	21	13	7
7	29	26	5
8	35	35	0
9	-12	5	-5
10	-1	20	-11
11	23	17	5

3 -1 1

0	61	60	2
1	28	32	-9
2	38	34	8
3	94	87	25
4	53	53	1
5	24	6	17
6	50	39	24
7	31	38	-12
8	124	131	-21
9	27	12	15
10	-7	30	-27
11	46	31	25
12	11	3	2

3 0 1

-10	18	16	1
-9	-12	5	-4
-8	-24	10	-22
-7	18	7	7
-6	98	91	20
-5	29	26	5
-4	121	110	34
-3	109	111	-6
-2	28	39	-24
-1	61	63	-4
0	23	7	17
1	49	52	-7
2	22	7	16
3	73	68	18
4	154	156	-9
5	86	85	2
6	149	145	13
7	78	73	13
8	64	62	4
9	76	77	-3
10	20	11	7
11	-21	23	-29
12	36	4	28

3 1 1

-10	-11	19	-12
-9	18	23	-4
-8	32	39	-11
-7	18	42	-39
-6	39	44	-9
-5	7	6	0
-4	-23	10	-23
-3	43	35	16
-2	29	30	0
-1	127	126	2
0	165	157	28
1	24	11	16
2	31	23	16
3	127	133	-25
4	48	50	-4
5	73	67	17
6	116	116	3
7	36	13	31
8	82	75	19
9	47	29	32
10	88	96	-20
11	23	12	9
12	29	32	-4

3 2 1

-9	18	17	1
-8	53	41	22
-7	15	9	3
-6	40	43	-6
-5	53	45	17
-4	57	46	24
-3	41	40	2
-2	18	15	2
-1	38	41	-7
0	41	38	7
1	53	48	14
2	27	22	9
3	87	85	4
4	28	29	0
5	34	19	25
6	41	42	-2
7	54	56	-6
8	54	53	2
9	44	50	-14
10	36	25	16
11	19	13	4
12	43	32	17
13	18	14	3

3 3 1

-9	16	8	4
-8	18	27	-10
-7	39	30	14
-6	19	19	0
-5	-16	11	-12
-4	21	10	9
-3	28	5	22
-2	-12	4	-5
-1	-12	11	-10
0	34	34	0
1	89	85	12
2	80	76	14
3	73	71	8
4	30	10	27
5	52	46	15
6	46	50	-9
7	22	7	14
8	30	16	17
9	28	15	15
10	34	46	-24
11	25	8	13
12	34	27	10
13	-12	26	-21

3 4 1

-8	-17	2	-8
-7	9	16	-4
-6	-10	1	-2
-5	-10	0	-3
-4	-7	4	-2
-3	-20	0	-14
-2	-8	12	-7
-1	37	37	0
0	33	22	19
1	34	22	20
2	27	17	14
3	37	38	-3
4	27	19	13
5	49	49	0
6	18	20	-1
7	40	37	5
8	51	47	9
9	22	23	0
10	23	14	8
11	35	46	-20
12	8	19	-7
13	21	19	1

3 5 1

-7	4	6	0
-6	9	17	-5
-5	19	15	4
-4	12	13	-1
-3	34	23	15
-2	-13	7	-7
-1	-9	13	-8
0	4	1	0
1	-8	1	-2
2	51	44	16
3	29	12	21
4	25	7	19
5	32	20	19
6	40	29	19
7	30	29	1
8	43	11	41
9	5	3	0
10	-17	19	-20
11	38	48	-20
12	21	19	1
13	-13	16	-11

3 6 1

-6	19	5	8
-5	-10	2	-3
-4	-18	13	-15
-3	-7	4	-2
-2	52	41	22
-1	20	9	8
0	54	52	5
1	-4	14	-7
2	18	6	8
3	22	19	3
4	20	8	10
5	72	59	31
6	43	35	15
7	64	54	24
8	27	3	20
9	-7	22	-16
10	25	13	11
11	29	0	20
12	10	20	-7
13	32	15	17

3 7 1

-5	-29	9	-29
-4	3	0	0
-3	17	17	0
-2	-24	3	-19
-1	22	26	-5
0	48	47	0

1	48	33	29
2	152	155	-8
3	27	11	16
4	168	163	14
5	96	82	36
6	46	43	8
7	68	68	0
8	28	18	12
9	36	36	0
10	28	0	19
11	20	7	9
12	10	20	-7

3 8 1

-4	-15	2	-6
-3	16	16	0
-2	13	3	4
-1	26	23	3
0	26	29	-3
1	19	27	-11
2	60	62	-3
3	23	21	2
4	47	50	-7
5	-13	1	-5
6	29	38	-16
7	18	24	-6
8	30	40	-16
9	35	35	1
10	-24	7	-20
11	3	15	-5
12	-16	4	-7

3 9 1

-3	-31	3	-30
-2	9	6	1
-1	-21	14	-20
0	27	17	10
1	-6	1	-1
2	35	22	18
3	14	29	-17
4	14	14	0
5	-18	7	-11
6	27	8	16
7	20	20	0
8	-13	0	-5
9	40	15	30
10	-7	3	-1
11	24	0	13

3 10 1

-1	12	0	3
0	25	6	14
1	32	13	20
2	19	8	7
3	16	11	4
4	24	10	12
5	14	6	4
6	27	3	18
7	24	11	11
8	16	6	5
9	25	2	15
10	9	5	1

3 11 1

1	-28	0	-23
2	33	5	23
3	-15	6	-7
4	13	1	4
5	12	2	3
6	-27	4	-23
7	4	1	0
8	27	2	16

4 -9 1

	4 -8 1		
0	9	12	-1
1	14	13	1
2	-3	6	-1
3	-13	3	-5
4	-6	3	-1
	4 -7 1		
0	6	0	1
1	8	6	0
2	5	12	-3
3	-8	1	-2
4	19	5	8
5	-8	11	-5
6	-11	0	-3
	4 -6 1		
0	-15	6	-8
1	33	26	10
2	30	25	7
3	-19	8	-13
4	-16	10	-11
5	2	0	0
6	7	5	0
7	11	4	2
	4 -5 1		
0	12	13	0
1	67	64	7
2	31	13	20
3	28	37	-14
4	-16	12	-12
5	24	26	-2
6	5	0	0
7	4	1	0
8	3	7	-1
	4 -4 1		
0	99	100	-3
1	63	63	0
2	41	49	-19
3	63	67	-10
4	16	17	-1
5	50	47	6
6	23	1	13
7	-22	11	-18
8	11	12	0
9	7	3	1
	4 -3 1		
0	66	73	-22
1	20	18	1
2	65	73	-22
3	36	27	13
4	38	53	-34
5	35	23	17
6	22	8	11
7	25	21	4
8	24	9	12
9	-11	12	-7
10	19	10	6
	4 -2 1		
0	43	35	14
1	29	20	13
2	28	15	15
3	58	44	31

4	49	39	19
5	52	46	13
6	19	11	6
7	13	5	4
8	24	11	12
9	26	25	2
10	-10	9	-5
	4 -1 1		
0	14	5	5
1	57	47	23
2	29	11	21
3	53	47	14
4	28	5	21
5	47	31	28
6	14	6	5
7	28	20	10
8	52	50	4
9	24	29	-7
10	14	7	4
11	-21	10	-15
	4 0 1		
-8	-16	3	-7
-7	26	0	17
-6	-17	8	-11
-5	30	10	20
-4	-28	7	-28
-3	47	32	28
-2	28	13	16
-1	19	16	2
0	43	33	19
1	44	28	30
2	27	4	22
3	65	55	24
4	36	27	15
5	42	32	18
6	37	10	32
7	9	4	2
8	26	6	17
9	8	12	-2
10	-23	8	-19
11	28	10	16
	4 1 1		
-8	11	2	3
-7	33	30	4
-6	30	33	-3
-5	41	32	14
-4	67	54	30
-3	24	13	11
-2	20	6	11
-1	31	30	1
0	27	17	12
1	41	33	16
2	33	13	25
3	38	18	30
4	33	1	30
5	40	9	39
6	19	4	10
7	39	38	1
8	65	63	4
9	41	35	10
10	34	48	-25
11	25	20	5
	4 2 1		
-7	26	15	11
-6	-22	9	-17
-5	5	15	-5
-4	53	38	28
-3	34	32	2
-2	37	33	6
-1	40	35	10

0	40	22	29
1	30	17	16
2	47	35	25
3	22	12	10
4	44	28	30
5	33	28	8
6	58	52	12
7	42	0	42
8	67	76	-22
9	43	40	5
10	39	42	-5
11	32	29	3
12	18	2	7
	4 3 1		
-7	-12	13	-8
-6	32	21	12
-5	-13	8	-7
-4	32	30	2
-3	31	21	12
-2	13	22	-9
-1	53	52	2
0	50	50	0
1	30	20	13
2	36	29	12
3	37	38	-2
4	39	23	25
5	69	59	25
6	90	100	-31
7	15	4	6
8	87	90	-8
9	36	43	-12
10	55	50	8
11	39	24	20
12	22	21	1
	4 4 1		
-6	15	24	-9
-5	30	2	21
-4	25	24	1
-3	-6	16	-8
-2	24	13	11
-1	23	27	-6
0	10	11	0
1	19	12	6
2	28	11	18
3	41	39	5
4	36	11	31
5	41	36	10
6	16	8	5
7	34	21	17
8	-2	5	-1
9	12	17	-4
10	35	36	-1
11	24	3	14
12	43	48	-8
	4 5 1		
-5	35	12	23
-4	-12	13	-9
-3	25	16	9
-2	-22	4	-16
-1	10	15	-4
0	-15	9	-10
1	8	14	-4
2	29	11	19
3	27	1	20
4	40	29	20
5	34	23	17
6	-3	4	0
7	43	22	32
8	30	28	3
9	24	18	6
10	47	28	30
11	42	25	24

12	-10	14	-8
	4 6 1		
-5	23	7	11
-4	9	1	2
-3	-24	5	-18
-2	26	0	17
-1	15	13	1
0	24	8	13
1	-9	2	-2
2	-15	4	-7
3	28	34	-8
4	20	2	11
5	18	12	5
6	19	12	6
7	34	26	12
8	-10	6	-3
9	23	2	13
10	15	0	6
11	42	32	15
	4 7 1		
-3	-7	8	-3
-2	-12	8	-6
-1	19	7	8
0	15	9	4
1	8	3	1
2	17	7	7
3	21	6	11
4	-3	4	0
5	20	10	8
6	27	3	18
7	-17	2	-8
8	19	11	6
9	4	2	0
10	13	7	3
11	13	12	0
	4 8 1		
-2	-31	9	-31
-1	20	3	10
0	23	17	5
1	23	9	11
2	31	3	23
3	35	14	25
4	27	19	10
5	24	12	11
6	14	6	4
7	32	16	18
8	18	12	4
9	24	14	9
10	-11	3	-3
	4 9 1		
0	31	14	16
1	26	8	14
2	40	38	3
3	-14	2	-5
4	63	56	13
5	42	24	25
6	36	35	1
7	51	41	17
8	12	0	3
9	20	27	-8
	4 10 1		
2	27	28	-1
3	10	10	0
4	40	42	-3
5	9	8	0
6	32	33	-1
7	28	24	5

5 -7 1

0	28	21	8
1	-13	2	-4
2	29	8	17

5 -6 1

0	13	7	2
1	11	3	2
2	6	13	-3
3	-10	8	-4
4	18	7	7

5 -5 1

0	21	0	12
1	19	8	7
2	23	2	13
3	12	0	4
4	34	6	26
5	20	0	9
6	-2	0	0

5 -4 1

0	27	16	12
1	-15	14	-12
2	27	15	13
3	-19	10	-14
4	31	13	19
5	24	8	12
6	22	6	11
7	26	13	11

5 -3 1

0	-10	9	-5
1	24	13	10
2	14	9	3
3	-18	12	-13
4	23	0	14
5	27	14	13
6	24	0	14
7	-12	9	-6
8	12	10	1

5 -2 1

0	76	68	19
1	39	36	5
2	33	23	13
3	61	63	-4
4	21	5	11
5	42	40	4
6	25	1	15
7	33	15	19
8	27	7	16

5 -1 1

0	69	67	5
1	22	2	13
2	61	64	-7
3	35	32	5
4	66	64	4
5	45	42	5
6	31	8	21
7	40	29	16
8	27	4	17
9	14	4	4

5 0 1

-6	17	2	6
-5	23	15	6
-4	-22	5	-15
-3	22	3	12
-2	43	27	24
-1	27	31	-6
0	58	40	35
1	9	3	2
2	25	12	12
3	40	23	25
4	24	10	12
5	31	20	13
6	18	1	9
7	24	2	15
8	31	18	14
9	26	22	3

5 1 1

-5	-4	3	0
-4	35	20	18
-3	28	15	13
-2	29	3	21
-1	13	20	-6
0	11	4	3
1	17	16	1
2	34	9	26
3	33	17	20
4	22	5	12
5	17	11	4
6	16	7	5
7	38	9	31
8	13	17	-3
9	-5	5	-1
10	18	13	3

5 2 1

-5	34	6	24
-4	28	10	15
-3	4	7	0
-2	-2	5	0
-1	-4	6	-1
0	10	16	-4
1	28	15	13
2	12	2	4
3	20	0	11
4	28	4	20
5	20	9	8
6	24	5	14
7	17	3	7
8	17	12	3
9	39	8	31
10	33	12	21

5 3 1

-4	30	18	13
-3	29	6	19
-2	15	18	-2
-1	12	13	0
0	30	13	18
1	29	12	17
2	7	9	-1
3	27	2	19
4	29	5	21
5	22	7	12
6	29	7	20
7	19	16	2
8	23	14	8
9	32	22	12
10	20	21	0

5 4 1

-4	-11	3	-3
-3	-6	11	-4
-2	4	2	0
-1	25	6	14
0	-13	2	-5
1	26	6	16
2	24	14	9
3	25	6	15
4	18	2	9
5	31	0	23
6	28	3	19
7	34	5	26
8	50	28	34
9	-17	3	-9
10	47	43	7

5 5 1

-3	-16	7	-8
-2	38	19	23
-1	36	20	20
0	33	13	21
1	11	12	0
2	22	0	13
3	30	9	19
4	25	4	15
5	30	24	7
6	47	43	7
7	37	15	26
8	65	64	2
9	32	19	15
10	33	40	-9

5 6 1

-2	-8	10	-4
-1	13	11	1
0	8	10	0
1	20	12	6
2	20	12	6
3	31	2	23
4	31	6	22
5	41	21	26
6	-5	9	-3
7	31	20	13
8	28	19	9
9	19	3	8

5 7 1

0	29	0	19
1	25	8	14
2	-3	1	0
3	-10	6	-3
4	25	9	12
5	23	5	12
6	35	10	25
7	21	8	9
8	30	5	20

5 8 1

2	19	0	8
3	23	10	9
4	12	2	3
5	34	11	21
6	27	2	16
7	22	1	11

6 -3 1

0	27	8	14
1	-21	8	-14
2	14	4	4
3	33	2	23

6 -2 1

0	21	7	8
1	20	2	9
2	26	0	16
3	23	2	12
4	-22	5	-14

6 -1 1

0	29	19	11
1	20	1	9
2	3	0	0
3	10	6	1
4	30	10	18
5	26	0	15

6 0 1

-1	14	7	3
0	27	23	4
1	21	6	10
2	28	14	13
3	40	31	13
4	21	3	11
5	29	26	3
6	30	5	19

6 1 1

-1	15	13	1
0	42	36	8
1	33	2	24
2	48	39	15
3	35	23	15
4	38	33	7
5	44	33	17
6	33	12	20

6 2 1

-1	26	0	15
0	40	27	18
1	21	4	10
2	47	23	33
3	-11	0	-3
4	30	12	17
5	23	2	12
6	29	9	17

6 3 1

0	7	7	0
1	25	13	10
2	24	6	13
3	19	4	8
4	32	0	22
5	32	1	23
6	40	5	32

6 4 1

2	-12	1	-4
3	29	4	18
4	38	1	30
5	18	3	7

Table 5. Observed and Calculated Structure Factors for Azo-15-Crown-5-Cyanine

The columns contain, in order, ℓ, $10F_{obs}$, $10F_{calc}$ and $10\left(\frac{F^2_{obs}-F^2_{calc}}{\sigma F^2_{obs}}\right)$. A minus sign preceding F_{obs} indicates that F^2_{obs} is negative.

-14 0 l

2	81	66	20
4	53	56	-3

-13 0 l

2	86	80	9
4	28	25	2
6	-23	7	-9

-12 0 l

2	104	105	-1
4	110	120	-17
6	134	147	-24
8	116	114	3

-11 0 l

2	247	255	-14
4	79	74	8
6	32	29	2
8	86	93	-12

-10 0 l

2	262	267	-10
4	138	139	-2
6	124	125	0
8	12	14	0

-9 0 l

2	220	214	12
4	199	200	-2
6	476	483	-10
8	74	81	-11
10	55	53	1

-8 0 l

2	278	282	-9
4	192	186	14
6	95	88	14
8	161	164	-6
10	81	75	8

-7 0 l

2	23	22	0
4	58	49	16
6	95	92	6
8	319	308	19
10	50	53	-3

-6 0 l

2	289	282	15
4	91	86	12
6	32	22	10
8	81	80	1
10	39	28	10

-5 0 l

2	370	362	17
4	333	328	10
6	159	153	12
8	100	87	23
10	158	153	8

-4 0 l

2	130	137	-22
4	696	691	6
6	391	388	5
8	95	87	14
10	152	144	14

-3 0 l

2	1129	1108	18
4	428	425	7
6	106	111	-12
8	168	169	-4
10	54	68	-21

-2 0 l

2	419	437	-40
4	21	3	12
6	37	35	3
8	228	233	-11
10	146	151	-9

-1 0 l

2	344	341	6
4	33	42	-16
6	94	100	-15
8	65	73	-13
10	73	78	-7

0 0 l

2	427	444	-37
4	267	270	-8
6	108	107	0
8	106	100	11
10	-16	30	-20

1 0 l

0	226	235	-42
2	253	259	-17
4	472	467	7
6	32	32	0
8	174	171	5
10	97	90	12

2 0 l

0	444	453	-23
2	2120	1956	75
4	362	370	-15
6	155	152	8
8	51	57	-8
10	96	78	28

3 0 l

0	1663	1610	36
2	920	901	28
4	455	453	3
6	21	7	8
8	59	64	-8
10	26	10	8

4 0 l

0	447	447	0
2	379	381	-4
4	415	415	-1
6	62	71	-16
8	65	68	-5
10	71	78	-11

5 0 l

0	209	211	-9
2	958	941	16
4	18	23	-4
6	68	70	-2
8	75	81	-9
10	-10	8	-2

6 0 l

0	154	155	-3
2	307	308	-2
4	437	427	17
6	77	78	-1
8	150	149	1

7 0 l

0	119	116	9
2	259	255	7
4	315	317	-3
6	135	133	3
8	78	66	17

8 0 l

0	50	56	-16
2	227	213	30
4	282	296	-27
6	31	22	7
8	10	5	1

9 0 l

0	117	118	-2
2	37	35	1
4	233	231	4
6	68	71	-4

10 0 l

0	29	34	-9
2	107	110	-6
4	36	49	-16
6	12	25	-7

11 0 l

0	17	21	-3
2	30	46	-19
4	25	32	-5
6	134	140	-11

12 0 l

0	53	46	13
2	-17	13	-8
4	-16	32	-21

13 0 l

0	67	64	6
2	72	70	3

14 0 l

0	75	65	19

-14 1 l

1	-31	6	-25
2	53	66	-25
3	126	139	-31
4	57	53	8
5	104	97	13

-13 1 l

1	33	15	18
2	188	185	6
3	44	42	3
4	78	75	7
5	74	67	15
6	87	91	-9
7	24	3	11

-12 1 l

1	166	163	7
2	-7	11	-5
3	64	59	10
4	170	170	1
5	208	210	-3
6	25	12	10
7	67	74	-13
8	47	31	20

-11 1 l

1	167	171	-12
2	37	32	7
3	64	67	-6
4	232	234	-4
5	173	173	1
6	-12	23	-17
7	47	37	15
8	89	88	2

-10 1 l

1	244	246	-3
2	48	49	-2
3	238	241	-8
4	63	52	24
5	56	57	-3
6	145	147	-4
7	114	126	-30
8	-5	3	0
9	146	138	17

-9 1 l

1	213	210	8
2	55	49	14
3	142	141	3
4	119	124	-14
5	98	94	12
6	70	72	-6
7	259	253	15
8	55	62	-13
9	25	8	11
10	4	14	-3

-8 1 l

1	95	93	4
2	82	84	-7
3	63	60	7
4	97	99	-4
5	282	284	-6
6	96	98	-5
7	166	162	9
8	109	109	1
9	31	37	-9
10	68	64	6

-7 1 l

1	56	57	-3
2	69	56	36
3	172	175	-12
4	219	217	5
5	13	17	-4
6	299	294	13
7	269	267	5
8	32	17	16
9	130	140	-29
10	71	68	5

-6 1 l

1	80	77	13

2	19	33	-26
3	355	347	21
4	269	263	16
5	151	150	4
6	137	139	-5
7	408	404	8
8	31	19	15
9	129	126	9
10	96	88	17
11	27	33	-7

