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This publication describes how to determine the amount of fire ant bait your spreader is delivering per acre. Although spreaders generally provide recommended settings and application speeds to achieve correct bait output, it is still a good idea to calibrate your spreader to ensure you are applying the correct amount of bait. Fire ant baits commonly require 1 to 1.5 pounds bait per acre. The following steps can be used to determine the output rate of your spreader:

**Step 1:** Measure a 100 foot long driving course (Fig. 1).

Fig. 1. Marking a driving course with a measuring tape.

**Step 2:** Select a gear and engine speed (RPM) setting that you could use in the nursery and time the application vehicle on the 100 feet course (Fig. 2). It is best to drive the course in one direction and then back. Then average the two travel times.

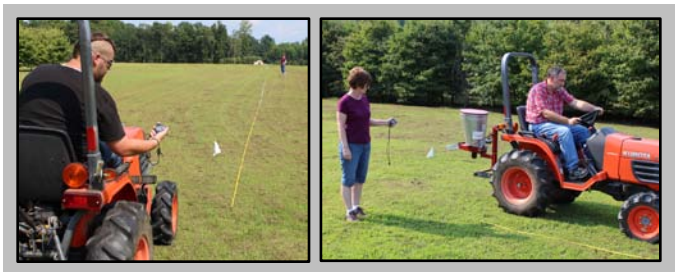

Fig. 2. Travel time can be timed by the vehicle operator (*left photo*) or with the help of another person *(right photo*).

**Step 3** (Optional but suggested): It will be helpful to measure travel times for multiple gear and engine speed settings to facilitate later calibration steps.

Fig. 3. *Left photo*: Moving the throttle lever on a tractor by hand to increase or decrease engine speed (RPM) on the tachometer. *Right photo*: Multiple gear and high/low options are typical of most tractors.

**Step 4.** Run the spreader for a few seconds and measure the width of the bait swath distributed by the spreader (Fig. 4). The edge of a cultivated field or a nursery row are good locations to calibrate because the bare soil allows you to see the bait particles.

Fig. 4. Measure the bait spreader swath width.

**Step 5:** Bait must be collected from the spreader to determine output rate. Some spreaders like the Herd® GT-77 have a chute attachment that facilitates collecting bait for calibration (Fig. 5). A five-gallon bucket lid with a slot cut large enough to fit over the chute opening is an excellent way to collect bait (Fig. 6). A plastic bag can be placed inside the bucket to catch the bait to facilitate the subsequent weighing. Other spreaders like the Vicon can have a plastic bag zip-tied to the dispensing spout to collect the bait (Fig. 7)


Fig. 5. *Left photo*: Chute attachment for a Herd® GT-77 spreader. *Middle photo*: Herd spreader without chute attachment. *Right photo*: Herd spreader with mounted chute attachment.

Fig. 6. *Left photo*: Five gallon bucket lined with trash bag on the ground in front of a Herd® GT-77 spreader with a slotted bucket lid slid over the end of the chute attachment. *Right photo*: Close-up of bucket lid slid onto chute attachment.



Fig. 7. *Left photo*: Vicon spreader with detachable spout attachment (see yellow arrow). Do Not go anywhere near the Vicon PTO shaft on the opposite side of the spreader during operation (see red circle with slash). Rotating PTO's Can Be Lethal. *Middle photo:* Spout attachment with a plastic bag zip-tied to the dispensing spout to catch bait. A bag with thicker plastic (i.e., heavier mil) works best because the moving spout will rub a hole in the bag over time. Note that the plastic bag has been slid onto the spout so that there are only a couple of inches of bag from the end of the spout opening. Do Not go near the swinging spout attachment during operation. *Right photo*: Plastic bag attached too far back on the spout attachment, which results in bag twisting when the spout is swinging side to side.

**Step 5 (continued):** Collect bait from the spreader for the same amount of time it took to drive the 100 feet driving course (see Step 2) (Fig. 8).

Fig. 8. *Left photo*: Capturing bait from a Herd® GT-77 spreader using a bucket with a slotted lid with an assistant timing the collection. *Middle photo*: The bucket collecting method also allows a single person to both collect and time the collection using their leg to keep the bucket in place. *Right photo*: Holding a collection bag directly on the chute attachment without a bucket. Note that two hands are required to hold the bag in place and that a second person is needed to time with this method.

**Step 6:** Weigh the trash bag containing the bait. It is usually easier to weigh the trash bag with bait if it is first placed inside a plastic tray (Fig. 9). Be sure to measure only the weight of the bait and not the weight of the plastic holding tray or trash bag. There are two ways to measure just the weight of the bait. Option one is to weigh the trash bag and the plastic tray before collecting bait, so their weight can be subtracted from the weight of trash bag containing bait. Option two is to place a plastic tray with an empty trash bag on the scale and zero (i.e., tare) the scale, so that when the plastic tray and trash bag with the bait are placed on the scale, the scale only shows the bait weight.

Note: It is not necessary to empty the bait collection bag if you need to capture more bait for additional calibration, because you can subtract the difference of each successive bait collection from the weight of the previous collection to determine how much bait you are capturing at each collection event.