-5 1 1

1	235	233	7
2	239	239	0
3	393	378	36
4	382	374	20
5	512	513	-3
6	94	86	23
7	11	13	-1
8	103	100	6
9	32	16	16
10	169	164	11
11	30	28	3

-4 1 1

1	328	331	-8
2	509	510	-1
3	51	51	1
4	120	124	-12
5	186	187	-4
6	27	17	13
7	18	27	-11
8	111	111	1
9	325	317	17
10	34	0	24
11	35	41	-8

-3 1 1

1	743	750	-10
2	23	29	-12
3	146	152	-26
4	318	320	-7
5	78	82	-12
6	20	18	3
7	328	326	7
8	32	13	22
9	109	106	7
10	30	13	14
11	50	46	7

-2 1 1

1	347	352	-16
2	656	657	-2
3	-9	6	-5
4	86	92	-21
5	15	8	6
6	105	108	-9
7	19	10	7
8	-25	4	-21
9	36	36	0
10	30	20	10
11	94	82	24

-1 1 1

1	42	49	-16
3	392	399	-19
4	207	211	-11
5	106	107	-2
6	59	61	-4
7	10	3	3
8	39	34	9
9	175	172	7
10	31	33	-2
11	84	91	-17

0 1 1

1	136	139	-16
2	644	663	-33
3	277	276	2
4	339	342	-6
5	18	21	-3
6	32	35	-5
7	166	169	-9
8	13	5	4
9	79	80	0
10	13	7	2
11	125	110	33

1 1 1

0	294	303	-36
1	328	333	-18
2	459	463	-9
3	364	359	14
4	136	138	-10
5	44	43	2
6	120	124	-12
7	117	113	12
8	28	21	8
9	80	81	-4
10	40	30	13
11	136	127	19

2 1 1

0	131	131	2
1	517	504	27
2	1207	1219	-11
3	216	218	-5
4	103	102	5
5	100	104	-13
6	60	54	15
7	30	33	-5
8	61	53	17
9	-11	10	-6
10	68	64	9

3 1 1

0	379	388	-27
1	260	259	2
2	545	530	35
3	207	199	27
4	219	214	17
5	138	127	36
6	73	66	20
7	48	44	7
8	85	75	24
9	111	109	4
10	22	7	9

4 1 1

0	559	555	9
1	80	84	-16
2	537	535	4
3	241	241	0
4	809	799	12
5	37	45	-17
6	35	40	-10
7	68	66	5
8	84	95	-28
9	-24	4	-15
10	24	34	-11

5 1 1

0	175	177	-6
1	28	23	8
2	453	446	16
3	215	216	-3
4	177	173	10
5	46	50	-9
6	47	39	15
7	174	184	-28
8	52	41	18
9	-8	1	-1
10	-30	12	-24

6 1 1

0	68	70	-10
1	109	118	-33
2	53	49	10
3	94	86	26
4	105	102	7
5	106	99	17
6	133	134	-1
7	-5	19	-10
8	60	46	25
9	-16	9	-8

7 1 1

0	312	301	37
1	28	24	6
2	449	451	-3
3	84	88	-13
4	60	54	14
5	2	4	0
6	126	127	-4
7	74	80	-14
8	-9	7	-3
9	13	20	-4

8 1 1

0	300	296	12
1	129	127	6
2	174	165	26
3	66	61	14
4	9	3	1
5	178	176	4
6	-12	7	-5
7	47	45	4
8	24	1	12

9 1 1

0	18	21	-5
1	-9	19	-14
2	76	79	-8
3	47	49	-3
4	17	19	-1
5	54	60	-12
6	-18	18	-16
7	23	31	-9

10 1 1

0	-9	7	-6
1	32	42	-18
2	-12	8	-6
3	28	41	-20
4	6	31	-23
5	121	120	3
6	42	53	-20

11 1 1

0	45	34	26
1	111	114	-7
2	54	59	-10
3	50	57	-14
4	39	43	-6
5	95	94	3
6	34	31	3

12 1 1

0	28	31	-6
1	117	118	-1
2	-25	2	-16
3	44	59	-28
4	43	36	10

13 1 1

0	30	30	0
1	12	18	-4
2	16	24	-7
3	37	41	-6

14 1 1

0	13	19	-5
1	27	23	3

-14 2 1

1	49	44	8
2	102	99	8
3	82	81	2
4	120	113	15
5	42	35	9

-13 2 1

1	173	174	-2
2	138	137	1
3	12	1	3
4	74	67	13
5	41	30	14
6	14	30	-14

-12 2 1

1	22	23	-1
2	33	37	-5
3	21	35	-18
4	23	2	12
5	19	10	6
6	28	39	-14
7	7	11	-1
8	121	117	9

-11 2 1

1	109	114	-15
2	188	189	-2
3	289	289	1
4	93	97	-10
5	30	15	15
6	39	44	-7
7	7	24	-12
8	80	68	22

-10 2 1

1	114	117	-7
2	31	19	15
3	46	46	0
4	52	48	9
5	62	65	-6
6	-16	12	-11
7	85	82	7
8	76	62	26
9	71	71	0

-9 2 1

1	72	63	23
2	160	162	-5
3	28	35	-12
4	93	94	-2
5	292	293	-3

6	78	76	4
7	49	42	11
8	120	111	20
9	33	50	-28
10	67	66	0

-8 2 1

1	81	85	-11
2	193	195	-7
3	82	88	-18
4	252	252	0
5	52	49	6
6	52	40	23
7	31	25	6
8	129	129	-1
9	80	85	-10
10	102	101	1

-7 2 1

1	16	15	1
2	195	185	31
3	144	150	-20
4	89	81	24
5	275	272	8
6	36	34	3
7	81	81	0
8	131	132	-3
9	191	189	3
10	58	53	9

-6 2 1

1	36	36	0
2	250	251	-1
3	48	51	-8
4	246	242	10
5	446	436	21
6	97	94	7
7	33	20	18
8	34	26	11
9	22	9	9
10	10	11	0
11	44	55	-18

-5 2 1

1	282	276	17
2	205	212	-23
3	337	328	25
4	203	200	9
5	92	86	21
6	69	66	7
7	143	145	-6
8	85	81	8
9	32	9	21
10	43	25	24
11	109	104	10

-4 2 1

1	46	38	21
2	716	711	8
3	467	477	-23
4	33	33	0
5	113	110	9
6	338	334	11
7	62	62	0
8	103	93	25
9	189	187	3
10	39	42	-5
11	24	29	-6

-3 2 1

1	33	33	0
2	397	396	3
3	71	71	0
4	125	122	13
5	299	301	-4
6	91	95	-13
7	250	253	-6
8	19	21	-2
9	113	117	-12
10	143	142	3
11	34	38	-4

-2 2 1

1	635	638	-5
2	414	415	-2
3	248	246	7
4	138	142	-18
5	35	33	3
6	89	91	-9
7	141	138	8
8	70	64	15
9	-20	5	-12
10	63	54	17
11	65	69	-6

-1 2 1

1	186	195	-44
2	1419	1448	-23
3	13	8	4
4	158	155	9
5	40	41	-3
6	114	117	-8
7	49	50	-1
8	71	66	8
9	5	6	0
10	26	2	15
11	58	41	27

0 2 1

0	293	294	-5
1	252	258	-23
2	604	623	-35
3	30	29	0
4	241	243	-7
5	87	87	0
6	-16	13	-16
7	143	148	-17
8	-24	10	-21
9	197	197	-1
10	22	7	9
11	18	6	6

1 2 1

0	123	122	6
1	299	310	-38
2	670	672	-2
3	408	416	-19
4	468	473	-10
5	330	335	-11
6	129	131	-6
7	45	41	7
8	87	84	8
9	29	8	18
10	19	10	5
11	36	23	14

2 2 1

0	25	26	-2
1	591	593	-4
2	573	581	-15
3	647	645	3
4	355	348	18
5	161	156	17
6	343	339	9
7	35	44	-18
8	46	44	3
9	75	71	8
10	37	23	16

3 2 1

0	814	808	8
1	213	216	-10
2	105	110	-21
3	46	41	11
4	56	52	9
5	291	282	25
6	25	25	1
7	51	49	3
8	9	5	1
9	134	123	25
10	30	28	2

4 2 1

0	569	557	24
1	135	136	-3
2	587	578	15
3	23	16	10
4	511	512	-3
5	321	319	5
6	203	201	4
7	3	28	-22
8	22	16	5
9	71	60	22
10	31	16	13

5 2 1

0	445	437	19
1	-12	13	-12
2	505	505	0
3	431	416	33
4	27	9	20
5	88	87	1
6	141	139	5
7	44	29	22
8	41	14	29
9	-18	15	-13

6 2 1

0	232	230	7
1	19	13	6
2	217	224	-23
3	173	175	-7
4	333	327	15
5	236	243	-19
6	412	413	-3
7	83	75	19
8	27	18	9
9	26	14	9

7 2 1

0	176	165	47
1	15	35	-37
2	15	23	-9
3	170	163	20
4	136	133	8
5	141	155	-40
6	57	70	-29
7	76	81	-11
8	98	92	14
9	22	25	-2

8 2 1

0	153	151	11
1	245	241	10
2	93	92	3
3	116	112	10
4	13	36	-31
5	29	32	-3
6	59	64	-10
7	12	22	-8
8	135	130	12

9 2 1

0	349	348	1
1	90	91	-3
2	158	154	12
3	171	175	-9
4	13	0	4
5	37	24	16
6	35	47	-19
7	139	135	10

10 2 1

0	156	158	-9
1	57	60	-8
2	209	208	1
3	44	39	8
4	13	27	-13
5	-29	2	-22
6	22	13	6

11 2 1

0	174	168	23
1	164	164	0
2	49	59	-20
3	-5	25	-16
4	-23	0	-14
5	-5	8	-2

12 2 1

0	31	34	-7
1	-17	9	-9
2	33	25	9
3	59	58	2
4	91	82	18

13 2 1

0	50	55	-14
1	41	38	4
2	40	42	-2
3	25	25	0

14 2 1

0	58	69	-31
1	-11	25	-16

-14 3 1

1	14	32	-17
2	67	64	6
3	56	40	25
4	24	6	11

-13 3 1

1	184	186	-5
2	21	17	3
3	36	36	0
4	34	22	13
5	18	8	5
6	37	32	6

-12 3 1

1	35	39	-7
2	82	84	-5
3	143	141	3
4	83	84	-4
5	37	27	13

6	28	20	2
7	41	28	16

-11 3 1

1	60	60	0
2	113	114	-3
3	-21	15	-18
4	63	63	0
5	31	39	-12
6	32	37	-7
7	68	55	23
8	19	17	1

-10 3 1

1	90	87	9
2	154	150	10
3	240	239	1
4	114	121	-18
5	84	95	-28
6	21	25	-4
7	77	69	17
8	96	89	14
9	-30	2	-28

-9 3 1

1	33	42	-19
2	80	89	-26
3	158	162	-11
4	37	28	13
5	47	54	-16
6	126	129	-8
7	75	73	5
8	56	55	0
9	-21	9	-12
10	106	96	20

-8 3 1

1	12	0	5
2	114	112	6
3	143	140	9
4	233	231	4
5	20	21	0
6	61	60	3
7	62	61	2
8	45	60	-32
9	56	58	-5
10	51	29	30

-7 3 1

1	-16	0	-10
2	125	130	-18
3	189	183	19
4	177	188	-33
5	84	79	13
6	151	147	10
7	164	167	-8
8	17	6	6
9	-4	16	-6
10	9	22	-9

-6 3 1

1	67	67	0
2	69	70	-3
3	251	241	28
4	89	89	-1
5	13	4	5
6	63	56	17
7	43	45	-3
8	-10	12	-7
9	99	91	18
10	52	36	23
11	35	33	2

-5 3 1

1	340	336	12
2	227	204	74
3	189	176	43
4	159	157	7
5	484	477	13
6	153	156	-10
7	93	101	-24
8	22	26	-4
9	105	96	22
10	85	79	14
11	58	69	-21

-4 3 1

1	133	135	-11
2	-1	5	-1
3	62	75	-49
4	198	208	-33
5	49	43	16
6	-17	8	-13
7	217	220	-8
8	32	34	-1
9	42	36	10
10	19	6	7
11	70	59	19

-3 3 1

1	-17	18	-22
2	451	461	-24
3	84	84	0
4	416	410	13
5	284	283	2
6	39	38	1
7	153	157	-10
8	14	15	-1
9	68	63	10
10	102	95	16
11	41	32	11

-2 3 1

1	519	514	10
2	327	319	25
3	404	404	0
4	179	177	8
5	351	347	11
6	74	76	-5
7	269	264	12
8	22	11	9
9	106	114	-22
10	85	71	29
11	41	19	23

-1 3 1

1	1101	1171	-75
2	1308	1342	-30
3	212	217	-18
4	135	137	-9
5	103	104	-6
6	179	179	0
7	48	47	1
8	75	68	17
9	33	44	-18
10	30	8	18
11	23	11	8

0 3 1

1	152	156	-20
2	477	503	-60
3	414	423	-22
4	496	504	-15
5	80	79	6
6	196	190	18
7	195	195	1
8	99	95	12
9	40	47	-12
10	77	70	16
11	77	65	22

1 3 1

0	525	545	-47
1	50	53	-8
2	185	197	-50
3	54	56	-4
4	555	565	-18
5	328	339	-28
6	98	98	-1
7	301	312	-29
8	81	83	-6
9	203	197	17
10	34	26	9
11	34	16	16

2 3 1

0	620	630	-20
1	539	541	-2
2	235	231	15
3	258	258	0
4	146	148	-5
5	94	95	-4
6	36	38	-3
7	154	160	-16
8	18	19	-5
9	41	45	-7
10	17	31	-14

3 3 1

0	595	599	-8
1	218	223	-19
2	228	229	-2
3	186	183	11
4	25	26	-2
5	133	138	-18
6	375	378	-6
7	88	95	-19
8	97	97	0
9	109	113	-9
10	56	49	12

4 3 1

0	58	58	-1
1	283	284	-4
2	23	19	5
3	275	263	35
4	278	280	-4
5	428	427	1
6	35	25	14
7	184	185	-4
8	89	89	0
9	108	98	22
10	-14	1	-4

5 3 1

0	-16	3	-16
1	114	108	23
2	80	84	-14
3	144	135	28
4	59	53	15
5	108	100	23
6	38	32	10
7	139	135	10
8	230	231	-3
9	98	95	7

6 3 1

0	241	244	-11
1	221	218	9
2	121	120	1
3	72	69	10
4	56	53	8
5	22	14	8
6	71	72	-2
7	158	165	-18
8	88	85	7
9	66	60	11

7 3 1

0	210	202	34
1	86	77	27
2	90	93	-10
3	171	167	14
4	112	120	-26
5	55	56	0
6	60	67	-17
7	127	134	-18
8	-16	24	-19

8 3 1

0	70	72	-9
1	23	23	0
2	151	150	4
3	30	15	17
4	84	77	16
5	43	47	-8
6	55	54	2
7	65	66	-3
8	115	119	-8

9 3 1

0	40	41	-3
1	60	66	-16
2	60	64	-10
3	59	53	12
4	138	146	-23
5	23	26	-3
6	50	55	-9
7	104	111	-16

10 3 1

0	120	123	-9
1	115	117	-8
2	41	49	-15
3	42	49	-13
4	40	38	3
5	-23	0	-13
6	-13	9	-6

11 3 1

0	98	95	10
1	151	144	16
2	25	23	2
3	7	32	-22
4	14	1	4
5	-15	9	-7

12 3 1

0	75	76	-4
1	-21	8	-13
2	11	7	1
3	24	33	-11
4	61	59	3

13 3 1

0	82	82	-1
1	11	34	-23

2	56	47	14
3	-20	15	-15

14 3 1

0	51	50	3
1	103	103	-1

-14 4 1

1	38	34	4
2	60	66	-11
3	22	28	-5
4	31	20	11

-13 4 1

1	92	94	-4
2	60	55	10
3	92	85	14
4	46	36	14
5	43	38	6
6	66	64	3

-12 4 1

1	81	69	26
2	129	125	9
3	29	37	-11
4	26	31	-6
5	14	12	1
6	21	3	9
7	67	60	13

-11 4 1

1	94	81	31
2	9	3	1
3	29	32	-3
4	123	130	-19
5	120	120	1
6	-25	10	-19
7	-5	11	-3
8	54	47	10

-10 4 1

1	85	86	-4
2	266	265	4
3	167	174	-18
4	25	13	12
5	133	135	-6
6	-27	4	-21
7	63	62	1
8	-16	22	-18
9	71	70	1

-9 4 1

1	276	270	16
2	109	108	0
3	180	178	6
4	109	112	-8
5	81	77	9
6	71	56	32
7	20	29	-10
8	-7	4	-1
9	22	13	6

-8 4 1

1	43	43	0
2	85	83	8
3	55	62	-17
4	7	4	1
5	87	89	-3
6	104	106	-5
7	171	170	3
8	94	84	23
9	11	1	2
10	6	7	0

-7 4 1

1	120	125	-17
2	241	226	44
3	93	91	5
4	164	165	-3
5	139	135	13
6	29	34	-7
7	175	175	0
8	190	183	18
9	24	32	-10
10	22	24	-1

-6 4 1

1	240	235	14
2	102	103	-3
3	511	497	26
4	21	23	-3
5	-13	5	-6
6	271	272	-3
7	222	221	3
8	46	41	9
9	147	143	10
10	26	15	9

-5 4 1

1	47	47	0
2	162	161	4
3	108	108	0
4	187	179	27
5	232	236	-12
6	-7	7	-3
7	137	136	1
8	12	17	-4
9	151	147	10
10	35	8	23
11	80	86	-13

-4 4 1

1	151	153	-8
2	628	619	15
3	444	440	9
4	125	123	7
5	62	54	21
6	34	27	12
7	86	84	5
8	28	5	18
9	31	26	7
10	21	24	-3
11	98	93	11

-3 4 1

1	152	149	13
2	304	304	0
3	579	580	-1
4	422	431	-21
5	254	252	8
6	73	74	-3
7	75	75	0
8	165	169	-11
9	57	64	-16
10	-13	0	-4
11	106	110	-9

-2 4 1

1	243	246	-11
2	132	130	8
3	419	422	-6
4	145	141	13
5	244	244	0
6	20	17	3
7	64	70	-15
8	46	34	20
9	28	29	-1
10	20	20	0
11	11	14	-1

-1 4 1

1	26	17	15
2	49	46	9
3	100	103	-12
4	272	269	10
5	399	398	4
6	15	18	-3
7	68	63	13
8	-17	16	-17
9	-25	2	-18
10	42	25	21
11	140	131	19

0 4 1

0	826	822	4
1	636	644	-13
2	10	1	3
3	176	178	-5
4	227	236	-31
5	49	47	4
6	84	86	-5
7	34	48	-30
8	29	28	0
9	32	28	5
10	52	40	18
11	110	108	5

1 4 1

0	45	48	-16
1	418	418	0
2	366	367	-1
3	360	356	10
4	250	255	-15
5	48	37	24
6	227	234	-20
7	152	143	25
8	75	78	-6
9	33	28	7
10	90	82	19

2 4 1

0	20	30	-25
1	15	26	-16
2	493	496	-7
3	54	55	0
4	13	19	-6
5	215	215	2
6	18	10	6
7	113	113	0
8	18	28	-11
9	57	62	-9
10	51	43	12

3 4 1

0	289	284	17
1	26	31	-9
2	309	307	4
3	30	37	-16
4	67	67	0
5	250	242	24
6	156	162	-18
7	66	62	10
8	94	95	-2
9	61	55	10
10	11	14	-1

4 4 1

0	125	122	19
1	34	37	-7
2	126	129	-14
3	24	30	-10
4	189	191	-3
5	140	143	-9
6	244	253	-24
7	115	112	7
8	196	200	-10
9	29	15	13
10	48	51	-3

5 4 1

0	155	151	17
1	201	194	22
2	206	199	20
3	145	131	45
4	74	69	14
5	29	35	-10
6	208	196	33
7	55	46	17
8	127	122	13
9	69	71	-3

6 4 1

0	325	324	3
1	260	258	6
2	147	151	-13
3	43	44	0
4	98	98	0
5	128	125	9
6	-24	9	-20
7	42	40	3
8	18	22	-3
9	55	50	7

7 4 1

0	272	272	0
1	125	123	9
2	131	131	0
3	81	90	-27
4	122	125	-8
5	23	32	-11
6	104	104	-1
7	103	107	-9
8	80	74	12

8 4 1

0	71	77	-23
1	49	51	-5
2	82	81	4
3	50	61	-27
4	146	146	0
5	102	106	-9
6	94	97	-7
7	95	97	-3
8	26	25	0

9 4 1

0	240	233	26
1	114	120	-17
2	36	35	2
3	60	62	-5
4	112	111	0
5	9	7	0
6	42	47	-7
7	39	24	18

10 4 1

0	79	86	-26
1	26	24	1
2	89	84	12
3	99	100	0
4	22	35	-16
5	40	31	11
6	23	14	6

11 4 1

0	44	39	13
1	74	74	0
2	26	38	-17
3	50	54	-6
4	-17	0	-7
5	19	18	0

12 4 1

0	207	209	-5
1	171	179	-19
2	73	77	-8
3	24	32	-8
4	-27	0	-17

13 4 1

0	12	23	-12
1	19	36	-20
2	42	16	28
3	-35	13	-24

14 4 1

0	-12	6	-6

-14 5 1

1	20	2	7
2	7	27	-14
3	-23	13	-16

-13 5 1

1	108	102	13
2	-18	5	-8
3	-8	0	-1
4	25	24	0
5	-35	9	-35
6	-21	19	-18

-12 5 1

1	42	52	-18
2	95	99	-11
3	63	70	-14
4	12	5	2
5	24	17	5
6	39	43	-6
7	18	3	6

-11 5 1

1	23	22	1
2	2	16	-6
3	83	84	0
4	74	71	8
5	129	128	2
6	-23	15	-18
7	5	9	-1
8	36	38	-2

-10 5 1

1	135	129	16
2	165	166	-1
3	30	25	6
4	-32	17	-40
5	21	1	10
6	-5	20	-10
7	10	8	1
8	-16	2	-6
9	80	77	6

-9 5 1

1	15	12	2
2	21	19	1
3	42	37	10
4	62	63	-2
5	-6	26	-19
6	73	74	-2
7	81	72	19
8	-20	11	-12
9	43	34	12

-8 5 1

1	199	198	1
2	169	171	-3
3	113	101	34
4	235	229	14
5	65	68	-9
6	14	10	2
7	18	14	2
8	71	73	-4
9	-8	26	-16
10	27	14	9

-7 5 1

1	79	73	17
2	111	107	12
3	106	99	20
4	132	140	-26
5	111	102	25
6	52	48	8
7	109	111	-5
8	50	54	-8
9	28	19	9
10	31	17	13

-6 5 1

1	297	280	47
2	104	104	0
3	102	102	0
4	17	11	5
5	155	154	1
6	135	135	-1
7	62	63	-2
8	79	73	12
9	44	44	0
10	9	10	0

-5 5 1

1	322	322	0
2	290	285	15
3	94	99	-18
4	239	236	8
5	50	50	0
6	66	70	-11
7	37	32	8
8	35	32	4
9	19	11	5
10	19	7	6

-4 5 1

1	98	103	-15
2	24	18	10
3	168	160	24
4	114	111	10
5	165	165	0
6	154	154	0
7	24	2	15
8	99	94	12
9	74	80	-15
10	37	22	17
11	89	80	19

-3 5 1

1	165	157	28
2	-10	27	-33
3	145	141	14
4	231	234	-9
5	166	167	-3
6	106	107	-4
7	17	31	-18
8	38	33	8
9	87	85	4
10	32	5	20
11	25	3	12

-2 5 1

1	265	266	-4
2	126	127	-4
3	39	35	10
4	457	462	-11
5	31	15	23
6	121	117	13
7	33	36	-5
8	64	69	-10
9	36	46	-18
10	106	104	4
11	46	31	18

-1 5 1

1	245	247	-7
2	28	48	-53
3	487	486	0
4	219	221	-9
5	-13	3	-7
6	104	102	5
7	66	57	22
8	113	115	-7
9	10	15	-3
10	113	99	30
11	36	28	9

0 5 1

1	81	84	-13
2	48	49	-3
3	205	207	-7
4	428	430	-3
5	34	27	14
6	128	125	10
7	213	220	-18
8	56	62	-12
9	18	16	1
10	81	73	16

1 5 1

0	296	296	-1
1	250	243	17
2	221	222	-3
3	253	249	12
4	165	158	24
5	247	257	-32
6	59	55	11
7	52	46	13
8	73	70	7
9	37	48	-17
10	41	42	-1

2 5 1

0	-7	11	-9
1	493	491	3
2	34	35	-2
3	301	304	-9
4	102	105	-13
5	147	154	-22
6	55	51	10
7	104	99	13
8	139	135	9
9	51	35	23
10	108	104	10

3 5 1

0	30	27	10
1	78	82	-15
2	79	80	-4
3	500	492	17
4	150	154	-14
5	183	188	-14
6	-19	2	-12
7	139	145	-15
8	14	14	0
9	23	4	11
10	61	56	8

4 5 1

0	-5	0	-1
1	262	255	20
2	41	50	-25
3	57	65	-22
4	157	160	-12
5	91	86	14
6	31	20	14
7	-4	9	-2
8	-12	8	-5
9	49	46	6

5 5 1

0	205	200	20
1	33	42	-20
2	196	196	0
3	35	31	7
4	105	110	-17
5	200	200	1
6	294	305	-28
7	14	5	4
8	112	117	-12
9	37	49	-19

6 5 1

0	33	38	-16
1	288	276	33
2	36	39	-5
3	20	20	0
4	110	119	-29
5	232	228	10
6	36	22	18
7	92	86	12
8	66	59	13
9	21	13	5

7 5 1

0	46	51	-19
1	117	121	-12
2	16	5	7
3	33	33	1
4	298	297	3
5	31	41	-16
6	79	76	8
7	-16	4	-6
8	76	74	4

8 5 1

0	57	61	-15
1	110	105	14
2	149	151	-7
3	8	22	-11
4	80	88	-21
5	68	77	-20
6	88	87	1
7	75	71	7

9 5 1

0	49	54	-15
1	131	138	-19
2	160	160	1
3	47	50	-5
4	58	67	-20
5	64	59	9
6	43	50	-12
7	31	28	3

10 5 1

0	110	111	-3
1	127	126	3
2	230	230	0
3	67	66	3
4	-6	13	-5
5	17	25	-6
6	-25	2	-15

11 5 1

0	181	184	-12
1	132	125	19
2	105	101	9
3	32	34	-2
4	-6	20	-10
5	-14	8	-6

12 5 1

0	33	32	2
1	46	39	10
2	19	22	-2
3	14	12	1
4	-16	8	-7

13 5 1

0	45	45	-1
1	80	77	5
2	-9	27	-18

-13 6 1

1	64	62	3
2	107	118	-26
3	-13	13	-7
4	74	75	-2
5	14	14	0

-12 6 1

1	89	90	-3
2	92	93	-1
3	49	43	9
4	30	25	5
5	63	66	-6
6	35	33	2
7	70	69	0

-11 6 1

1	54	48	10
2	-4	22	-12
3	213	211	4
4	26	39	-18
5	114	114	0
6	64	62	4
7	21	21	0
8	-11	11	-5

-10 6 1

1	44	42	4
2	21	22	-1
3	-24	8	-19
4	132	139	-20
5	-16	6	-7
6	42	53	-19
7	122	127	-11
8	31	32	0

-9 6 1

1	41	33	12
2	25	40	-25
3	86	92	-15
4	83	84	-3
5	162	168	-14
6	42	37	8
7	92	101	-22
8	52	48	6
9	34	20	13

-8 6 1

1	32	36	-7
2	39	34	8
3	121	125	-10
4	-6	15	-7
5	-19	7	-12
6	89	99	-27
7	99	100	-1
8	48	43	8
9	59	63	-6

-7 6 1

1	30	29	2
2	27	32	-7
3	133	132	2
4	67	74	-19
5	137	136	1
6	90	91	0
7	162	166	-12
8	110	110	0
9	53	54	-1
10	34	44	-14

-6 6 1

1	-20	8	-19
2	317	319	-5
3	49	46	7
4	-9	3	-3
5	119	115	13
6	120	120	0
7	163	159	10
8	128	134	-17
9	17	15	1
10	35	50	-23

-5 6 1

1	122	124	-5
2	43	42	2
3	-20	3	-16
4	1	16	-9
5	21	9	11
6	45	51	-12
7	158	162	-10
8	162	160	5
9	151	150	4
10	-28	7	-21

-4 6 1

1	78	75	10
2	-4	5	-1
3	91	99	-30
4	115	121	-20
5	83	85	-8
6	88	89	-3
7	15	13	1
8	97	105	-21
9	94	90	10
10	43	44	-1

-3 6 1

1	212	206	19
2	94	85	30
3	39	46	-20
4	-9	2	-3
5	33	0	33
6	88	86	4
7	29	37	-13
8	-18	9	-11
9	22	34	-14
10	48	42	8

-2 6 1

1	458	425	58
2	98	94	15
3	472	467	10
4	38	27	23
5	-23	9	-26
6	64	69	-12
7	64	65	-1
8	127	132	-14
9	33	25	9
10	81	72	18

-1 6 1

1	101	97	15
2	142	143	-5
3	79	84	-18
4	-14	2	-7
5	71	78	-24
6	185	186	0
7	78	73	13
8	38	38	0
9	14	0	4
10	96	87	20

0 6 1

0	271	270	3
1	170	165	21
2	134	137	-12
3	58	53	15
4	183	186	-10
5	109	104	13
6	42	25	29
7	54	61	-16
8	165	165	0
9	54	51	6
10	137	136	4

1 6 1

0	61	54	32
1	499	490	16
2	163	159	15
3	64	56	24
4	-18	2	-14
5	25	19	9
6	147	152	-14
7	36	33	5
8	39	33	9
9	72	79	-15
10	-16	15	-11

2 6 1

0	124	125	-9
1	106	104	7
2	326	325	1
3	149	155	-19
4	65	57	22
5	57	62	-12
6	23	26	-3
7	26	8	15
8	138	147	-23
9	27	18	8
10	16	31	-14

3 6 1

0	333	327	22
1	384	380	9
2	284	278	17
3	17	18	-1
4	210	207	10
5	107	108	-2
6	338	345	-17
7	152	157	-16
8	177	183	-17
9	-7	17	-8
10	63	62	3

4 6 1

0	155	151	16
1	312	292	42
2	65	63	6
3	78	78	-1
4	-22	17	-28
5	19	9	8
6	130	130	1
7	59	55	7
8	79	80	-2
9	35	10	22

5 6 1

0	142	137	24
1	365	366	-1
2	233	228	14
3	20	20	0
4	231	228	7
5	73	81	-22
6	185	186	-2
7	29	23	7
8	40	30	12
9	43	51	-13

6 6 1

0	199	195	16
1	100	103	-11
2	91	90	1
3	71	73	-5
4	96	95	1
5	38	30	12
6	154	153	3
7	18	34	-19
8	40	33	9

7 6 1

0	58	60	-9
1	343	341	5
2	60	63	-8
3	31	14	19
4	62	58	8
5	-22	1	-13
6	46	49	-5
7	77	74	7

8	20	16	3

8 6 1

0	217	224	-28
1	120	115	13
2	-3	13	-5
3	112	107	11
4	58	63	-11
5	13	9	2
6	89	83	13
7	-6	4	-1

9 6 1

0	159	160	-5
1	11	5	2
2	6	6	0
3	26	27	-1
4	70	63	15
5	111	115	-10
6	-12	2	-3
7	44	35	12

10 6 1

0	19	19	0
1	52	49	4
2	41	30	16
3	222	230	-21
4	47	44	5
5	38	28	12
6	20	8	6

11 6 1

0	82	86	-14
1	34	20	16
2	69	72	-6
3	98	96	4
4	13	20	-5
5	38	32	7

12 6 1

0	125	123	6
1	42	29	17
2	53	51	4
3	36	42	-9

13 6 1

0	3	25	-19
1	31	42	-16
2	-20	8	-11

-13 7 1

1	36	34	2
2	26	0	13
3	39	38	0
4	57	69	-24

-12 7 1

1	12	8	1
2	66	64	5
3	36	20	17
4	-15	3	-5
5	22	27	-4
6	23	23	0

-11 7 1

1	69	69	0
2	11	10	0
3	-11	16	-10
4	63	63	0
5	-25	4	-16
6	31	40	-13
7	17	4	5

-10 7 1

1	-27	0	-20
2	12	26	-12
3	50	57	-14
4	36	40	-7
5	128	120	21
6	59	64	-11
7	-17	15	-12
8	-20	9	-11

-9 7 1

1	177	185	-22
2	27	33	-9
3	119	131	-36
4	-14	19	-15
5	-7	11	-4
6	54	65	-25
7	-8	11	-4
8	40	31	11
9	64	61	5

-8 7 1

1	47	44	4
2	113	117	-11
3	55	54	1
4	120	126	-16
5	106	107	-5
6	70	81	-29
7	-14	26	-22
8	85	95	-22
9	114	94	41

-7 7 1

1	81	83	-6
2	48	50	-3
3	61	68	-18
4	44	44	-1
5	87	90	-8
6	27	21	7
7	55	73	-43
8	-19	6	-9
9	52	48	6

-6 7 1

1	110	106	11
2	47	43	9
3	54	46	19
4	-14	1	-6
5	45	48	-6
6	75	79	-10
7	166	161	12
8	113	116	-8
9	17	9	4
10	25	8	11

-5 7 1

1	81	76	14
2	114	112	6
3	120	119	1
4	185	191	-17
5	-19	4	-13
6	180	178	4
7	74	68	14
8	78	79	-2
9	56	40	27
10	-9	0	-1

-4 7 1

1	73	78	-17
2	151	154	-10
3	71	76	-16
4	180	184	-11
5	-5	16	-9
6	150	151	-2
7	126	124	6
8	51	48	5
9	29	26	3
10	-18	3	-7

-3 7 1

1	305	293	33
2	50	55	-16
3	258	252	16
4	80	82	-5
5	92	92	0
6	120	119	2
7	32	37	-9
8	-16	13	-12
9	21	28	-7
10	83	72	21

-2 7 1

1	-17	10	-16
2	94	90	15
3	45	54	-25
4	220	227	-21
5	40	31	17
6	109	113	-12
7	155	153	3
8	57	62	-12
9	130	128	5
10	75	73	3

-1 7 1

1	36	28	17
2	435	435	0
3	77	74	10
4	132	128	12
5	100	105	-15
6	102	98	12
7	21	21	0
8	-19	9	-12
9	34	25	10
10	81	78	7

0 7 1

1	276	276	0
2	208	206	6
3	371	368	6
4	87	82	13
5	78	81	-9
6	154	160	-18
7	177	172	13
8	-20	3	-12
9	100	95	13
10	100	88	24

1 7 1

0	785	765	31
1	130	136	-21
2	567	569	-3
3	39	46	-17
4	155	154	3
5	49	49	0
6	14	1	5
7	17	20	-3
8	102	106	-11
9	27	21	6
10	48	49	0

2 7 1

0	130	124	27
1	211	202	30
2	168	163	15
3	60	54	14
4	192	186	19
5	75	76	-2
6	52	56	-9
7	71	69	5
8	32	37	-6
9	-14	6	-6
10	46	48	-3

3 7 1

0	129	132	-12
1	254	255	-3
2	270	260	29
3	22	32	-18
4	135	140	-18
5	128	123	16
6	102	100	6
7	175	174	4
8	41	22	24
9	109	117	-18

4 7 1

0	116	115	7
1	368	355	32
2	422	421	3
3	57	49	19
4	93	95	-7
5	85	89	-14
6	56	54	3
7	52	52	1
8	65	63	4
9	32	34	-2

5 7 1

0	36	41	-16
1	201	201	0
2	45	41	9
3	170	174	-13
4	21	16	6
5	142	143	-4
6	53	55	-4
7	21	19	2
8	33	35	-2
9	74	68	11

6 7 1

0	21	25	-7
1	146	136	29
2	278	276	5
3	233	232	4
4	112	115	-9
5	185	181	12
6	30	39	-13
7	74	74	0
8	47	44	4

7 7 1

0	63	63	0
1	113	111	6
2	32	30	2
3	361	358	8
4	-22	3	-14
5	106	98	18
6	64	67	-5
7	23	17	5
8	35	33	2

8 7 1

0	16	17	-1
1	118	122	-12
2	28	15	14
3	118	119	-2
4	60	64	-8
5	-23	8	-15
6	19	17	1
7	22	31	-9

9 7 1

0	159	165	-20
1	84	81	7
2	43	41	3
3	183	174	21
4	132	124	19
5	206	211	-12
6	24	30	-6

10 7 1

0	49	53	-11
1	36	23	16
2	156	154	4
3	146	143	7
4	20	5	8
5	125	129	-7

11 7 1

0	12	8	3
1	182	183	-2
2	26	20	5
3	23	2	11
4	58	53	8

12 7 1

0	52	49	8
1	37	37	0
2	-26	20	-26
3	87	85	2

13 7 1

0	108	105	8
1	-4	20	-9

-13 8 1

1	45	41	4
2	18	1	6
3	77	72	9

-12 8 1

1	55	53	3
2	13	13	0
3	12	17	-2
4	43	46	-5
5	62	52	16

-11 8 1

1	107	107	0
2	77	79	-4
3	92	95	-8
4	38	40	-2
5	70	72	-4
6	67	66	1
7	48	54	-11

-10 8 1

1	-11	10	-5
2	84	83	3
3	45	45	0
4	-14	10	-7
5	33	42	-12
6	39	34	7
7	43	47	-6
8	60	45	24

-9 8 1

1	116	117	-1
2	53	61	-17
3	8	8	0
4	95	103	-21
5	85	100	-40
6	-25	15	-23
7	19	5	7
8	33	29	4

-8 8 1

1	23	22	1
2	34	50	-32
3	46	46	0
4	28	27	1
5	86	95	-21
6	26	29	-3
7	35	46	-18
8	20	31	-12
9	13	4	3

-7 8 1

1	290	285	14
2	188	183	13
3	51	58	-16
4	162	160	4
5	17	19	-1
6	44	58	-30
7	69	86	-43
8	28	31	-4
9	13	22	-6

-6 8 1

1	40	39	2
2	37	28	16
3	8	6	0
4	92	95	-8
5	275	279	-12
6	147	157	-28
7	50	46	8
8	23	34	-13
9	47	42	8

-5 8 1

1	177	168	28
2	72	72	-1
3	26	28	-4
4	115	114	0
5	131	132	-1
6	153	152	2
7	96	106	-27
8	42	47	-8
9	170	167	7
10	-11	7	-4

-4 8 1

1	30	41	-23
2	73	75	-4
3	151	149	5
4	26	44	-37
5	49	49	-1
6	117	114	8
7	98	104	-17
8	49	59	-20
9	6	16	-5
10	75	66	16

-3 8 1

1	529	514	28
2	179	183	-13
3	120	130	-35
4	214	208	17
5	24	26	-3
6	46	41	11
7	60	63	-6
8	47	50	-5
9	102	93	20
10	58	68	-18

-2 8 1

1	90	82	27
2	91	93	-5
3	83	90	-25
4	130	131	-5
5	233	226	20
6	102	111	-28
7	-20	8	-14
8	120	110	24
9	184	184	0
10	14	1	4

-1 8 1

1	50	54	-12
2	402	392	22
3	63	65	-4
4	-11	9	-7
5	322	318	10
6	92	88	8
7	65	65	0
8	32	27	7
9	110	104	14
10	34	27	8

0 8 1

0	9	23	-18
1	-12	2	-6
2	497	493	8
3	103	100	12
4	86	87	-5
5	24	35	-18
6	121	126	-12
7	24	20	4
8	40	45	-8
9	17	0	6
10	98	91	14

1 8 1

0	264	263	6
1	99	103	-12
2	142	136	21
3	180	188	-26
4	220	210	29
5	209	213	-13
6	43	40	5
7	-22	13	-20
8	12	6	2
9	99	91	16
10	122	119	6

2 8 1

0	416	403	35
1	202	185	56
2	292	285	18
3	62	61	1
4	180	171	26
5	117	120	-9
6	54	54	0
7	48	55	-14
8	93	85	17
9	50	46	6

3 8 1

0	53	57	-15
1	61	56	15
2	432	431	3
3	235	238	-7
4	24	34	-17
5	64	59	12
6	44	44	0
7	28	14	14
8	41	44	-4
9	50	46	7

4 8 1

0	18	11	10
1	149	146	7
2	13	13	0
3	150	151	-2
4	324	326	-4
5	44	52	-17
6	-26	19	-31
7	105	119	-37
8	-21	1	-11
9	26	17	8

5 8 1

0	165	165	0
1	173	167	18
2	16	26	-13
3	144	141	11
4	214	212	4
5	139	145	-17
6	33	32	0
7	30	34	-4
8	49	51	-4

6 8 1

0	165	160	19
1	195	195	1
2	46	58	-28
3	117	120	-9
4	73	71	3
5	114	109	11
6	105	98	16
7	24	21	2
8	26	26	0

7 8 1

0	138	134	16
1	58	59	-1
2	-14	11	-10
3	257	251	14
4	129	135	-17
5	36	44	-14
6	60	65	-10
7	-8	16	-7

8 8 1

0	76	77	-6
1	122	120	4
2	234	230	10
3	33	37	-6
4	50	45	9
5	58	52	10
6	63	52	21
7	25	6	12

9 8 1

0	70	68	5

1	117	125	-23
2	89	96	-19
3	86	82	10
4	-8	5	-2
5	65	59	11
6	-9	8	-3

10 8 1

0	49	47	5
1	200	201	-3
2	33	24	10
3	157	159	-6
4	103	107	-10
5	46	40	8

11 8 1

0	99	99	0
1	19	7	7
2	27	32	-5
3	83	82	2
4	56	56	0

12 8 1

0	28	32	-6
1	-28	10	-22
2	88	87	3

13 8 1

0	-23	7	-19

-12 9 1

1	142	141	0
2	89	77	23
3	46	54	-13
4	61	56	9
5	10	3	1

-11 9 1

1	89	80	18
2	60	64	-6
3	11	22	-8
4	49	55	-11
5	41	28	17
6	85	78	12

-10 9 1

1	139	132	18
2	65	68	-6
3	133	131	4
4	43	45	-3
5	-22	11	-15
6	26	8	13
7	53	52	2

-9 9 1

1	79	84	-13
2	16	6	6
3	118	122	-12
4	60	54	11
5	94	106	-32
6	78	71	16
7	86	84	4
8	81	85	-8