Fig. 9. *Left photo*: Bait collected in trash bag. *Right photo*: Trash bag with bait weighed inside a plastic pan on a scale.

**Step 7:** Refer to the bait collection tables to determine how many pounds of bait you are applying per acre. If you weighed your collected bait in ounces, then use Table 1. If you weighed your collected bait in grams, then use Table 2. To use the tables, find the far left column labeled 'width (ft)' and look below this heading to find your swath width determined in Step 4. Then, look along the top of the table and find the 'ounces caught' row (Table 1) or 'grams caught' row (Table 2) and find the value that is closest to the bait weight you determined in Steps 5 and 6. Now go straight down from your ounces/grams caught value until you hit the row with the swath width for your spreader. The value in the cell at the intersection of your swath width and collected ounces/grams is the pounds per acre of bait that your spreader is delivering. If your cell value falls within the yellow-highlighted area of the table, then you are applying bait at 1 to 1.5 pounds per acre. If your cell value falls above the yellow highlighted area, then you are applying bait at more than 1.5 pounds per acre. If your cell value falls below the yellow highlighted area, then you are applying less than 1 pound per acre. Note that some baits like Award® II Fire Ant Bait are not to exceed 1 pound of bait per acre, but most bait products have applications in the range of 1 to 1.5 pounds of bait per acre. The table can still be used if your bait requires less than 1 pound bait per acre, just make sure the amount of bait you collect has a value below the yellow highlighted area.

**Step 8:** If you are applying too much or too little bait, you will have to modify your spreader output. Spreader output can be modified by altering the swath width or settings on the spreader that control application rate, but these changes are beyond the scope of this publication. Another method to alter bait delivery rate is to change the vehicle operating speed. Reducing vehicle speed will increase bait delivery rate, while increasing vehicle speed with decrease bait delivery rate. If you have previously timed your vehicle for different gear and engine speed settings (see Step 3), then you can time your bait collection for one of these new gear / engine speed settings and re-measure the weight of the collected bait. If you have not previously timed your vehicle for different gear and engine speed settings, then you will have to repeat Step 2.

**Step 9 (Conditional):** If air temperature or humidity change during your bait application, you may need to re-calibrate your spreader. High humidity can cause bait to clump in the hopper and may alter application rate. Likewise, if you switch bait brands, it is also a good idea to re-calibrate your spreader.

**List of Items Needed to Calibrate:**

- Note pad and pen / pencil
- Measuring tape (100 feet)
- Marking flags
- Vehicle with spreader
- Stop watch
- Bait
- Bait product label
- Personal Protective Equipment (PPE) required for bait you are using
- Safety glasses (good to have even though some bait labels don't require)
- Tools for adjusting spreader or adding attachments
- Scale
- Plastic tray
- Items specific to Herd spreader:
    - Calibration chute
    - 5-gallon bucket
    - Trash bag or 1-gallon bag
- Items specific to Vicon spreader:
    - Plastic bag (heavy mil)
    - Zip-tie
    - Knife or snips to cut zip-tie

# BAIT COLLECTION - OUNCES CAUGHT

**Table 1. Chart to determine pounds of fire ant bait caught per acre, based on ounces of product caught for given calibration areas (yellow highlighted areas on the chart are the desired 1 to 1.5 pounds / acre range).**