-8 9 1

1	90	90	0
2	-18	8	-12
3	194	198	-11
4	-15	12	-10
5	123	122	1
6	77	81	-10
7	-18	9	-10
8	16	20	-2

-7 9 1

1	111	115	-11
2	50	52	-3
3	200	203	-8
4	15	0	6
5	125	130	-15
6	-21	10	-14
7	-31	23	-41
8	87	81	13
9	31	26	5

-6 9 1

1	36	40	-8
2	103	104	-3
3	-14	4	-6
4	7	20	-9
5	305	308	-8
6	131	130	2
7	61	56	8
8	19	7	6
9	39	48	-15

-5 9 1

1	46	50	-10
2	10	16	-4
3	21	1	13
4	177	180	-8
5	221	222	-4
6	119	118	3
7	60	60	0
8	58	57	3
9	14	10	1

-4 9 1

1	63	62	1
2	223	225	-5
3	136	141	-15
4	142	138	11
5	20	20	0
6	156	154	6
7	186	198	-33
8	46	49	-4
9	28	1	16

-3 9 1

1	193	194	-2
2	134	139	-15
3	112	113	-5
4	121	125	-10
5	99	98	4
6	154	154	0
7	42	34	11
8	-8	15	-6
9	112	104	16
10	47	31	20

-2 9 1

1	44	27	35
2	123	127	-11
3	54	55	-2
4	125	124	1
5	34	35	0
6	56	56	0
7	33	39	-10
8	45	41	5
9	76	69	12
10	80	71	18

-1 9 1

1	160	161	-5
2	124	118	18
3	203	204	-3
4	57	59	-5
5	-24	10	-23
6	75	72	7
7	195	196	-3
8	66	62	7
9	41	51	-18
10	77	63	25

0 9 1

1	52	56	-9
2	130	130	0
3	288	286	4
4	273	271	7
5	-9	6	-4
6	19	0	9
7	61	50	23
8	187	182	12
9	-21	0	-11

1 9 1

0	32	30	7
1	256	257	-1
2	38	43	-12
3	202	199	10
4	114	115	-4
5	164	159	12
6	15	2	6
7	-14	20	-17
8	157	157	0
9	86	92	-14

2 9 1

0	77	79	-6
1	156	143	43
2	82	89	-24
3	21	26	-7
4	185	193	-23
5	84	78	16
6	99	110	-31
7	132	129	5
8	150	141	20
9	161	153	17

3 9 1

0	36	30	15
1	-12	0	-5
2	88	82	17
3	124	127	-10
4	272	271	2
5	34	41	-12
6	143	146	-10
7	62	67	-11
8	30	22	9
9	44	27	21

4 9 1

0	169	167	9
1	111	113	-7
2	232	226	16
3	86	91	-12
4	155	152	9
5	139	142	-7
6	-17	3	-8
7	103	107	-9
8	27	10	13

5 9 1

0	173	176	-13
1	52	56	-9
2	10	21	-10
3	61	64	-8
4	49	61	-28
5	82	86	-9
6	133	131	3
7	41	28	17
8	45	51	-9

6 9 1

0	263	258	15
1	-27	20	-40
2	207	197	27
3	17	5	7
4	133	137	-12
5	51	60	-19
6	26	18	7
7	-10	7	-3
8	8	16	-4

7 9 1

0	98	102	-18
1	25	29	-7
2	-16	16	-15
3	24	13	9
4	47	44	4
5	67	75	-17
6	10	19	-5
7	66	69	-4

8 9 1

0	195	197	-9
1	125	118	18
2	37	36	1
3	7	12	-2
4	9	20	-7
5	13	27	-12
6	60	61	-1

9 9 1

0	84	76	26
1	147	148	-1
2	80	80	0
3	24	24	0
4	73	83	-22
5	-22	0	-12

10 9 1

0	-21	1	-16
1	22	5	10
2	45	40	7
3	77	73	9
4	-29	21	-32

11 9 1

0	57	51	15
1	59	56	5
2	138	137	3
3	122	124	-3

12 9 1

0	29	27	1
1	63	62	3
2	64	72	-11

-12 10 1

1	82	79	6
2	108	105	6

3	-14	28	-21

-11 10 1

1	168	161	16
2	54	64	-19
3	46	50	-7
4	-30	2	-23
5	-22	0	-11

-10 10 1

1	55	60	-9
2	86	91	-11
3	27	2	15
4	58	51	12
5	53	38	22
6	55	51	6

-9 10 1

1	130	132	-6
2	183	189	-18
3	269	275	-15
4	55	48	12
5	-10	1	-2
6	46	49	-4
7	28	14	11

-8 10 1

1	31	34	-4
2	131	136	-12
3	104	107	-6
4	34	39	-9
5	100	100	0
6	60	63	-4
7	42	44	-3
8	-21	3	-10

-7 10 1

1	101	110	-24
2	147	143	10
3	257	262	-12
4	97	94	7
5	85	88	-6
6	67	74	-16
7	48	45	5
8	16	28	-11

-6 10 1

1	212	213	-1
2	380	377	5
3	112	113	-3
4	95	100	-14
5	138	143	-14
6	47	54	-14
7	26	28	-2
8	6	15	-4
9	12	20	-5

-5 10 1

1	92	94	-4
2	-13	24	-23
3	23	3	13
4	30	6	22
5	34	9	25
6	-18	13	-13
7	143	147	-8
8	12	24	-9
9	3	12	-2

-4 10 1

1	80	81	-3
2	211	217	-16
3	187	187	1
4	359	359	0
5	245	248	-6
6	85	83	4
7	20	5	9
8	12	12	0
9	27	23	4

-3 10 1

1	44	39	11
2	253	246	17
3	-12	16	-14
4	125	129	-13
5	158	163	-15
6	100	101	-1
7	131	139	-21
8	71	72	-1
9	32	9	18

-2 10 1

1	133	132	2
2	239	229	28
3	92	96	-9
4	16	11	3
5	24	23	0
6	92	98	-14
7	43	47	-8
8	100	101	-1
9	59	58	2

-1 10 1

1	20	24	-5
2	227	224	10
3	222	213	27
4	298	302	-12
5	82	86	-9
6	41	46	-10
7	324	328	-11
8	104	102	3
9	10	16	-3

0 10 1

0	311	304	18
1	213	204	27
2	234	222	34
3	20	13	6
4	140	134	17
5	73	69	8
6	110	116	-15
7	142	140	4
8	105	108	-6
9	29	22	7

1 10 1

0	469	459	24
1	257	254	9
2	126	123	8
3	148	156	-24
4	140	142	-8
5	-16	10	-11
6	74	71	6
7	65	64	1
8	115	118	-8
9	15	12	1

2 10 1

0	535	519	33
1	57	61	-10
2	135	133	7
3	79	82	-9
4	274	274	1
5	139	134	15
6	112	118	-17
7	170	171	-2
8	80	74	13
9	97	97	0

3 10 1

0	79	76	12
1	46	53	-17
2	151	156	-16
3	141	143	-6
4	24	21	3
5	36	38	-2
6	40	42	-3
7	24	9	10
8	47	57	-18

4 10 1

0	22	12	14
1	64	56	21
2	131	124	18
3	51	53	-5
4	222	220	5
5	27	35	-11
6	75	73	5
7	64	60	6
8	-24	26	-30

5 10 1

0	234	234	-3
1	90	88	6
2	89	90	-2
3	239	241	-6
4	130	131	-1
5	34	30	5
6	-20	2	-10
7	32	26	7
8	34	16	16

6 10 1

0	23	18	7
1	58	57	2
2	77	75	5
3	33	45	-23
4	18	22	-3
5	44	55	-22
6	130	127	7
7	39	34	6

7 10 1

0	48	48	0
1	73	77	-10
2	113	115	-6
3	5	19	-8
4	69	67	4
5	-7	6	-2
6	-22	13	-16

8 10 1

0	128	132	-13
1	255	250	10
2	80	74	15
3	81	81	0
4	46	43	5
5	49	46	6
6	-24	10	-16

9 10 1

0	200	194	19
1	107	103	9
2	18	23	-4
3	68	68	0
4	59	48	18
5	-32	22	-38

10 10 1

0	69	69	0
1	23	6	11
2	111	108	6
3	33	32	2
4	36	45	-13

11 10 1

0	17	4	8
1	137	146	-20
2	43	44	0

12 10 1

0	52	47	11

-11 11 1

1	32	16	15
2	9	5	1
3	59	65	-12
4	-15	1	-5

-10 11 1

1	209	210	-1
2	94	89	11
3	20	7	7
4	28	23	4
5	15	26	-9
6	18	14	2

-9 11 1

1	21	30	-10
2	105	97	18
3	43	48	-7
4	27	39	-18
5	-11	3	-3
6	32	34	-2
7	46	44	2

-8 11 1

1	93	92	1
2	31	20	13
3	209	215	-14
4	39	42	-5
5	-21	13	-15
6	131	129	3
7	39	46	-10

-7 11 1

1	215	212	6
2	48	43	8
3	45	48	-6
4	20	1	9
5	197	197	0
6	83	88	-13
7	12	3	3
8	7	9	0

-6 11 1

1	51	44	14
2	66	58	18
3	131	128	9
4	205	210	-13
5	107	101	13
6	105	98	16
7	32	34	-2

8	-13	29	-23

-5 11 1

1	63	59	9
2	131	136	-13
3	458	457	1
4	297	305	-20
5	184	188	-9
6	20	26	-6
7	141	142	-3
8	35	40	-7

-4 11 1

1	100	91	23
2	268	260	20
3	165	163	5
4	89	78	29
5	52	39	23
6	65	62	5
7	77	71	11
8	23	14	6
9	63	62	1

-3 11 1

1	171	170	3
2	268	260	20
3	152	149	11
4	270	267	8
5	412	416	-9
6	25	26	0
7	38	36	2
8	36	31	6
9	40	38	2

-2 11 1

1	58	54	12
2	36	36	0
3	267	263	10
4	150	141	25
5	363	361	3
6	89	95	-14
7	65	69	-9
8	9	24	-11
9	-17	19	-14

-1 11 1

1	49	50	-2
2	48	51	-8
3	153	145	24
4	10	12	-1
5	52	55	-7
6	180	184	-11
7	100	107	-17
8	-26	22	-29
9	83	80	6

0 11 1

1	130	127	9
2	94	99	-13
3	138	142	-13
4	220	217	9
5	393	387	14
6	34	22	14
7	99	91	19
8	39	19	22
9	39	27	14

1 11 1

0	89	89	0
1	89	93	-12
2	31	42	-23
3	49	59	-24
4	135	134	1
5	125	129	-9
6	21	25	-3
7	80	71	18
8	71	76	-9
9	48	41	7

2 11 1

0	102	97	18
1	106	106	0
2	55	60	-11
3	50	54	-10
4	216	219	-8
5	98	97	2
6	120	123	-6
7	67	69	-4
8	55	37	26

3 11 1

0	69	74	-19
1	52	54	-5
2	44	53	-21
3	-10	11	-6
4	42	46	-8
5	166	163	9
6	90	87	6
7	173	173	0
8	-9	12	-5

4 11 1

0	87	85	10
1	-10	14	-9
2	121	121	0
3	17	9	5
4	27	14	13
5	60	61	-1
6	53	46	12
7	113	108	11
8	74	70	7

5 11 1

0	46	60	-47
1	19	28	-11
2	220	218	6
3	13	23	-9
4	60	74	-35
5	19	15	3
6	61	55	10
7	46	34	16

6 11 1

0	104	102	5
1	63	57	13
2	124	119	13
3	130	132	-4
4	53	54	0
5	10	2	2
6	47	57	-18
7	54	49	8

7 11 1

0	174	170	14
1	40	44	-6
2	49	42	12
3	25	33	-10
4	24	22	1
5	-22	1	-12
6	19	3	7

8 11 1

0	-15	15	-18
1	36	50	-25
2	95	104	-23
3	-15	14	-10
4	-30	23	-37
5	12	34	-21

9 11 1

0	55	50	14
1	30	10	16
2	32	37	-8
3	8	3	1
4	-22	4	-11

10 11 1

0	93	83	30
1	-27	8	-20
2	14	5	3
3	34	38	-5

11 11 1

0	-11	10	-7
1	51	50	1

-11 12 1

1	29	27	2
2	27	20	6
3	89	83	11

-10 12 1

1	83	83	0
2	96	101	-11
3	20	10	6
4	25	30	-5
5	-8	39	-34

-9 12 1

1	-12	11	-6
2	92	97	-12
3	19	13	4
4	45	40	7
5	125	117	18
6	34	41	-9

-8 12 1

1	158	164	-16
2	-14	2	-5
3	94	101	-16
4	-26	14	-23
5	44	27	22
6	46	39	11
7	23	24	0

-7 12 1

1	287	279	20
2	57	59	-3
3	93	95	-5
4	183	182	2
5	99	102	-6
6	26	18	7
7	19	17	1

-6 12 1

1	33	23	12
2	238	232	13
3	28	34	-8
4	20	15	4
5	95	95	-1
6	-20	6	-11
7	48	51	-5
8	17	2	5

-5 12 1

1	285	290	-13
2	144	144	-1
3	221	219	6
4	35	7	26
5	58	55	6
6	80	88	-18
7	151	154	-7
8	72	65	12

-4 12 1

1	106	96	27
2	122	116	18
3	32	15	20
4	170	173	-8
5	120	115	11
6	23	19	3
7	39	31	10
8	32	39	-9

-3 12 1

1	30	18	15
2	343	340	5
3	140	137	9
4	62	64	-4
5	72	61	22
6	109	109	1
7	123	118	15
8	82	71	21

-2 12 1

1	163	162	2
2	315	320	-12
3	325	330	-11
4	74	64	24
5	137	132	14
6	119	127	-21
7	58	58	0
8	60	61	-2

-1 12 1

1	28	25	4
2	43	40	5
3	104	117	-41
4	172	180	-23
5	41	40	1
6	75	68	16
7	70	67	6
8	51	46	7

0 12 1

0	-8	17	-11
1	99	106	-23
2	251	248	8
3	165	163	5
4	58	55	7
5	47	46	1
6	157	167	-28
7	179	173	16
8	71	70	3

1 12 1

0	-22	8	-25
1	33	34	0
2	244	240	11
3	57	58	1
4	-9	2	-2
5	213	205	20

6	224	234	-25
7	110	103	16
8	55	40	22

2 12 1

0	18	29	-20
1	30	42	-23
2	124	124	-1
3	32	35	-5
4	180	179	1
5	47	57	-19
6	37	33	6
7	75	71	8
8	56	51	8

3 12 1

0	33	36	-7
1	24	32	-12
2	76	82	-13
3	19	24	-5
4	64	76	-28
5	116	118	-5
6	28	26	2
7	19	18	1

4 12 1

0	136	144	-31
1	185	176	25
2	101	99	5
3	41	37	5
4	-25	17	-26
5	32	38	-9
6	143	142	3
7	71	72	0

5 12 1

0	98	102	-15
1	28	32	-6
2	142	145	-8
3	93	93	-1
4	147	151	-11
5	13	5	3
6	-17	1	-7
7	22	10	8

6 12 1

0	27	35	-16
1	100	97	8
2	45	44	1
3	118	117	4
4	99	95	8
5	37	31	8
6	43	33	12

7 12 1

0	153	156	-11
1	-18	22	-22
2	35	42	-12
3	51	59	-15
4	28	30	-1
5	34	36	-2

8 12 1

0	85	89	-14
1	-25	9	-19
2	-27	14	-24
3	-20	20	-19
4	-2	12	-3
5	16	27	-9

9 12 1

0	107	98	29
1	137	134	7
2	68	65	6
3	-11	11	-6

10 12 1

0	183	185	-4
1	89	85	8
2	27	12	10

11 12 1

0	42	40	5

-10 13 1

1	-24	3	-14
2	57	69	-23
3	71	66	7

-9 13 1

1	18	28	-10
2	40	31	12
3	67	66	3
4	36	23	14
5	109	102	15

-8 13 1

1	116	122	-15
2	31	23	9
3	83	82	1
4	3	3	0
5	28	30	-2
6	22	9	8

-7 13 1

1	59	60	0
2	23	18	4
3	50	46	8
4	149	151	-5
5	74	74	0
6	27	5	14

-6 13 1

1	153	153	0
2	107	108	-2
3	36	23	16
4	-24	3	-15
5	136	135	1
6	107	112	-12
7	62	60	3

-5 13 1

1	137	132	14
2	167	164	7
3	40	44	-6
4	56	65	-19
5	-24	7	-15
6	19	34	-17
7	79	78	1

-4 13 1

1	169	170	-1
2	-28	4	-24
3	95	101	-14
4	168	170	-4
5	61	61	-1
6	62	61	0
7	123	123	0
8	48	52	-7

-3 13 1

1	92	92	1
2	90	88	5
3	150	150	1
4	55	39	27
5	8	22	-10
6	25	26	-1
7	77	81	-9
8	105	106	0

-2 13 1

1	87	77	24
2	-7	2	-1
3	33	35	-3
4	124	124	1
5	31	22	10
6	61	67	-12
7	35	31	5
8	19	5	6

-1 13 1

1	225	219	16
2	115	120	-14
3	62	60	5
4	25	30	-6
5	17	14	2
6	78	89	-27
7	18	2	7
8	48	43	6

0 13 1

1	170	169	4
2	113	112	1
3	46	51	-10
4	90	91	-3
5	120	110	25
6	77	75	2
7	55	54	1
8	34	19	14

1 13 1

0	56	61	-17
1	28	36	-12
2	133	131	7
3	113	111	6
4	87	88	-2
5	-18	22	-22
6	57	63	-12
7	21	12	6

2 13 1

0	80	85	-16
1	41	38	4
2	177	180	-7
3	85	86	-3
4	97	98	-2
5	47	46	2
6	57	55	3
7	55	48	10

3 13 1

0	306	303	7
1	17	31	-18
2	107	107	0
3	40	45	-9
4	69	58	22
5	112	117	-12
6	121	112	20
7	21	8	7

4 13 1

0	50	48	6
1	127	124	8
2	101	100	2
3	23	33	-13
4	23	2	12
5	22	2	10
6	23	6	10

5 13 1

0	34	37	-7
1	73	69	8
2	29	8	17
3	35	42	-10
4	186	189	-6
5	63	65	-3
6	40	15	24

6 13 1

0	167	165	7
1	213	211	4
2	152	144	19
3	38	34	6
4	53	39	22
5	21	27	-5

7 13 1

0	83	78	17
1	92	91	4
2	2	3	0
3	74	73	0
4	21	27	-5
5	18	29	-11

8 13 1

0	21	9	12
1	51	52	-1
2	65	58	13
3	96	93	7
4	19	18	0

9 13 1

0	64	67	-8
1	148	143	11
2	86	84	5
3	97	87	14

10 13 1

0	32	37	-9
1	47	44	5

-9 14 1

1	65	61	7
2	62	60	3
3	84	87	-6

-8 14 1

1	34	35	0
2	9	20	-7
3	68	66	3
4	53	48	8
5	-7	3	-1

-7 14 1

1	48	46	2
2	44	42	1
3	25	14	9
4	24	20	3

5	102	101	0
6	25	7	11

-6 14 1

1	108	105	6
2	25	25	0
3	30	26	4
4	47	41	10
5	27	16	10
6	46	52	-11

-5 14 1

1	58	53	11
2	34	41	-10
3	139	134	13
4	80	81	-1
5	26	35	-10
6	42	27	18
7	31	8	17

-4 14 1

1	38	32	8
2	190	198	-21
3	194	186	22
4	125	126	-2
5	59	57	3
6	75	73	5
7	121	121	0

-3 14 1

1	42	40	2
2	67	70	-7
3	84	72	27
4	22	28	-7
5	68	61	14
6	70	64	11
7	-26	15	-21

-2 14 1

1	77	76	2
2	145	144	1
3	29	18	11
4	178	179	-1
5	45	51	-11
6	80	90	-24
7	25	10	10

-1 14 1

1	86	90	-11
2	63	63	0
3	139	141	-5
4	23	29	-8
5	40	42	-4
6	90	87	6
7	27	30	-3

0 14 1

0	175	184	-25
1	105	103	6
2	221	228	-18
3	164	161	9
4	19	12	5
5	-10	13	-6
6	58	60	-3
7	24	31	-8

1 14 1

0	187	186	2
1	79	83	-11
2	35	27	10
3	60	67	-16
4	116	124	-20
5	65	73	-18
6	61	53	14
7	16	8	3

2 14 1

0	202	204	-8
1	33	45	-22
2	119	124	-13
3	24	35	-15
4	64	64	1
5	107	99	17
6	34	37	-3
7	25	24	1

3 14 1

0	179	183	-12
1	70	66	8
2	171	172	-3
3	34	19	16
4	77	75	3
5	31	1	19
6	59	62	-6

4 14 1

0	80	78	7
1	99	102	-8
2	16	9	4
3	86	96	-24
4	37	25	14
5	66	70	-9
6	-5	6	-1

5 14 1

0	149	154	-16
1	163	157	15
2	66	70	-8
3	95	89	14
4	81	84	-7
5	2	31	-20

6 14 1

0	30	28	4
1	-14	16	-11
2	224	224	0
3	60	50	18
4	104	102	6
5	29	6	15

7 14 1

0	44	44	0
1	112	111	2
2	17	30	-12
3	16	1	5
4	9	30	-16

8 14 1

0	17	0	9
1	-15	10	-7
2	18	21	-2
3	134	117	36

9 14 1

0	-23	12	-22
1	74	70	8

-8 15 1

1	13	12	0
2	25	37	-15
3	58	66	-15

-7 15 1

1	8	6	0
2	17	10	4
3	33	24	10
4	86	80	10

-6 15 1

1	67	58	17
2	55	56	-1
3	-16	14	-11
4	-25	5	-15
5	19	3	7

-5 15 1

1	17	26	-8
2	39	33	8
3	118	100	41
4	45	56	-20
5	14	10	2
6	-21	7	-11

-4 15 1

1	-20	4	-11
2	15	21	-4
3	13	11	1
4	-2	34	-27
5	30	40	-13
6	25	9	10

-3 15 1

1	-18	16	-15
2	65	67	-4
3	40	38	2
4	118	113	11
5	32	22	11
6	25	8	11

-2 15 1

1	115	118	-6
2	33	37	-5
3	124	122	4
4	54	51	5
5	16	12	2
6	43	32	15

-1 15 1

1	77	72	9
2	136	142	-16
3	108	102	14
4	-26	13	-22
5	30	30	0
6	20	20	0

0 15 1

1	106	116	-27
2	24	20	5
3	22	9	9
4	41	32	13
5	30	32	-2
6	12	35	-23

1 15 1

0	57	58	-1
1	128	124	11
2	124	123	2
3	89	100	-26
4	23	13	7
5	-34	9	-33
6	81	68	23

2 15 1

0	153	151	6
1	37	38	-2
2	111	112	-2
3	79	75	7
4	77	80	-6
5	35	38	-4
6	25	9	11

3 15 1

0	18	14	3
1	62	66	-6
2	83	83	0
3	39	42	-3
4	42	36	9
5	23	16	5

4 15 1

0	105	114	-32
1	28	14	13
2	113	111	3
3	149	153	-10
4	39	36	4
5	42	35	10

5 15 1

0	41	44	-7
1	22	21	0
2	63	57	10
3	119	109	22
4	-14	6	-5

6 15 1

0	103	108	-16
1	23	25	-2
2	62	62	0
3	38	31	8
4	-13	8	-5

7 15 1

0	19	26	-9
1	36	24	13
2	23	28	-4
3	41	37	5

8 15 1

0	7	17	-7
1	18	11	4

-7 16 1

1	-21	0	-10
2	54	63	-16

-6 16 1

1	28	39	-15
2	22	30	-8
3	23	29	-7
4	30	26	5

-5 16 1

1	73	63	20
2	9	5	1
3	-26	19	-24
4	21	36	-18

-4	16	1	
1	82	90	-18
2	36	40	-6
3	26	17	7
4	26	33	-8
5	46	43	5

-3	16	1	
1	24	18	5
2	52	64	-24
3	-28	1	-20
4	13	21	-6
5	-9	12	-5

-2	16	1	
1	70	74	-9
2	-13	23	-17
3	6	8	0
4	78	75	6
5	-6	10	-3

-1	16	1	
1	-28	2	-21
2	23	23	0
3	27	16	10
4	62	56	11
5	87	73	27

0	16	1	
0	-12	2	-4
1	-24	10	-17
2	-17	3	-7
3	63	64	0
4	53	58	-10
5	19	27	-7

1	16	1	
0	68	67	2
1	-5	21	-11
2	-11	1	-3
3	41	39	2
4	9	15	-3
5	-22	8	-13

2	16	1	
0	58	55	8
1	85	92	-17
2	131	119	27
3	73	75	-4
4	-38	7	-41
5	26	28	-2

3	16	1	
0	-13	24	-25
1	6	18	-6
2	-25	2	-16
3	19	17	1
4	-12	17	-10

4	16	1	
0	179	182	-8
1	85	79	11
2	-13	0	-4
3	38	35	4
4	42	41	0

5	16	1	
0	100	94	18
1	62	57	8
2	-7	5	-1
3	-16	0	-5

6	16	1	
0	56	62	-17
1	14	13	0
2	48	58	-17

7	16	1	
0	22	31	-13
1	16	17	0

-5	17	1	
1	68	57	20
2	80	78	5
3	39	50	-17

-4	17	1	
1	48	44	5
2	-23	8	-14
3	20	14	4

-3	17	1	
1	73	68	10
2	42	23	22
3	72	77	-11
4	82	75	13

-2	17	1	
1	33	23	11
2	60	64	-8
3	46	36	14
4	72	71	2

-1	17	1	
1	79	68	22
2	-14	27	-22
3	13	3	3
4	30	23	7

0	17	1	
1	22	14	5
2	48	39	13
3	-8	6	-2
4	-9	18	-9

1	17	1	
0	23	20	3
1	68	73	-10
2	81	83	-2
3	-5	2	0
4	32	32	0

2	17	1	
0	-5	16	-9
1	6	3	0
2	-23	3	-13
3	28	35	-8
4	-29	13	-2

3	17	1	
0	13	14	0
1	63	59	6
2	28	38	-12
3	48	37	14

4	17	1	
0	11	10	0
1	24	0	11
2	39	34	6

5	17	1	
0	45	55	-22
1	27	8	13

-3	18	1	
1	9	17	-4

-2	18	1	
1	-28	21	-29
2	63	63	0

-1	18	1	
1	-21	12	-14
2	-10	14	-6

0	18	1	
0	31	19	11
1	21	6	8
2	81	77	8

1	18	1	
0	44	41	6
1	68	66	5
2	38	43	-8

2	18	1	
0	70	67	8
1	18	26	-7
2	48	35	18

3	18	1	
0	39	33	10
1	22	3	9

Table 6. Observed and Calculated Structure Factors for 2-Aza-2-Methyl-10,10-Dicyanodec-3,5,7,9-tetraene.

The columns contain, in order, k, $10F_{obs}$, $10F_{calc}$ and $10\left(\frac{F^2_{obs}-F^2_{calc}}{\sigma F^2_{obs}}\right)$. A minus sign preceding F_{obs} indicates that F^2_{obs} is negative.

-10	k	1	
1	17	7	25
2	37	33	23
3	41	39	10
4	32	33	-6
5	42	42	-2
6	25	27	-12
7	12	12	-1

-10	k	2	
0	12	2	13
1	21	12	31
2	16	1	29
3	66	65	6
4	49	47	13
5	31	19	51
6	22	13	31
7	25	20	21

-10	k	3	
1	14	1	23
2	18	9	27
3	22	15	25
4	24	5	54
5	72	68	24
6	47	40	40
7	32	23	40

-10	k	4	
0	-6	4	-5
1	26	26	0
2	14	8	16
3	20	15	18
4	31	28	11
5	28	16	47
6	30	22	37
7	28	13	51

-10	k	5	
1	11	1	13
2	12	14	-6
3	16	17	0
4	21	18	14
5	11	8	6

-10	k	6	
0	27	29	-4
1	28	25	15
2	13	9	9

-9	k	1	
1	-5	5	-7
2	10	9	3
3	58	55	22
4	44	41	19
5	26	15	46
6	60	58	12
7	23	13	35
8	36	34	11
9	25	18	27
10	32	30	10

-9	k	2	
0	-7	1	-5
1	20	23	-15
2	18	15	11
3	40	41	-9
4	32	28	20
5	57	50	49
6	81	81	-2
7	58	50	55
8	32	20	54
9	21	17	15
10	18	15	9

-9	k	3	
1	6	3	3
2	11	8	6
3	38	37	7
4	47	42	30
5	61	60	8
6	21	5	47
7	50	43	42
8	58	56	16
9	29	29	2
10	15	6	20

-9	k	4	
0	21	20	0
1	8	4	5
2	28	29	-3
3	45	46	-8
4	17	16	7
5	10	1	12
6	16	12	13
7	6	0	4
8	30	27	12
9	19	18	1
10	29	26	15

-9	k	5	
1	10	11	-3
2	17	14	12
3	4	2	1
4	-6	8	-13
5	12	9	6
6	4	2	1
7	-11	4	-18
8	-2	0	0
9	2	12	-15

-9	k	6	
0	7	0	5
1	7	1	6
2	10	8	3
3	7	11	-8
4	-4	0	-2
5	7	8	-1
6	14	6	16
7	-7	6	-11

-9	k	7	
1	15	6	20
2	14	5	17
3	14	12	6
4	19	22	-12

-8	k	1	
1	8	8	1
2	11	7	12
3	60	57	24
4	25	26	-8
5	88	87	1
6	80	75	39
7	150	148	12
8	30	26	19
9	24	19	23
10	18	9	25
11	0	6	-5
12	14	8	13

-8	k	2	
0	52	57	-26
1	9	6	7
2	42	38	28
3	37	38	-9
4	22	18	18
5	33	33	-2
6	33	34	-11
7	35	31	20
8	53	48	37
9	61	58	20
10	32	29	15
11	14	17	-8
12	8	6	3
13	3	2	0

-8	k	3	
1	8	11	-9
2	44	42	12
3	43	44	-1
4	19	19	-3
5	27	28	-7
6	35	34	2
7	22	19	13
8	14	11	10
9	11	1	14
10	8	2	8
11	12	11	3
12	13	11	4

-8	k	4	
0	121	123	-11
1	16	0	35
2	16	14	7
3	15	10	16
4	-3	12	-24
5	27	27	0
6	-6	7	-12
7	18	17	6
8	13	18	-19
9	9	10	-3
10	23	28	-28
11	-8	11	-6
12	-5	3	-4

-8	k	5	
1	-5	3	-6
2	0	9	-10
3	-4	1	-2
4	16	22	-24
5	-7	4	-9
6	19	19	0
7	7	6	2
8	-9	1	-10
9	8	5	4
10	-11	1	-15
11	-5	2	-3

-8	k	6	
0	19	18	2
1	13	17	-14
2	17	17	2
3	9	8	2
4	19	21	-10
5	20	21	-6
6	18	22	-16
7	23	23	0
8	31	33	-9
9	27	23	15
10	16	8	19

-8	k	7	
1	10	1	12
2	21	22	-6
3	9	4	7
4	11	2	14
5	39	41	-13
6	31	29	10
7	48	48	-2

-8	k	8	
0	16	5	16
1	35	36	-4
2	17	6	25
3	37	34	17

-7	k	1	
1	10	13	-10
2	57	56	3
3	102	99	25
4	83	84	-7
5	53	55	-18
6	17	11	24
7	23	20	15
8	85	86	-8
9	70	71	-7
10	57	60	-25
11	9	1	10
12	18	19	-5
13	-8	0	-8
14	-16	7	-42

-7	k	2	
0	54	46	49
1	93	91	17
2	85	85	-1
3	67	66	8
4	23	27	-31
5	12	14	-7
6	-3	3	-3
7	44	44	0
8	28	30	-13
9	23	27	-21
10	46	41	29
11	33	34	-10
12	41	43	-11
13	16	18	-10
14	12	8	10

-7	k	3	
1	11	6	13
2	23	16	36
3	50	53	-24
4	-5	1	-6
5	7	6	1
6	21	22	-5
7	11	13	-4
8	13	16	-13
9	23	24	-6
10	13	14	-2
11	15	15	1
12	38	35	16
13	19	24	-22
14	-8	5	-12

-7	k	4	
0	28	31	-13
1	29	26	15
2	12	10	7
3	3	4	-1
4	22	22	-3
5	-15	2	-39
6	30	30	-3
7	-4	8	-11
8	22	23	-6

9	26	27	-2
10	31	37	-38
11	14	20	-22
12	-11	2	-17
13	18	17	6

-7 k 5

1	39	39	1
2	7	6	1
3	19	22	-15
4	41	37	27
5	77	78	-8
6	27	26	7
7	18	18	0
8	56	60	-31
9	21	20	4
10	7	0	6
11	6	4	2
12	-9	6	-16
13	31	26	22

-7 k 6

0	44	40	19
1	60	62	-13
2	20	19	3
3	27	27	0
4	28	30	-15
5	22	22	1
6	37	41	-30
7	19	11	27
8	34	33	4
9	15	1	24
10	35	33	8
11	21	19	6

-7 k 7

1	19	12	26
2	43	48	-30
3	44	47	-17
4	12	10	3
5	9	6	5
6	11	3	14
7	20	16	15
8	5	5	0
9	15	10	11

-7 k 8

0	76	84	-43
1	63	61	14
2	24	18	27
3	35	31	21
4	25	22	12
5	-6	0	-4
6	-1	3	-1
7	-12	2	-19

-6 k 1

1	49	50	-6
2	121	117	30
3	21	26	-35
4	52	55	-31
5	105	105	-5
6	9	8	2
7	47	47	0
8	25	26	-7
9	20	19	4
10	26	28	-14
11	8	10	-4
12	6	7	-2
13	49	48	7
14	2	4	-1
15	-11	3	-18
16	-12	4	-14

-6 k 2

0	165	155	44
1	158	158	0
2	22	11	57
3	28	30	-14
4	79	77	12
5	29	29	-5
6	6	3	5
7	-7	5	-15
8	55	58	-2
9	23	27	-22
10	18	21	-15
11	57	59	-18
12	-10	3	-15
13	4	1	2
14	-10	0	-14
15	-7	9	-17

-6 k 3

1	8	4	9
2	3	0	1
3	49	44	39
4	8	6	5
5	9	6	8
6	29	29	3
7	12	16	-15
8	18	28	-27
9	-9	2	-13
10	13	18	-22
11	9	12	-8
12	-9	1	-13
13	8	14	-15
14	-8	2	-8
15	31	28	13

-6 k 4

0	60	64	-26
1	58	58	4
2	6	9	-7
3	18	12	28
4	74	76	-20
5	36	39	-17
6	72	73	-3
7	51	52	-3
8	53	51	17
9	-8	2	-10
10	21	18	14
11	32	28	24
12	6	6	0
13	11	17	-19
14	16	16	2
15	11	8	7

-6 k 5

1	39	39	-5
2	33	32	6
3	40	47	-51
4	47	49	-13
5	138	140	-9
6	54	50	29
7	27	26	6
8	55	57	-17
9	49	49	0
10	17	17	2
11	13	14	-4
12	6	0	5
13	14	8	13
14	2	3	0

-6 k 6

0	116	121	-28
1	28	16	57
2	111	116	-36
3	119	125	-41
4	56	58	-16
5	39	41	-11
6	-6	5	-11
7	14	18	-18
8	46	41	30
9	27	31	-22
10	21	24	-14
11	32	28	21
12	38	31	37
13	35	30	16

-6 k 7

1	30	30	-3
2	36	40	-22
3	26	27	-7
4	26	27	-4
5	19	20	-6
6	6	1	5
7	21	24	-16
8	8	11	-5
9	30	29	3
10	13	4	18
11	27	18	33

-6 k 8

0	27	23	17
1	14	2	22
2	46	43	14
3	25	23	6
4	9	9	1
5	-2	8	-10
6	-5	8	-13
7	7	12	-12
8	-11	0	-15

-6 k 9

1	15	15	2
2	22	21	4
3	11	7	7
4	8	7	1

-5 k 1

1	48	53	-55
2	31	36	-47
3	44	42	17
4	67	62	43
5	6	12	-20
6	80	84	-33
7	12	18	-32
8	36	37	-7
9	5	0	4
10	39	39	-2
11	19	24	-28
12	35	35	0
13	54	58	-30
14	29	29	-2
15	4	5	-1
16	-8	2	-9
17	-9	2	-11

-5 k 2

0	173	179	-30
1	46	47	-8
2	44	39	48
3	23	20	20
4	33	33	-3
5	70	70	-1
6	25	26	-5
7	87	86	6
8	67	69	-12
9	71	73	-13
10	43	45	-20
11	19	23	-23
12	23	23	2
13	12	12	0
14	20	26	-29
15	19	21	-9
16	10	7	6

-5 k 3

1	49	51	-17
2	164	165	-6
3	30	23	50
4	59	65	-59
5	176	173	15
6	87	84	19
7	166	163	16
8	68	70	-10
9	17	18	-4
10	23	18	25
11	-7	5	-14
12	40	40	-3
13	27	23	18
14	47	44	18
15	21	20	2
16	-12	0	-17

-5 k 4

0	99	99	0
1	135	142	-52
2	96	99	-27
3	55	60	-40
4	6	2	4
5	71	73	-19
6	108	115	-51
7	40	35	38
8	89	90	-4
9	81	82	-4
10	2	0	1
11	74	75	-5
12	17	16	6
13	3	3	0
14	54	50	26
15	17	7	25
16	30	26	19

-5 k 5

1	43	44	-12
2	119	125	-44
3	21	20	7
4	19	16	16
5	25	22	15
6	43	44	-7
7	24	28	-22
8	17	21	-24
9	25	25	-1
10	26	26	-3
11	21	8	43
12	43	41	17
13	61	56	34
14	62	56	38
15	59	54	28

-5 k 6

0	310	327	-51
1	33	2	117
2	56	55	9
3	90	88	11
4	7	8	-1
5	13	17	-14
6	-8	10	-26
7	8	15	-19
8	5	5	0
9	-9	10	-25
10	20	19	5

11	18	5	34
12	36	35	6
13	38	31	34

-5 k 7

1	57	58	-12
2	45	47	-14
3	25	26	-2
4	33	34	-7
5	19	20	-8
6	27	34	-43
7	-13	0	-24
8	15	18	-9
9	-4	2	-2
10	11	8	5
11	48	46	10
12	13	0	18

-5 k 8

0	37	36	5
1	-7	0	-8
2	20	25	-26
3	11	17	-21
4	25	22	17
5	3	6	-4
6	12	15	-8
7	-6	2	-6
8	-8	3	-9
9	6	2	4

-5 k 9

1	5	0	3
2	-2	1	-1
3	14	19	-17
4	13	10	6
5	7	3	4

-4 k 1

1	128	122	47
2	40	42	-26
3	55	48	68
4	94	88	50
5	108	105	29
6	9	11	-6
7	45	47	-18
8	84	80	26
9	19	19	1
10	36	32	23
11	-7	9	-23
12	10	20	-43
13	34	35	-1
14	17	16	6
15	-4	4	-5
16	47	51	-30
17	5	11	-9

-4 k 2

0	279	273	20
1	65	64	8
2	53	59	-71
3	100	91	74
4	55	57	-14
5	259	259	2
6	60	58	23
7	92	89	24
8	16	12	18
9	68	69	-8
10	16	15	5
11	24	21	15
12	56	57	-9
13	7	15	-21
14	22	22	1
15	4	4	0
16	11	13	-8
17	18	20	-6

-4 k 3

1	89	84	47
2	103	101	15
3	157	169	-83
4	218	208	49
5	260	252	32
6	71	77	-56
7	27	20	48
8	15	12	9
9	94	92	13
10	78	79	-9
11	7	8	-2
12	10	3	13
13	4	4	0
14	9	7	4
15	68	63	30
16	68	66	9
17	51	47	27

-4 k 4

0	114	102	69
1	432	421	27
2	402	396	16
3	190	194	-21
4	72	69	28
5	29	33	-27
6	27	34	-59
7	6	10	-9
8	46	41	42
9	76	76	3
10	50	49	7
11	22	16	27
12	112	108	25
13	29	23	29
14	33	30	17
15	56	55	4
16	28	30	-11

-4 k 5

1	152	150	9
2	53	53	0
3	88	86	12
4	36	37	-4
5	34	33	6
6	53	57	-35
7	37	38	-11
8	36	38	-13
9	49	53	-29
10	54	52	15
11	16	0	33
12	108	102	36
13	47	47	0
14	23	14	32
15	12	1	17

-4 k 6

0	47	42	28
1	26	21	27
2	37	34	23
3	59	58	5
4	60	64	-36
5	30	36	-44
6	39	40	-9
7	10	14	-12
8	-13	8	-36
9	18	1	-13
10	80		-26
11	29		-3
12	23	15	9
13	-5	0	-3
14	24	19	22

-4 k 7

1	-5	5	-8
2	53	51	10
3	41	41	0
4	7	13	-15
5	14	11	8
6	-8	8	-20
7	36	42	-36
8	54	56	-11
9	21	16	19
10	13	12	1
11	4	0	2
12	10	10	0

-4 k 8

0	8	1	5
1	1	13	-23
2	-13	0	-25
3	-13	8	-33
4	-8	8	-18
5	19	21	-12
6	31	32	-2
7	15	17	-7
8	4	5	0
9	-7	0	-6
10	-8	2	-8

-4 k 9

1	-12	2	-18
2	18	23	-19
3	-9	1	-10
4	-11	3	-18
5	11	7	6
6	-11	8	-23

-3 k 1

1	180	167	76
2	312	305	25
3	346	342	11
4	268	262	23
5	203	197	31
6	110	113	-22
7	366	349	51
8	100	100	4
9	66	64	15
10	11	17	-26
11	9	11	-6
12	61	63	-12
13	40	43	-23
14	63	62	12
15	19	16	12
16	6	10	-7
17	30	29	1
18	31	31	-1

-3 k 2

0	329	310	52
1	81	72	87
2	259	262	-15
3	168	170	-14
4	240	237	13
5	309	312	-12
6	69	71	-23
7	58	52	53
8	108	110	-15
9	195	197	-10
10	157	157	-1
11	40	41	-5
12	52	51	7
13	92	88	29
14	42	38	26
15	61	61	-1
16	20	27	-35
17	12	10	6
18	22	19	11

-3 k 3

1	135	136	-9
2	111	121	-82
3	84	82	18
4	42	40	15
5	133	137	-27
6	69	77	-81
7	70	65	47
8	42	43	-6
9	-7	0	-10
10	49	53	-39
11	73	70	22
12	61	62	-10
13	160	157	14
14	69	63	46
15	43	43	5
16	13	7	13
17	8	16	-21

-3 k 4

0	515	527	-22
1	302	306	-12
2	356	351	13
3	19	3	61
4	129	128	4
5	26	26	-2
6	3	0	2
7	36	41	-41
8	33	31	17
9	39	33	43
10	37	35	11
11	33	33	3
12	106	106	4
13	85	84	8
14	36	31	28
15	59	59	0
16	27	24	17
17	6	0	4

-3 k 5

1	99	100	-5
2	140	136	32
3	29	28	4
4	87	88	-1
5	73	78	-43
6	29	35	-40
7	60	56	29
8	11	18	-27
9	63	65	-20
10	80	76	25
11	61	62	-1
12	37	32	27
13	27	23	20
14	41	39	14
15	70	67	18
16	26	23	10

-3 k 6

0	52	54	-9
1	84	83	6
2	26	27	-6
3	27	31	-26
4	79	75	37
5	57	60	-25
6	6	13	-23
7	15	13	6
8	20	23	-17
9	12	10	7
10	14	16	-6
11	29	25	17

12	6	5	0
13	-3	5	-4
14	-12	0	-17

-3 k 7

1	13	16	-11
2	21	25	-25
3	4	11	-15
4	32	34	-13
5	24	24	-2
6	-15	1	-35
7	-14	0	-30
8	-7	3	-8
9	3	3	0
10	-6	9	-17
11	-14	7	-32
12	2	4	-1
13	8	0	8

-3 k 8

0	25	27	-9
1	-10	11	-33
2	41	40	6
3	15	20	-23
4	5	11	-13
5	25	23	9
6	-8	0	-9
7	-7	4	-10
8	1	2	0
9	-5	10	-16
10	-7	7	-13

-3 k 9

1	-9	0	-11
2	35	35	3
3	-3	8	-9
4	6	11	-11
5	13	18	-14
6	9	10	-3
7	13	16	-10

-2 k 1

1	56	64	-105
2	350	363	-42
3	372	372	0
4	501	490	25
5	25	26	-10
6	278	272	26
7	131	126	35
8	75	76	-4
9	15	9	24
10	127	127	-2
11	47	43	30
12	27	20	39
13	50	48	10
14	103	101	17
15	138	135	17
16	67	64	22
17	46	44	11
18	10	15	-14

-2 k 2

0	1534	1445	56
1	1296	1233	54
2	446	434	29
3	108	114	-60
4	43	41	29
5	57	54	32
6	6	0	9
7	59	58	4
8	6	11	-19
9	94	91	18
10	140	139	1
11	49	42	54
12	95	97	-15
13	105	106	-10
14	92	92	3
15	92	94	-13
16	-12	2	-20
17	18	11	23
18	8	7	1

-2 k 3

1	249	246	13
2	381	386	-14
3	85	87	-24
4	136	131	30
5	110	110	-2
6	141	146	-36
7	42	46	-40
8	121	126	-40
9	32	28	27
10	99	102	-25
11	31	31	0
12	78	76	16
13	162	161	0
14	54	51	19
15	16	11	16
16	-8	0	-10
17	-8	3	-10
18	22	23	-2

-2 k 4

0	147	140	42
1	36	34	20
2	46	46	9
3	2	6	-7
4	35	36	-7
5	203	207	-21
6	3	1	2
7	11	15	-16
8	71	77	-52
9	120	122	-9
10	115	117	-14
11	25	25	-3
12	9	8	3
13	27	23	19
14	10	14	-11
15	40	37	16
16	23	23	1
17	19	18	4

-2 k 5

1	50	43	62
2	32	33	-6
3	124	123	5
4	59	55	37
5	74	69	38
6	51	52	-4
7	102	101	2
8	61	61	5
9	-10	6	-24
10	14	17	-11
11	-12	8	-36
12	-9	8	-22
13	36	33	15
14	25	27	-11
15	-6	3	-6
16	6	5	0

-2 k 6

0	40	48	-50
1	-8	2	-14
2	37	37	6
3	13	16	-14
4	26	28	-10
5	13	9	11
6	43	46	-21
7	50	53	-27
8	37	41	-30
9	34	34	-2
10	-9	11	-29
11	-6	1	-5
12	-7	3	-8
13	-8	10	-23
14	16	17	-5
15	-8	4	-11

-2 k 7

1	34	40	-42
2	21	25	-25
3	27	32	-29
4	36	35	2
5	-10	11	-34
6	-7	10	-24
7	-13	9	-39
8	24	26	-13
9	17	18	-3
10	11	8	5
11	7	11	-8
12	32	28	18
13	17	11	16

-2 k 8

0	93	94	-4
1	15	11	11
2	17	19	-9
3	20	22	-9
4	0	11	-17
5	15	15	0
6	13	14	-4
7	-10	3	-14
8	14	15	-1
9	15	15	1
10	10	2	11

-2 k 9

1	43	39	26
2	23	21	9
3	18	21	-12
4	14	1	20
5	25	25	-3
6	31	28	17
7	7	6	1

-1 k 1

1	77	74	37
2	50	58	-109
3	72	70	29
4	250	253	-12
5	125	122	19
6	105	96	70
7	116	110	44
8	71	69	19
9	13	16	-18
10	46	50	-31
11	52	53	-5
12	255	262	-27
13	110	106	26
14	27	14	60
15	9	5	6
16	30	34	-23
17	-1	12	-18
18	13	8	13

-1 k 2

0	232	251	-81
1	415	424	-25
2	849	841	10
3	589	611	-44
4	67	71	-38
5	107	95	96
6	82	85	-33
7	45	46	-8
8	-5	10	-24
9	47	49	-19
10	176	177	-6
11	122	124	-9
12	170	171	-8
13	35	28	43
14	76	77	-2
15	31	32	-8
16	49	52	-24
17	35	35	3
18	7	8	-1

-1 k 3

1	10	10	1
2	404	399	15
3	156	160	-21
4	10	1	24
5	145	145	-1
6	75	73	17
7	9	11	-8
8	213	215	-11
9	148	146	17
10	86	83	23
11	14	14	0
12	48	49	-8
13	52	53	-9
14	10	2	13
15	78	76	14
16	77	75	9
17	33	31	12
18	21	21	2

-1 k 4

0	197	188	38
1	200	204	-20
2	80	81	-11
3	8	7	3
4	58	52	49
5	215	214	7
6	117	108	65
7	30	34	-33
8	32	30	12
9	-8	2	-15
10	-14	2	-39
11	36	35	6
12	49	46	17
13	-8	7	-19
14	-5	7	-10
15	25	25	0
16	22	22	-1
17	4	6	-3

-1 k 5

1	76	69	63
2	4	12	-26
3	46	49	-30
4	35	39	-32
5	49	45	38
6	23	26	-23
7	9	14	-22
8	-13	11	-55
9	-13	5	-36
10	-11	3	-21
11	35	37	-10
12	-8	8	-20
13	-11	4	-19
14	-1	2	0
15	-14	0	-27
16	31	32	-1

-1 k 6

J-2526-M74

0	19	28	-46
1	71	67	33
2	105	103	17
3	14	12	6
4	63	58	46
5	33	35	-16
6	12	17	-21
7	21	18	14
8	-12	2	-26
9	11	14	-11
10	30	31	-2
11	-7	3	-9
12	16	17	-6
13	-2	6	-6
14	8	9	-2

-1 k 7

1	59	64	-43
2	43	45	-15
3	56	56	0
4	15	20	-21
5	-12	0	-22
6	46	44	12
7	10	9	0
8	14	16	-9
9	17	15	6
10	11	10	4
11	5	0	3
12	25	25	-1
13	20	20	0

-1 k 8

0	9	5	5
1	32	31	4
2	4	3	1
3	28	29	-4
4	40	33	7
5	20	13	25
6	23	18	18
7	7	3	5
8	11	7	10
9	13	7	12
10	47	43	23

-1 k 9

1	29	25	20
2	22	20	9
3	33	27	26
4	9	10	-3
5	17	2	30
6	49	40	50

0 k 0

2	50	53	-32
4	7	13	-28
6	134	138	-30
8	62	57	48
10	226	232	-27
12	28	26	8
14	204	210	-28
16	20	20	3
18	38	28	51

0 k 1

1	88	83	65
2	542	598	-137
3	448	482	-100
4	167	172	-38
5	399	400	-3
6	-7	3	-21
7	239	231	40
8	62	60	30
9	138	143	-41
10	23	22	10
11	74	75	-10
12	14	10	20
13	162	158	29
14	148	147	5
15	86	85	10
16	17	16	7
17	21	21	0
18	20	21	-5
19	5	14	-26

0 k 2

0	197	198	-6
1	205	224	-121
2	130	140	-95
3	82	85	-31
4	374	371	9
5	134	138	-34
6	175	171	23
7	74	69	20
8	235	230	26
9	150	147	22
10	-5	0	-7
11	89	93	-38
12	13	12	7
13	27	25	22
14	32	24	58
15	43	41	10
16	24	27	-27
17	43	45	-19
18	24	21	14

0 k 3

1	-9	1	-33
2	170	169	11
3	146	154	-63
4	109	106	34
5	265	253	55
6	65	65	9
7	148	139	65
8	23	27	-51
9	13	18	-36
10	32	36	-51
11	24	22	15
12	28	29	-5
13	-9	3	-22
14	57	56	17
15	12	19	-36
16	-7	2	-12
17	7	14	-25
18	-9	6	-22

0 k 4

0	69	67	17
1	110	115	-42
2	31	37	-77
3	127	129	-14
4	-6	0	-11
5	21	24	-40
6	12	11	2
7	73	69	47
8	33	34	-4
9	108	108	0
10	53	49	43
11	16	18	-13
12	16	19	-18
13	-2	14	-38
14	29	32	-20
15	11	13	-6
16	-9	4	-18
17	16	20	-23

0 k 5

1	68	74	-72
2	90	93	-37
3	-7	1	-15
4	100	103	-26
5	60	58	30
6	11	7	19
7	45	44	7
8	56	59	-38
9	-9	0	-18
10	19	21	-11
11	52	53	-10
12	11	4	-30
13	59	57	19
14	35	35	0
15	7	12	-18
16	10	1	-17

0 k 6

0	159	151	46
1	47	43	43
2	62	61	3
3	12	15	-18
4	11	15	-24
5	18	18	-3
6	36	35	9
7	43	42	11
8	26	27	-7
9	-10	7	-34
10	20	18	8
11	41	39	11
12	57	56	15
13	43	44	-9
14	33	33	0

0 k 7

1	57	60	-38
2	40	42	-12
3	60	60	-7
4	45	50	-46
5	13	12	3
6	47	48	-5
7	54	54	0
8	13	9	16
9	53	51	18
10	66	62	42
11	64	60	31
12	12	13	-3

0 k 8

0	15	16	-3
1	26	25	7
2	12	10	6
3	28	26	18
4	60	56	37
5	52	49	20
6	30	23	43
7	25	13	60
8	19	7	45
9	13	11	7

0 k 9

1	-8	9	-27
2	31	28	21
3	18	10	29
4	19	15	17
5	42	38	30

1 k 0

0	36	20	136
1	191	175	90
2	355	357	-6
3	801	804	-4
4	509	520	-26
5	223	227	-22
6	136	132	30
7	17	19	-18
8	20	21	-6
9	139	139	0
10	298	301	-9
11	103	99	26
12	67	68	-4
13	115	116	-5
14	71	69	17
15	60	58	9
16	12	15	-11
17	19	27	-38
18	42	38	22
19	5	0	3

1 k 1

1	343	346	-12
2	229	226	16
3	593	609	-33
4	117	119	-18
5	79	72	67
6	-5	2	-8
7	300	291	33
8	329	318	35
9	38	39	-12
10	-8	2	-14
11	47	49	-13
12	21	23	-14
13	91	94	-19
14	4	3	1
15	5	0	4
16	74	72	17
17	56	54	18
18	40	39	2

1 k 2

0	558	587	-51
1	173	163	61
2	214	214	-3
3	34	33	5
4	105	97	72
5	139	135	24
6	316	309	25
7	196	185	58
8	61	59	21
9	9	14	-18
10	21	22	-10
11	6	17	-46
12	68	70	-14
13	30	31	-5
14	13	16	-12
15	-8	11	-27
16	38	36	11
17	26	27	-6
18	-12	4	-19

1 k 3

1	56	56	0
2	194	183	55
3	22	17	30
4	2	12	-33
5	86	83	30
6	69	60	78
7	-10	4	-26
8	46	47	-11
9	13	11	10
10	52	51	7
11	-12	4	-32
12	42	46	-37
13	-13	7	-34
14	-6	16	-39
15	31	34	-21
16	45	48	-14
17	-9	1	-9

1 k 4

0	214	190	97
1	206	203	14
2	120	122	-19
3	44	39	42
4	168	159	53
5	55	53	22
6	1	10	-21
7	20	23	-19
8	56	54	15
9	47	49	-19
10	-10	6	-23
11	22	26	-19
12	37	39	-14
13	13	14	-1
14	38	44	-41
15	26	28	-7
16	11	11	1

1 k 5

1	155	160	-32
2	69	66	27
3	66	65	8
4	62	63	-3
5	74	69	43
6	-7	8	-23
7	47	46	6
8	-14	2	-34
9	-12	4	-26
10	12	15	-11
11	23	23	-2
12	1	8	-8
13	55	54	6
14	6	10	-7
15	13	13	-1

1 k 6

0	40	44	-23
1	51	55	-34
2	76	72	32
3	28	24	23
4	44	49	-41
5	67	65	12
6	9	7	5
7	19	18	4
8	7	10	-8
9	50	44	38
10	88	83	34
11	24	18	25
12	-8	6	-12
13	-8	15	-37
14	-15	2	-28

1 k 7

1	33	31	12
2	38	37	4
3	57	55	13
4	48	47	7
5	22	12	35
6	27	16	48
7	165	158	39
8	57	52	29
9	18	8	27
10	25	27	-8
11	-6	3	-6
12	6	6	0

1 k 8

0	-8	10	-16
1	-12	10	-34
2	45	39	36
3	21	17	18
4	38	35	19
5	13	11	6
6	80	78	16
7	26	25	4
8	39	38	6

1 k 9

1	9	7	4
2	5	0	3

2 k 0

0	239	252	-55
1	379	371	24
2	-4	6	-14
3	116	116	-1
4	366	367	-5
5	347	335	38
6	123	110	98
7	138	128	73
8	182	176	31
9	39	45	-68
10	84	87	-25
11	48	54	-50
12	57	55	19
13	-10	0	-18
14	41	39	18
15	10	16	-18
16	20	24	-21
17	27	32	-25
18	36	38	-10

2 k 1

1	260	261	-5
2	153	159	-42
3	-12	1	-34
4	22	26	-32
5	337	331	21
6	12	1	30
7	168	164	28
8	72	51	169
9	3	11	-22
10	-9	11	-43
11	37	36	10
12	35	34	2
13	44	41	21
14	21	23	-10
15	39	42	-21
16	34	38	-28
17	17	16	3
18	12	10	4

2 k 2

0	71	69	13
1	66	64	16
2	347	332	48
3	45	44	6
4	31	27	31
5	48	51	-26
6	57	58	-14
7	82	88	-56
8	-9	11	-45
9	35	33	19
10	145	133	75
11	15	14	4
12	8	12	-12
13	52	54	-20
14	-10	9	-28
15	13	15	-9
16	8	13	-13
17	-9	2	-10
18	14	22	-30

2 k 3

1	48	47	7
2	152	140	74
3	207	211	-23
4	-6	4	-12
5	73	76	-25
6	146	145	5
7	46	51	-45
8	10	18	-38
9	61	63	-13
10	51	50	12
11	14	17	-13
12	79	85	-50
13	49	51	-16
14	-9	2	-12
15	12	14	-4
16	-15	2	-30
17	-13	1	-21

2 k 4

0	85	83	7
1	116	115	9
2	123	120	22
3	56	59	-25
4	18	24	-44
5	18	21	-20
6	-9	2	-17
7	94	96	-9
8	17	15	8
9	17	13	18
10	70	70	0
11	79	81	-15
12	74	74	3
13	43	46	-17
14	-13	0	-25
15	14	13	3
16	36	36	0

2 k 5

1	87	87	-2
2	47	49	-14
3	69	67	12
4	94	93	8
5	84	84	-5
6	24	27	-19
7	52	54	-14
8	124	124	3
9	131	130	8
10	104	102	14
11	32	37	-33
12	19	23	-18
13	3	4	-1
14	-12	8	-26
15	12	15	-10

2 k 6

0	73	74	-7
1	12	11	2
2	19	21	-13
3	17	17	-2
4	53	50	22
5	142	141	4
6	69	64	34
7	30	19	51
8	14	3	24
9	29	29	1
10	25	22	12
11	21	23	-10
12	10	9	1
13	-11	1	-16

2 k 7

1	9	8	2
2	23	26	-14
3	68	67	4
4	33	32	3
5	21	19	9
6	30	23	36
7	13	4	17
8	47	42	30
9	19	17	6
10	37	36	3
11	14	13	4

2 k 8

0	7	3	3
1	42	42	-1
2	-5	1	-4
3	26	26	0
4	36	37	-4
5	15	11	11
6	31	31	0
7	-3	4	-3

3 k 0

0	6	1	5
1	420	409	28
2	-4	5	-12
3	-8	1	-18
4	68	64	37
5	120	120	3
6	147	145	9
7	219	216	13
8	121	119	19
9	82	79	25
10	25	25	0
11	48	50	-17
12	-5	1	-4
13	33	39	-40
14	38	42	-23
15	13	13	1
16	12	11	2
17	38	34	18
18	24	22	8

3 k 1

1	109	96	99
2	115	109	42
3	85	84	9
4	40	34	57
5	39	41	-26
6	135	134	5
7	12	9	12
8	47	45	19
9	28	29	-8
10	0	11	-20
11	59	62	-20
12	3	17	-46
13	40	47	-53
14	39	44	-39
15	38	45	-44
16	7	17	-30
17	-10	8	-22
18	5	10	-9

3 k 2

0	576	547	48
1	93	91	11
2	103	103	6
3	118	118	-1
4	69	67	23
5	170	164	35
6	71	74	-23
7	59	58	11
8	74	75	-9
9	-5	3	-8
10	40	43	-29
11	42	42	0
12	43	46	-28

13	20	31	-69
14	55	62	-50
15	1	7	-6
16	-9	0	-11
17	21	22	-8

3 k 3

1	133	124	62
2	199	199	2
3	66	64	16
4	19	21	-16
5	84	85	-10
6	95	92	23
7	16	22	-35
8	-10	7	-27
9	19	19	0
10	42	39	26
11	77	80	-21
12	30	31	-4
13	36	40	-23
14	31	35	-23
15	9	17	-24
16	28	22	27

3 k 4

0	92	91	8
1	17	23	-35
2	98	98	0
3	159	158	4
4	74	73	5
5	58	57	9
6	64	65	-14
7	14	1	31
8	46	37	63
9	112	104	51
10	56	53	20
11	14	20	-24
12	-8	15	-39
13	7	13	-14
14	-8	8	-16
15	-5	11	-17

3 k 5

1	20	23	-20
2	31	33	-11
3	65	66	-13
4	102	101	12
5	91	89	21
6	166	160	28
7	163	161	10
8	50	46	27
9	28	29	-4
10	14	17	-8
11	11	16	-14
12	-4	3	-4
13	-16	3	-39
14	24	23	2

3 k 6

0	30	34	-18
1	48	53	-40
2	39	38	8
3	51	47	24
4	77	76	11
5	49	45	26
6	76	74	12
7	43	42	4
8	65	66	-11
9	53	53	-1
10	18	14	16
11	-3	6	-6
12	10	8	3

3 k 7

1	-10	3	-17
2	30	26	25
3	28	29	-7
4	25	26	-4
5	22	25	-11
6	11	10	1
7	-7	10	-19
8	16	17	-4
9	14	12	5

3 k 8

0	-4	16	-24
1	-9	4	-13
2	14	16	-8
3	-17	8	-46
4	-7	3	-8

4 k 0

0	35	31	28
1	229	213	74
2	270	253	70
3	103	96	57
4	101	103	-21
5	57	58	-12
6	25	31	-50
7	40	45	-49
8	44	44	5
9	59	59	-1
10	69	65	37
11	78	77	7
12	30	35	-32
13	26	29	-13
14	16	16	0
15	-11	5	-21
16	-9	6	-17
17	7	5	3

4 k 1

1	134	117	116
2	75	82	-71
3	180	171	47
4	151	147	23
5	92	100	-72
6	118	121	-16
7	40	39	14
8	33	30	20
9	71	69	18
10	-13	8	-41
11	40	40	2
12	67	71	-33
13	22	23	-5
14	23	23	-2
15	-4	8	-12
16	-15	9	-41
17	-7	2	-7

4 k 2

0	102	111	-59
1	7	20	-71
2	91	93	-9
3	107	111	-31
4	52	49	23
5	-10	0	-22
6	72	78	-47
7	41	45	-31
8	64	61	23
9	47	43	32
10	119	120	-9
11	77	80	-22
12	57	56	7
13	3	8	-7
14	18	23	-25
15	9	17	-24
16	-7	7	-14

4 k 3

1	94	95	-8
2	93	91	16
3	52	53	-11
4	76	79	-19
5	105	109	-36
6	69	67	15
7	131	128	22
8	225	231	-26
9	110	114	-26
10	46	47	-6
11	32	29	16
12	22	26	-21
13	-8	11	-26
14	-12	0	-20
15	-12	1	-19

4 k 4

0	87	86	4
1	48	52	-33
2	12	7	13
3	26	28	-13
4	23	22	3
5	107	104	17
6	200	204	-23
7	45	41	30
8	54	52	13
9	9	3	10
10	52	56	-31
11	9	6	7
12	12	18	-19
13	12	14	-4
14	-9	0	-10

4 k 5

1	13	13	-2
2	22	26	-26
3	93	93	0
4	39	39	1
5	34	32	12
6	4	6	-2
7	58	55	24
8	36	39	-16
9	45	43	14
10	21	24	-13
11	24	25	-7
12	19	22	-14
13	5	9	-7

4 k 6

0	70	73	-15
1	23	28	-25
2	8	7	0
3	70	73	-21
4	29	31	-9
5	9	11	-4
6	21	27	-34
7	39	36	18
8	2	4	-1
9	27	22	24
10	26	23	17

4 k 7

1	26	32	-37
2	7	4	3
3	-13	3	-25
4	14	15	-3
5	5	9	-6
6	-7	5	-10
7	-6	8	-12

5 k 0

0	382	352	72
1	126	127	-9
2	120	116	30
3	10	14	-17
4	84	88	-34
5	58	55	31
6	60	58	12
7	92	95	-27
8	-9	1	-17
9	28	33	-31
10	47	46	12
11	38	41	-19
12	39	48	-67
13	37	46	-66
14	27	29	-8
15	24	25	-7
16	21	22	-2

5 k 1

1	51	50	13
2	153	141	72
3	149	144	30
4	69	74	-52
5	-2	0	-1
6	51	54	-23
7	38	41	-17
8	61	60	15
9	64	67	-25
10	95	96	-9
11	58	63	-42
12	-13	3	-27
13	-15	3	-35
14	28	32	-21
15	22	23	-4
16	22	22	0

5 k 2

0	28	20	36
1	87	86	14
2	36	36	-1
3	122	117	35
4	198	202	-18
5	98	99	-1
6	44	39	34
7	27	8	83
8	92	91	10
9	65	59	45
10	26	27	-9
11	11	12	-2
12	19	28	-51
13	-15	1	-31
14	-2	9	-12
15	3	9	-7

5 k 3

1	18	24	-37
2	12	14	-6
3	34	31	22
4	36	31	30
5	240	245	-20
6	127	120	43
7	18	2	41
8	63	61	13
9	76	77	-3
10	24	20	20
11	9	11	-5
12	-8	0	-8
13	6	13	-14
14	21	19	7

5 k 4

0	120	125	-28

1	18	13	20
2	35	40	-38
3	112	116	-27
4	74	76	-16
5	42	39	17
6	32	34	-10
7	27	28	-5
8	40	42	-12
9	71	74	-18
10	47	48	-10
11	21	22	-5
12	25	21	16
13	20	22	-7

5 k 5

1	49	45	27
2	39	43	-27
3	19	23	-20
4	-9	7	-19
5	26	32	-31
6	13	14	-5
7	3	0	1
8	21	25	-19
9	26	26	-1
10	7	17	-25
11	5	12	-14

5 k 6

0	30	28	9
1	-9	0	-12
2	4	18	-37
3	-8	2	-9
4	10	17	-22
5	-12	10	-31
6	0	2	0
7	16	7	20
8	-8	4	-11

5 k 7

1	-14	3	-28
2	-16	1	-35
3	7	0	6

6 k 0

0	-5	11	-21
1	77	79	-14
2	41	33	64
3	24	23	5
4	53	51	11
5	71	73	-16
6	23	26	-18
7	32	31	8
8	62	60	15
9	80	76	25
10	103	104	-5
11	27	27	0
12	9	8	1
13	22	19	15
14	-9	3	-12
15	21	21	0

6 k 1

1	23	26	-15
2	85	85	4
3	84	84	3
4	43	40	20
5	87	95	-64
6	27	16	55
7	248	245	10
8	124	126	-13
9	16	9	22
10	18	15	10
11	32	31	9
12	-6	3	-6
13	11	14	-8
14	-3	11	-16
15	2	8	-6

6 k 2

0	-12	13	-40
1	62	61	10
2	59	58	9
3	40	40	0
4	19	4	49
5	67	63	25
6	177	178	-3
7	88	93	-38
8	87	88	-4
9	78	76	16
10	17	21	-15
11	35	37	-11
12	2	7	-5
13	5	10	-8
14	11	15	-12

6 k 3

1	4	2	2
2	48	52	-33
3	10	3	13
4	110	112	-11
5	14	14	0
6	53	55	-17
7	34	34	4
8	24	21	16
9	57	58	-6
10	28	26	9
11	12	8	11
12	20	17	8
13	25	24	2

6 k 4

0	68	82	-82
1	25	24	0
2	35	41	-43
3	78	79	-1
4	-6	10	-21
5	13	16	-11
6	-10	1	-14
7	33	38	-31
8	38	40	-16
9	28	23	25
10	17	17	0
11	12	13	-1

6 k 5

1	24	32	-45
2	9	15	-19
3	-9	7	-16
4	27	20	31
5	-13	1	-22
6	-15	4	-34
7	16	13	10
8	9	2	9
9	6	4	2

6 k 6

0	13	14	-1
1	-9	5	-14
2	-15	1	-29
3	-9	5	-12
4	10	0	10
5	7	7	0

7 k 0

0	33	35	-11
1	20	18	19
2	82	84	-15
3	31	33	-14
4	83	81	18
5	161	161	0
6	68	64	29
7	48	30	109
8	50	49	12
9	25	26	-5
10	23	20	10
11	20	22	-8
12	9	17	-25
13	4	11	-14
14	-14	4	-29

7 k 1

1	10	9	5
2	11	15	-18
3	42	38	26
4	74	75	-11
5	161	160	4
6	44	42	15
7	45	41	27
8	25	22	13
9	44	46	-12
10	54	55	0
11	9	3	9
12	-5	7	-10
13	3	9	-8

7 k 2

0	54	53	5
1	89	95	-41
2	71	75	-33
3	95	98	-23
4	24	24	0
5	14	11	7
6	8	15	-21
7	18	20	-8
8	-8	5	-14
9	26	29	-16
10	51	53	-11
11	20	25	-24
12	37	36	9

7 k 3

1	62	67	-41
2	13	12	3
3	-13	1	-26
4	11	21	-37
5	-12	5	-26
6	-5	12	-25
7	18	22	-20
8	7	6	2
9	20	25	-22
10	32	31	6
11	7	4	4

7 k 4

0	18	17	2
1	-1	7	-7
2	14	21	-27
3	7	10	-5
4	16	19	-12
5	7	10	-7
6	-9	7	-17
7	15	11	11
8	-8	0	-7
9	4	2	0

7 k 5

1	-11	5	-19
2	-12	3	-20
3	18	19	-6
4	17	20	-12
5	-9	6	-15

8 k 0

0	21	17	14
1	-11	0	-19
2	63	61	13
3	32	30	14
4	73	73	-2
5	92	90	13
6	46	43	22
7	66	66	1
8	49	51	-16
9	83	84	-6
10	48	48	2
11	15	10	12
12	17	16	1

8 k 1

1	13	9	13
2	14	5	22
3	77	75	17
4	46	44	14
5	81	81	1
6	22	19	15
7	24	23	3
8	27	24	15
9	16	13	9
10	39	42	-19
11	13	19	-21

8 k 2

0	15	25	-33
1	16	21	-19
2	73	74	-6
3	12	14	-4
4	20	16	14
5	19	20	-3
6	16	16	2
7	-6	1	-4
8	39	43	-26
9	20	21	-4
10	21	17	13

8 k 3

1	8	10	-5
2	20	28	-38
3	8	4	5
4	7	11	-10
5	-14	2	-28
6	12	8	7
7	-6	3	-6
8	4	1	1

8 k 4

0	-13	9	-22
1	-7	6	-11
2	-15	3	-32
3	-7	5	-10
4	-5	2	-4
5	9	14	-11

9 k 0

0	69	71	-11
1	74	74	-6
2	33	36	-17
3	40	38	9
4	17	10	20
5	17	11	18
6	15	5	22
7	17	19	-8

8	14	10	9	7	14	15	-2	7	9	8	1	2	40	39	5
9	12	5	13	8	4	10	-10					3	21	19	9
10	19	19	0					9	k	3		4	-4	4	-4
				9	k	2						5	-8	4	-10
9	k	1						1	-10	4	-15	6	16	10	16
				0	-4	1	-1	2	3	3	0				
1	44	46	-13	1	-15	2	-33	3	25	23	8	10	k	1	
2	23	20	16	2	21	20	3								
3	12	8	8	3	-11	4	-18	10	k	0		1	-14	7	-32
4	11	11	1	4	10	3	10					2	10	14	-11
5	-7	1	-7	5	14	17	-9	0	17	1	22	3	-4	2	-3
6	3	6	-3	6	-10	3	-14	1	18	10	23				

Table 5. Observed and Calculated Structure Factors for

$Me_2N - III - CHO$

The columns contain, in order, ℓ, $10F_{obs}$, $10F_{calc}$ and $10\left(\frac{F^2_{obs}-F^2_{calc}}{\sigma F^2_{obs}}\right)$. A minus sign preceding F_{obs} indicates that F^2_{obs} is negative.

J-2526-m80

Me2N -- III -- CHO

0 0 1

4	565	584	-38
6	695	707	-19
8	504	511	-16
10	321	317	12
12	43	50	-23
14	236	238	-6
16	3	8	-2
18	95	97	-10
20	97	97	-1
22	287	295	-26
24	389	392	-8
26	-21	6	-11
28	34	41	-10
30	-10	13	-5
32	68	59	18

0 2 1

0	2830	2788	14
1	1060	1056	4
2	473	475	-4
3	335	333	4
4	469	469	0
5	223	221	5
6	241	239	6
7	22	17	5
8	59	70	-38
9	164	167	-10
10	307	308	0
11	828	808	27
12	215	212	12
13	317	317	1
14	136	125	42
15	130	129	4
16	115	123	-32
17	22	28	-9
18	204	209	-20
19	25	27	-1
20	145	155	-35
21	100	100	0
22	196	201	-17
23	75	49	36
24	373	375	-6
25	86	87	0
26	98	102	-12
27	35	3	24
28	-16	19	-12
29	48	44	7
30	-18	12	-8
31	45	46	-1
32	35	16	17

0 4 1

0	797	778	22
1	586	575	20
2	42	39	5
3	26	6	19
4	165	165	0
5	109	110	-1
6	146	146	0
7	188	193	-20
8	13	5	4
9	209	212	-11
10	305	306	-2
11	459	444	34
12	438	432	13
13	338	336	3
14	173	175	-10
15	258	257	3
16	51	50	2
17	59	63	-10
18	76	72	10
19	46	40	11
20	117	118	-3
21	-28	15	-23
22	131	141	-30
23	142	146	-13
24	164	160	9
25	61	66	-9
26	75	75	1
27	29	36	-7
28	-25	25	-22
29	32	16	13
30	18	16	1

0 6 1

0	218	217	1
1	299	297	5
2	80	81	-1
3	81	89	-23
4	30	35	-7
5	40	52	-26
6	80	81	-3
7	41	38	5
8	40	48	-14
9	149	155	-19
10	189	183	17
11	233	240	-20
12	485	477	16
13	17	7	4
14	155	152	10
15	137	139	-6
16	137	134	9
17	64	71	-14
18	38	39	-2
19	22	36	-15
20	34	32	1
21	55	53	3
22	73	65	15
23	56	60	-6
24	15	27	-8
25	20	27	-6

0 8 1

0	45	35	9
1	29	52	-32
2	38	31	8
3	56	41	23
4	34	22	12
5	51	51	0
6	2	7	-1
7	17	2	5
8	51	59	-11
9	107	107	0
10	219	223	-10
11	-27	23	-17
12	312	318	-16
13	119	119	1
14	55	59	-6
15	83	84	-2

1 0 1

2	102	109	-38
4	321	340	-69
6	294	300	-21
8	96	92	15
10	30	51	-53
12	532	534	-4
14	197	204	-27
16	31	9	24
18	151	144	24
20	153	151	10
22	376	384	-22
24	271	276	-14
26	44	33	18
28	29	2	19
30	25	3	11
32	19	22	-2

1 1 1

1	20	34	-24
2	368	373	-14
3	45	39	16
4	478	494	-37
5	23	7	14
6	541	556	-30
7	57	60	-11
8	431	436	-11
9	134	134	1
10	140	138	8
11	184	180	18
12	51	51	1
13	130	125	24
14	240	243	-10
15	125	118	29
16	93	98	-16
17	77	78	-2
18	46	44	4
19	25	28	-4
20	94	94	0
21	27	4	18
22	159	162	-9
23	130	117	37
24	428	433	-11
25	54	12	51
26	80	74	16
27	5	5	0
28	63	61	5
29	24	0	8
30	85	84	2
31	22	1	8
32	50	57	-12
33	18	7	4

1 2 1

1	213	223	-45
2	277	278	-2
3	201	197	18
4	312	307	16
5	15	10	3
6	150	147	14
7	117	114	13
8	15	18	-3
9	146	141	22
10	12	12	0
11	426	414	29
12	42	31	16
13	103	107	-18
14	-2	2	0
15	123	117	22
16	21	17	4
17	107	102	17
18	34	34	0
19	54	50	10
20	27	22	6
21	66	70	-10
22	160	164	-12
23	207	204	8
24	217	226	-28
25	28	29	-1
26	-24	8	-14
27	17	10	4
28	11	38	-23
29	31	1	18
30	48	42	9
31	23	0	10
32	20	21	0

1 3 1

1	203	207	-15
2	153	152	2
3	61	65	-12
4	140	138	10
5	38	36	5
6	152	148	16
7	54	48	17
8	112	110	7
9	62	65	-7
10	27	18	12
11	175	179	-14
12	130	125	18
13	210	204	22
14	70	66	11
15	141	138	9
16	24	30	-8
17	59	65	-15
18	24	15	9
19	-17	0	-8
20	37	22	22
21	21	14	5
22	45	43	2
23	195	200	-16
24	286	282	11
25	18	28	-8
26	46	49	-4
27	52	45	11
28	49	47	2
29	-9	13	-5
30	73	71	3
31	-24	9	-11

1 4 1

1	190	192	-10
2	-11	7	-5
3	35	42	-16
4	27	40	-23
5	81	80	3
6	16	12	3
7	134	137	-12
8	17	0	8
9	75	76	0
10	143	138	18
11	143	147	-13
12	103	96	23
13	75	76	-1
14	27	20	8
15	15	13	1
16	-17	0	-7
17	27	34	-10
18	33	26	9
19	45	40	10
20	29	31	-2
21	25	35	-12
22	31	38	-9
23	149	148	3
24	59	72	-25
25	112	108	10
26	13	8	1
27	81	73	18
28	-23	2	-9
29	23	26	-2

1 5 1

1	83	88	-14
2	140	133	27
3	42	43	0
4	123	121	6
5	-15	9	-8
6	85	85	0
7	-15	6	-7
8	15	8	4
9	65	64	2
10	102	103	-4
11	44	48	-8
12	136	132	15
13	160	161	-2
14	74	73	3
15	111	111	0
16	57	49	17
17	42	49	-12

Me2N -- III -- CHO

18	22	0	11
19	17	12	3
20	18	30	-12
21	15	21	-4
22	-25	19	-18
23	152	157	-13
24	84	86	-3
25	13	25	-8
26	22	11	6
27	39	35	4

1 6 1

1	16	30	-15
2	77	81	-12
3	16	22	-3
4	83	80	9
5	-22	10	-14
6	64	62	4
7	-13	8	-5
8	-10	10	-5
9	63	64	-2
10	150	149	1
11	69	70	-1
12	74	75	-1
13	52	50	3
14	69	69	0
15	21	26	-4
16	28	26	1
17	13	26	-10
18	9	17	-4
19	13	0	3
20	55	46	15
21	-23	11	-11
22	-13	10	-5
23	96	98	-6
24	41	34	8

1 7 1

1	-10	12	-6
2	43	44	-2
3	27	6	14
4	31	33	-2
5	31	29	2
6	20	13	5
7	35	44	-14
8	22	25	-2
9	82	87	-13
10	63	65	-2
11	15	20	-3
12	141	142	-3
13	79	83	-8
14	44	52	-11
15	88	78	22
16	33	36	-2
17	40	48	-11
18	5	6	0
19	-24	1	-10
20	-32	10	-20

1 8 1

1	45	44	1
2	36	19	18
3	14	11	1
4	-7	24	-11
5	22	1	9
6	35	19	16
7	37	13	22
8	-21	9	-9
9	61	73	-22
10	38	56	-23
11	34	9	18
12	118	124	-13
13	-10	1	-1
14	19	11	3

2 0 1

0	859	885	-44
2	334	331	9
4	326	347	-69
6	139	146	-36
8	152	152	2
10	482	480	3
12	614	604	18
14	108	109	0
16	14	21	-6
18	143	143	0
20	163	164	-3
22	45	43	4
24	160	156	13
26	143	143	0
28	57	58	0
30	5	18	-5
32	36	8	22

2 1 1

0	2533	2531	0
1	628	637	-16
2	809	819	-15
3	353	353	0
4	599	606	-18
5	247	247	1
6	418	410	20
7	127	128	-6
8	182	177	18
9	-24	19	-30
10	174	171	9
11	369	362	18
12	294	294	0
13	49	53	-10
14	355	351	11
15	-15	1	-6
16	36	24	20
17	24	24	0
18	51	53	-4
19	29	2	23
20	39	36	5
21	61	51	24
22	219	220	-4
23	45	20	31
24	246	252	-19
25	61	53	15
26	59	55	8
27	10	1	2
28	88	87	2
29	39	27	14
30	38	34	5
31	23	27	-3
32	-9	12	-4

2 2 1

0	1166	1157	8
1	414	408	14
2	379	369	27
3	-20	0	-12
4	217	205	49
5	104	95	40
6	246	233	49
7	179	167	50
8	88	86	4
9	264	249	52
10	107	98	35
11	39	53	-38
12	377	385	-19
13	30	4	26
14	106	103	11
15	131	123	31
16	94	94	0
17	53	55	-6
18	13	20	-6
19	23	7	13
20	111	106	17
21	48	48	0
22	93	93	1
23	-2	10	-2
24	88	85	8
25	33	31	2
26	71	70	1
27	30	18	11
28	29	24	5
29	27	20	6
30	30	20	9
31	-18	11	-8
32	22	27	-4

2 3 1

0	1007	989	17
1	781	775	9
2	433	426	18
3	155	162	-32
4	324	314	29
5	9	20	-9
6	191	183	30
7	29	29	0
8	-21	13	-19
9	59	53	18
10	343	335	22
11	421	412	23
12	86	88	-7
13	285	284	3
14	269	271	-6
15	146	147	-4
16	15	21	-5
17	21	24	-3
18	91	92	-5
19	78	76	6
20	85	87	-4
21	29	16	12
22	155	152	7
23	135	138	-10
24	189	186	7
25	70	73	-8
26	29	19	8
27	30	30	0
28	24	19	3
29	-20	1	-7
30	-32	13	-20

2 4 1

0	522	537	-26
1	33	49	-31
2	62	52	26
3	209	202	24
4	94	97	-9
5	114	113	5
6	74	76	-5
7	24	23	1
8	22	12	9
9	209	206	9
10	-14	7	-6
11	143	137	24
12	167	160	24
13	114	119	-17
14	18	18	0
15	66	68	-5
16	73	69	11
17	81	78	7
18	14	5	4
19	61	64	-7
20	49	59	-20
21	34	42	-13
22	87	76	28
23	56	49	12
24	92	77	34
25	5	15	-3
26	32	41	-10
27	-25	9	-12
28	-33	9	-20
29	24	17	5

2 5 1

0	280	279	1
1	434	421	30
2	30	25	6
3	72	77	-14
4	64	63	3
5	29	19	13
6	93	92	2
7	28	25	4
8	56	51	11
9	66	71	-12
10	215	216	-3
11	236	234	5
12	382	377	11
13	155	150	17
14	219	221	-6
15	160	159	1
16	117	124	-21
17	-18	14	-11
18	38	18	26
19	55	46	15
20	35	33	2
21	-22	19	-16
22	84	84	0
23	140	137	8
24	43	37	7
25	36	25	12
26	14	16	0
27	-11	16	-6

2 6 1

0	170	171	-3
1	21	1	11
2	83	85	-7
3	36	27	12
4	57	56	2
5	17	2	6
6	14	10	2
7	53	44	16
8	93	93	-1
9	117	113	12
10	49	51	-2
11	29	40	-13
12	77	80	-7
13	47	46	2
14	45	57	-22
15	65	68	-8
16	39	31	10
17	65	58	14
18	-13	7	-4
19	21	23	-1
20	44	44	0
21	35	1	22
22	54	51	4
23	14	3	3
24	87	74	27

2 7 1

0	-24	15	-12
1	142	146	-12
2	-17	3	-5
3	94	91	9
4	35	2	25
5	97	95	3
6	29	21	8
7	54	44	17
8	-11	4	-2
9	44	59	-24
10	206	213	-22
11	56	71	-24
12	343	339	8
13	62	68	-9

14	125	118	18
15	68	72	-7
16	66	72	-12
17	39	13	24
18	21	1	8
19	27	2	14

2 8 1

0	146	156	-20
1	28	24	3
2	53	52	1
3	11	20	-5
4	20	30	-8
5	-28	1	-15
6	26	7	11
7	34	20	12
8	-2	34	-19
9	55	56	-1
10	16	3	4
11	30	29	0
12	54	57	-4
13	22	11	5

3 0 1

2	149	151	-10
4	260	263	-12
6	81	83	-7
8	-3	22	-16
10	292	288	13
12	53	55	-4
14	130	125	18
16	53	53	1
18	144	141	10
20	218	216	7
22	201	195	19
24	293	299	-15
26	50	56	-12
28	56	53	5
30	62	58	7
32	35	42	-8

3 1 1

1	208	214	-24
2	319	322	-8
3	166	169	-13
4	190	190	-1
5	27	27	0
6	33	34	0
7	71	69	6
8	105	109	-16
9	92	92	0
10	84	83	0
11	234	230	16
12	322	317	15
13	15	7	5
14	-10	10	-6
15	41	49	-17
16	33	19	19
17	67	69	-7
18	11	0	3
19	56	58	-4
20	29	15	14
21	61	58	5
22	283	290	-20
23	120	111	25
24	52	62	-18
25	-18	2	-7
26	26	30	-3
27	29	20	8
28	33	21	11
29	-16	15	-9
30	45	41	5
31	3	4	0

3 2 1

1	41	37	9
2	27	21	9
3	-4	3	0
4	4	19	-11
5	94	97	-15
6	31	32	-3
7	82	84	-7
8	24	12	13
9	118	117	1
10	255	245	33
11	130	130	-1
12	77	78	-1
13	-22	2	-13
14	123	130	-28
15	37	31	10
16	49	40	19
17	26	21	5
18	129	130	-4
19	-10	8	-4
20	181	183	-9
21	51	42	16
22	202	200	6
23	80	77	5
24	241	243	-6
25	53	51	3
26	50	47	3
27	77	68	19
28	34	24	9
29	41	29	15
30	19	32	-11
31	0	8	-1

3 3 1

1	68	52	47
2	281	278	10
3	64	65	-3
4	282	281	2
5	112	110	10
6	161	158	11
7	141	136	21
8	16	8	5
9	112	110	7
10	40	38	3
11	228	231	-12
12	8	9	0
13	17	3	7
14	108	109	-3
15	59	59	0
16	62	61	3
17	29	31	-3
18	-25	7	-17
19	25	2	15
20	69	64	11
21	96	100	-10
22	64	70	-13
23	149	146	9
24	32	29	3
25	101	98	5
26	25	19	4
27	27	30	-3
28	-11	2	-2
29	19	3	6

3 4 1

1	87	92	-20
2	70	69	1
3	57	55	5
4	48	47	1
5	38	37	1
6	38	24	23
7	-11	17	-11
8	63	66	-6
9	181	176	17
10	162	161	2
11	157	150	24
12	42	49	-12
13	62	66	-11
14	76	72	12
15	87	82	12
16	14	9	3
17	48	43	8
18	52	57	-9
19	19	4	8
20	71	76	-11
21	40	42	-3
22	119	115	11
23	132	138	-17
24	141	128	34
25	33	36	-3
26	-19	3	-6
27	78	69	17
28	-23	11	-11

3 5 1

1	43	41	5
2	32	14	20
3	-5	9	-3
4	6	4	0
5	58	63	-14
6	40	42	-2
7	101	107	-17
8	50	48	4
9	78	75	7
10	161	162	-2
11	119	116	9
12	12	14	0
13	-19	0	-8
14	18	24	-5
15	70	72	-5
16	-32	3	-22
17	36	44	-12
18	-14	16	-9
19	34	18	18
20	22	20	1
21	52	61	-15
22	16	18	-1
23	91	95	-7
24	86	78	16
25	84	81	6

3 6 1

1	47	48	-1
2	22	9	9
3	14	31	-15
4	-17	4	-6
5	19	13	4
6	-13	10	-6
7	-13	7	-5
8	72	71	4
9	107	105	4
10	79	83	-11
11	36	36	0
12	141	139	6
13	39	39	0
14	33	30	3
15	26	27	0
16	16	6	4
17	-10	0	-2
18	-10	10	-4
19	-31	16	-20
20	22	4	8
21	36	19	15
22	33	33	0

3 7 1

1	72	65	15
2	9	18	-5
3	32	18	14
4	10	2	2
5	9	16	-3
6	4	23	-9
7	-16	11	-7
8	43	35	11
9	59	54	9
10	110	115	-12
11	55	56	-1
12	67	68	-1
13	33	22	9
14	35	11	19
15	27	22	4
16	-3	7	-1
17	27	21	4
18	-27	0	-11

3 8 1

1	16	29	-9
2	16	2	4
3	43	31	16
4	23	17	4
5	-11	6	-3
6	26	11	10
7	-11	22	-10
8	33	40	-8
9	53	62	-15
10	45	36	10
11	-3	21	-7

4 0 1

0	915	919	-4
2	392	386	17
4	135	140	-21
6	110	115	-20
8	216	219	-9
10	27	23	5
12	268	267	3
14	166	163	12
16	131	134	-11
18	60	58	5
20	68	65	5
22	66	68	-3
24	147	152	-14
26	78	73	11
28	79	76	5
30	30	29	1

4 1 1

0	401	402	-1
1	133	139	-27
2	21	4	13
3	27	32	-7
4	430	424	13
5	51	55	-9
6	299	295	13
7	83	86	-11
8	10	0	3
9	78	83	-14
10	496	496	0
11	129	127	8
12	246	244	4
13	-5	11	-4
14	367	364	7
15	89	98	-30
16	152	152	-1
17	16	25	-8
18	54	51	5
19	46	50	-7
20	139	140	-3
21	86	86	0
22	111	112	-4
23	30	36	-7
24	66	63	6
25	37	32	6
26	50	45	10
27	23	21	1
28	29	26	3

29	48	32	23
30	29	26	3

4 2 1

0	680	666	19
1	402	405	-9
2	380	377	9
3	65	73	-23
4	97	90	24
5	30	24	9
6	57	51	17
7	-18	11	-14
8	122	121	1
9	7	6	0
10	70	71	-1
11	115	116	-5
12	162	156	22
13	125	130	-18
14	178	180	-6
15	79	80	-3
16	102	97	16
17	42	45	-6
18	73	66	19
19	51	52	-1
20	40	34	10
21	33	0	23
22	75	78	-4
23	86	70	36
24	122	118	10
25	58	56	3
26	56	55	0
27	-20	22	-16
28	-18	43	-35
29	22	6	8

4 3 1

0	595	606	-16
1	75	86	-35
2	24	13	9
3	305	300	16
4	257	244	42
5	160	160	1
6	211	202	34
7	18	23	-5
8	77	68	27
9	165	159	24
10	138	144	-25
11	55	60	-14
12	209	207	8
13	144	146	-7
14	214	220	-21
15	100	102	-5
16	214	215	-2
17	57	50	15
18	59	61	-4
19	19	12	4
20	55	61	-13
21	65	53	22
22	129	125	11
23	17	2	5
24	37	37	0
25	63	51	21
26	38	25	13
27	-18	0	-6
28	56	49	9

4 4 1

0	235	216	46
1	449	433	35
2	177	170	23
3	63	66	-8
4	-19	12	-13
5	18	10	5
6	-11	24	-18
7	-12	25	-18
8	75	77	-5
9	-12	21	-13
10	136	133	8
11	178	175	8
12	119	114	14
13	143	145	-7
14	187	192	-13
15	101	103	-5
16	26	10	12
17	41	40	2
18	42	39	3
19	38	46	-14
20	6	12	-2
21	17	9	4
22	44	44	0
23	109	105	10
24	50	48	3
25	35	38	-4
26	46	38	11

4 5 1

0	301	312	-24
1	-24	3	-12
2	187	190	-8
3	215	213	7
4	126	123	7
5	151	155	-14
6	20	17	2
7	57	62	-12
8	110	108	6
9	118	114	10
10	116	115	2
11	13	5	2
12	93	93	0
13	127	130	-8
14	20	22	-1
15	66	68	-4
16	88	92	-12
17	31	36	-5
18	-26	2	-13
19	-13	3	-3
20	63	60	5
21	33	28	4
22	100	92	17
23	-2	3	0
24	113	99	31

4 6 1

0	41	48	-9
1	184	186	-7
2	25	22	3
3	29	41	-15
4	65	67	-4
5	-15	12	-8
6	-13	19	-10
7	44	29	20
8	53	58	-10
9	-36	7	-26
10	161	160	0
11	60	61	-1
12	226	230	-13
13	41	27	15
14	139	136	7
15	72	61	24
16	34	21	13
17	32	29	2
18	26	24	1
19	31	28	2
20	22	3	7

4 7 1

0	231	242	-22
1	2	25	-9
2	138	145	-20
3	26	21	4
4	46	42	5
5	35	43	-10
6	-20	4	-7
7	34	14	17
8	68	71	-5
9	59	53	10
10	25	27	-2
11	14	12	0
12	70	61	16
13	-30	8	-16
14	27	20	5
15	63	61	2
16	73	70	3

4 8 1

0	55	58	-3
1	27	17	6
2	-17	6	-5
3	34	23	10
4	61	59	3
5	34	23	10
6	3	15	-3

5 0 1

2	123	125	-7
4	21	5	12
6	88	85	11
8	244	242	7
10	238	236	9
12	161	155	23
14	36	26	15
16	61	65	-9
18	128	131	-9
20	153	150	9
22	132	127	15
24	30	21	8
26	40	42	-2
28	7	14	-2

5 1 1

1	87	94	-25
2	103	107	-14
3	47	48	-2
4	125	130	-18
5	56	54	5
6	53	47	14
7	96	94	5
8	136	139	-11
9	22	18	4
10	184	181	8
11	42	31	19
12	-28	9	-22
13	12	6	2
14	39	42	-5
15	-4	21	-11
16	44	37	13
17	33	30	4
18	25	11	11
19	9	16	-4
20	59	65	-12
21	37	31	8
22	109	105	10
23	-30	7	-16
24	148	146	5
25	16	37	-19
26	25	33	-7
27	37	42	-5
28	-28	18	-19

5 2 1

1	77	74	7
2	158	158	0
3	-8	1	-2
4	78	82	-14
5	30	19	13
6	-16	8	-9
7	47	53	-12
8	174	176	-7
9	43	54	-21
10	181	181	-1
11	114	115	-2
12	56	59	-7
13	47	39	14
14	84	83	3
15	23	1	12
16	28	21	7
17	20	19	1
18	106	106	0
19	60	50	17
20	158	158	2
21	95	91	9
22	55	55	1
23	110	96	36
24	27	17	8
25	28	22	4
26	33	22	10
27	27	27	0

5 3 1

1	19	25	-6
2	-11	2	-3
3	-13	2	-4
4	33	39	-10
5	65	63	3
6	117	114	9
7	50	61	-27
8	63	65	-3
9	116	117	-1
10	173	176	-10
11	54	42	23
12	37	36	2
13	-10	6	-3
14	74	73	3
15	35	37	-2
16	2	18	-6
17	36	27	11
18	-17	21	-16
19	40	29	14
20	51	58	-11
21	58	52	10
22	143	139	11
23	73	72	1
24	89	88	1
25	24	14	6
26	13	14	0

5 4 1

1	135	136	-5
2	68	67	3
3	54	59	-9
4	26	23	2
5	23	18	5
6	38	31	9
7	108	106	4
8	124	126	-4
9	128	134	-16
10	28	2	17
11	80	83	-7
12	-14	1	-4
13	61	63	-5
14	53	47	11
15	-4	28	-17
16	-18	7	-8
17	-16	15	-9
18	43	48	-7
19	-6	18	-6
20	82	83	-2
21	77	90	-28
22	42	19	22
23	107	109	-3

24	69	52	26

5 5 1

1	70	67	7
2	58	63	-11
3	21	21	0
4	25	14	8
5	34	22	13
6	7	22	-9
7	-9	19	-10
8	32	31	1
9	121	123	-6
10	76	80	-9
11	40	46	-8
12	94	87	17
13	15	9	3
14	-17	6	-6
15	26	35	-9
16	33	25	8
17	34	29	5
18	-8	9	-2
19	43	32	14
20	44	46	-2
21	25	24	0
22	61	57	6

5 6 1

1	46	50	-6
2	36	19	18
3	53	52	0
4	4	19	-7
5	21	8	7
6	44	44	0
7	66	65	3
8	84	83	3
9	55	47	13
10	86	84	5
11	33	38	-7
12	25	28	-2
13	7	20	-6
14	19	2	6
15	16	19	-1
16	24	7	9
17	15	16	0
18	-16	9	-5

5 7 1

1	23	4	9
2	2	36	-21
3	-27	5	-13
4	30	23	6
5	-7	1	-1
6	36	36	0
7	27	24	2
8	21	37	-14
9	21	23	-1
10	45	48	-4
11	19	19	0
12	71	62	17

6 0 1

0	179	180	-1
2	40	40	0
4	161	166	-17
6	136	138	-6
8	58	63	-10
10	313	305	22
12	239	234	17
14	246	241	14
16	12	10	0
18	107	107	0
20	75	79	-9
22	44	37	9
24	67	66	1
26	32	46	-17

6 1 1

0	261	261	0
1	66	64	5
2	149	150	-5
3	36	41	-8
4	90	87	10
5	78	70	24
6	95	100	-16
7	32	29	5
8	110	104	19
9	26	8	15
10	59	51	17
11	18	20	-1
12	86	80	18
13	61	66	-12
14	24	4	12
15	44	40	6
16	240	233	19
17	12	26	-10
18	80	82	4
19	7	26	12
20	79	83	-8
21	-4	3	0
22	34	21	12
23	33	20	11
24	87	91	-9
25	-24	22	-18
26	-35	17	-27

6 2 1

0	303	299	7
1	75	72	7
2	42	58	-32
3	89	83	18
4	116	112	12
5	-7	1	-1
6	140	141	-3
7	58	48	21
8	114	119	-17
9	112	111	2
10	186	185	1
11	106	105	2
12	230	234	-12
13	67	71	-7
14	217	213	11
15	115	113	4
16	68	70	-5
17	48	38	15
18	33	37	-4
19	19	20	-1
20	34	41	-9
21	54	46	13
22	51	47	4
23	-29	9	-16
24	60	50	16
25	51	38	18

6 3 1

0	171	169	4
1	181	181	1
2	53	53	1
3	-18	19	-15
4	122	126	-14
5	92	94	-6
6	42	43	-2
7	14	14	0
8	142	143	-5
9	-16	7	-6
10	56	49	12
11	106	103	8
12	19	10	5
13	75	76	-3
14	53	59	-10
15	46	57	-18
16	128	124	9
17	49	46	5
18	46	36	14
19	26	9	10
20	68	70	-5
21	56	47	14
22	21	9	5
23	19	21	-1
24	17	27	-7

6 4 1

0	299	309	-22
1	54	60	-12
2	97	95	6
3	183	181	6
4	48	38	14
5	105	101	10
6	47	41	10
7	-22	14	-14
8	30	34	-4
9	141	139	6
10	87	89	-4
11	80	73	15
12	132	136	-10
13	153	157	-12
14	86	88	-5
15	71	76	-10
16	65	60	10
17	32	34	-2
18	26	18	6
19	-18	4	-5
20	-22	25	-18
21	-22	15	-11

6 5 1

0	70	69	0
1	139	142	-9
2	33	32	0
3	35	9	23
4	128	129	-3
5	76	81	-10
6	-13	21	-11
7	-8	8	-2
8	51	71	-36
9	-1	2	0
10	61	61	1
11	86	74	26
12	79	79	0
13	30	29	0
14	47	56	-14
15	45	40	7
16	74	73	0
17	33	38	-6
18	53	52	2

6 6 1

0	241	249	-17
1	22	7	6
2	176	175	4
3	60	61	-1
4	-20	4	-7
5	51	42	13
6	27	20	6
7	-14	1	-3
8	34	34	0
9	84	83	1
10	41	32	10
11	37	40	-4
12	36	43	-8
13	42	57	-22
14	-21	1	-7

6 7 1

0	94	90	5
1	-28	31	-26
2	-25	0	-10
3	-31	29	-26
4	98	98	0

7 0 1

2	96	104	-23
4	119	117	4
6	54	50	7
8	199	197	6
10	73	69	9
12	71	66	10
14	24	25	0
16	31	20	10
18	71	74	-6
20	47	46	1
22	24	9	8

7 1 1

1	27	25	3
2	64	78	-35
3	16	6	5
4	66	73	-16
5	-16	7	-7
6	86	92	-16
7	33	29	4
8	56	62	-12
9	-21	33	-29
10	135	138	-10
11	44	40	5
12	66	67	-2
13	-12	3	-3
14	61	60	1
15	-21	24	-19
16	28	18	8
17	-29	16	-19
18	49	46	3
19	-19	8	-8
20	71	65	12
21	49	37	15
22	63	65	-3
23	13	18	-2

7 2 1

1	65	64	1
2	51	41	17
3	60	60	0
4	16	2	5
5	34	36	-1
6	113	115	-6
7	93	91	6
8	177	173	11
9	20	20	0
10	97	98	-3
11	45	34	16
12	-26	7	-15
13	-33	5	-23
14	36	25	12
15	7	3	0
16	-13	0	-3
17	-10	5	-2
18	41	53	-17
19	12	19	-4
20	-8	21	-9
21	15	31	-11
22	54	55	-1

7 3 1

1	29	33	-4
2	35	30	6
3	27	15	10
4	26	33	-8
5	12	12	0

6	51	60	-16
7	47	54	-13
8	65	57	16
9	50	57	-14
10	52	55	-5
11	89	89	-2
12	50	49	0
13	35	24	12
14	31	33	-2
15	43	34	11
16	30	12	14
17	37	23	15
18	22	10	7
19	32	21	10
20	33	28	4

7 4 l

1	13	6	2
2	64	58	12
3	26	35	-10
4	-17	25	-18
5	33	13	17
6	81	84	-6
7	42	48	-8
8	75	68	13
9	93	93	0
10	69	65	7
11	-17	7	-6
12	9	20	-6
13	-29	5	-14
14	-34	3	-20
15	41	34	9
16	-13	12	-5
17	62	44	27
18	18	34	-12

7 5 l

1	-16	19	-11
2	31	22	8
3	-16	25	-16
4	35	21	14
5	21	15	3
6	31	38	-8
7	57	53	6
8	56	42	21
9	43	36	9
10	21	7	7
11	72	68	7
12	36	10	20
13	29	14	11
14	-23	12	-12

7 6 l

1	24	30	-4
2	85	77	17
3	37	30	7
4	-29	8	-15
5	-23	0	-8
6	34	34	0

8 0 l

0	55	39	18
2	118	131	-40
4	23	35	-13
6	115	116	-2
8	8	10	0
10	-19	6	-7
12	93	96	-6
14	8	20	-6
16	164	163	2
18	-24	19	-15

8 1 l

0	87	83	8
1	39	39	0
2	44	40	5
3	28	28	0
4	29	17	11
5	27	2	15
6	35	35	0
7	24	16	5
8	104	104	0
9	43	43	0
10	156	148	22
11	35	39	-3
12	181	191	-28
13	29	37	-7
14	154	149	12
15	26	38	-11
16	47	45	1
17	29	12	12
18	89	85	10

8 2 l

0	-27	14	-12
1	30	39	-11
2	48	60	-24
3	33	23	9
4	47	52	-8
5	80	82	-4
6	67	61	11
7	-26	1	-12
8	67	63	7
9	25	30	-5
10	25	23	1
11	-23	6	-9
12	52	58	-9
13	43	53	-16
14	32	40	-9
15	38	36	2
16	98	99	-1
17	37	42	-5

8 3 l

0	131	134	-4
1	75	82	-15
2	29	28	0
3	73	70	5
4	40	48	-11
5	25	13	8
6	7	15	-2
7	25	26	-1
8	76	85	-19
9	100	95	12
10	78	80	-3
11	87	85	3
12	121	128	-18
13	97	95	4
14	94	87	15
15	50	60	-14

8 4 l

0	65	72	-9
1	62	62	-1
2	45	30	18
3	26	26	0
4	66	72	-10
5	46	45	1
6	-18	19	-12
7	40	38	2
8	53	48	8
9	29	30	-1
10	25	6	-11
11	37	31	6
12	-19	19	-12

8 5 l

0	158	165	-12
1	12	47	-27
2	102	112	-24
3	34	46	-14
4	30	56	-32

9 0 l

2	-11	4	-2
4	48	51	-4
6	122	124	-3
8	-22	4	-9
10	106	97	23
12	26	37	-10

9 1 l

1	19	12	4
2	65	62	5
3	13	24	-6
4	89	81	17
5	-25	13	-14
6	34	18	14
7	43	39	6
8	107	103	10
9	-37	11	-23
10	74	80	-10
11	21	14	3
12	36	28	8

9 2 l

1	23	16	5
2	34	23	10
3	30	14	12
4	-12	12	-5
5	-23	11	-10
6	81	86	-11
7	37	34	2
8	-29	11	-16
9	34	31	2
10	62	61	2

9 3 l

1	30	3	16
2	51	53	-4
3	29	32	-2
4	26	22	2
5	37	24	13
6	18	5	4