| Ounces Caught | | 0.05 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.75 | 0.8 | 0.85 | 0.9 | 0.95 | 1 | 1.05 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calibration Area | | | | | | | | | | | | | | | | | | | | | | |
| Width (ft) | Length (ft) | Spreader Output (Pounds) | | | | | | | | | | | | | | | | | | | | |
| 1 | 100 | 1.361 | 2.723 | 4.084 | 5.445 | 6.806 | 8.168 | 9.529 | 10.890 | 12.251 | 13.613 | 14.974 | 16.335 | 17.696 | 19.058 | 20.419 | 21.780 | 23.141 | 24.503 | 25.864 | 27.225 | 28.586 |
| 2 | 100 | 0.681 | 1.361 | 2.042 | 2.723 | 3.403 | 4.084 | 4.764 | 5.445 | 6.126 | 6.806 | 7.487 | 8.168 | 8.848 | 9.529 | 10.209 | 10.890 | 11.571 | 12.251 | 12.932 | 13.613 | 14.293 |
| 3 | 100 | 0.454 | 0.908 | 1.361 | 1.815 | 2.269 | 2.723 | 3.176 | 3.630 | 4.084 | 4.538 | 4.991 | 5.445 | 5.899 | 6.353 | 6.806 | 7.260 | 7.714 | 8.168 | 8.621 | 9.075 | 9.529 |
| 4 | 100 | 0.340 | 0.681 | 1.021 | 1.361 | 1.702 | 2.042 | 2.382 | 2.723 | 3.063 | 3.403 | 3.743 | 4.084 | 4.424 | 4.764 | 5.105 | 5.445 | 5.785 | 6.126 | 6.466 | 6.806 | 7.147 |
| 5 | 100 | 0.272 | 0.545 | 0.817 | 1.089 | 1.361 | 1.634 | 1.906 | 2.178 | 2.450 | 2.723 | 2.995 | 3.267 | 3.539 | 3.812 | 4.084 | 4.356 | 4.628 | 4.901 | 5.173 | 5.445 | 5.717 |
| 6 | 100 | 0.227 | 0.454 | 0.681 | 0.908 | 1.134 | 1.361 | 1.588 | 1.815 | 2.042 | 2.269 | 2.496 | 2.723 | 2.949 | 3.176 | 3.403 | 3.630 | 3.857 | 4.084 | 4.311 | 4.538 | 4.764 |
| 7 | 100 | 0.194 | 0.389 | 0.583 | 0.778 | 0.972 | 1.167 | 1.361 | 1.556 | 1.750 | 1.945 | 2.139 | 2.334 | 2.528 | 2.723 | 2.917 | 3.111 | 3.306 | 3.500 | 3.695 | 3.889 | 4.084 |
| 8 | 100 | 0.170 | 0.340 | 0.510 | 0.681 | 0.851 | 1.021 | 1.191 | 1.361 | 1.531 | 1.702 | 1.872 | 2.042 | 2.212 | 2.382 | 2.552 | 2.723 | 2.893 | 3.063 | 3.233 | 3.403 | 3.573 |
| 9 | 100 | 0.151 | 0.303 | 0.454 | 0.605 | 0.756 | 0.908 | 1.059 | 1.210 | 1.361 | 1.513 | 1.664 | 1.815 | 1.966 | 2.118 | 2.269 | 2.420 | 2.571 | 2.723 | 2.874 | 3.025 | 3.176 |
| 10 | 100 | 0.136 | 0.272 | 0.408 | 0.545 | 0.681 | 0.817 | 0.953 | 1.089 | 1.225 | 1.361 | 1.497 | 1.634 | 1.770 | 1.906 | 2.042 | 2.178 | 2.314 | 2.450 | 2.586 | 2.723 | 2.859 |
| 11 | 100 | 0.124 | 0.248 | 0.371 | 0.495 | 0.619 | 0.743 | 0.866 | 0.990 | 1.114 | 1.238 | 1.361 | 1.485 | 1.609 | 1.733 | 1.856 | 1.980 | 2.104 | 2.228 | 2.351 | 2.475 | 2.599 |
| 12 | 100 | 0.113 | 0.227 | 0.340 | 0.454 | 0.567 | 0.681 | 0.794 | 0.908 | 1.021 | 1.134 | 1.248 | 1.361 | 1.475 | 1.588 | 1.702 | 1.815 | 1.928 | 2.042 | 2.155 | 2.269 | 2.382 |
| 13 | 100 | 0.105 | 0.209 | 0.314 | 0.419 | 0.524 | 0.628 | 0.733 | 0.838 | 0.942 | 1.047 | 1.152 | 1.257 | 1.361 | 1.466 | 1.571 | 1.675 | 1.780 | 1.885 | 1.990 | 2.094 | 2.199 |
| 14 | 100 | 0.097 | 0.194 | 0.292 | 0.389 | 0.486 | 0.583 | 0.681 | 0.778 | 0.875 | 0.972 | 1.070 | 1.167 | 1.264 | 1.361 | 1.458 | 1.556 | 1.653 | 1.750 | 1.847 | 1.945 | 2.042 |
| 15 | 100 | 0.091 | 0.182 | 0.272 | 0.363 | 0.454 | 0.545 | 0.635 | 0.726 | 0.817 | 0.908 | 0.998 | 1.089 | 1.180 | 1.271 | 1.361 | 1.452 | 1.543 | 1.634 | 1.724 | 1.815 | 1.906 |
| 16 | 100 | 0.085 | 0.170 | 0.255 | 0.340 | 0.425 | 0.510 | 0.596 | 0.681 | 0.766 | 0.851 | 0.936 | 1.021 | 1.106 | 1.191 | 1.276 | 1.361 | 1.446 | 1.531 | 1.616 | 1.702 | 1.787 |
| 17 | 100 | 0.080 | 0.160 | 0.240 | 0.320 | 0.400 | 0.480 | 0.561 | 0.641 | 0.721 | 0.801 | 0.881 | 0.961 | 1.041 | 1.121 | 1.201 | 1.281 | 1.361 | 1.441 | 1.521 | 1.601 | 1.682 |
| 18 | 100 | 0.076 | 0.151 | 0.227 | 0.303 | 0.378 | 0.454 | 0.529 | 0.605 | 0.681 | 0.756 | 0.832 | 0.908 | 0.983 | 1.059 | 1.134 | 1.210 | 1.286 | 1.361 | 1.437 | 1.513 | 1.588 |
| 19 | 100 | 0.072 | 0.143 | 0.215 | 0.287 | 0.358 | 0.430 | 0.502 | 0.573 | 0.645 | 0.716 | 0.788 | 0.860 | 0.931 | 1.003 | 1.075 | 1.146 | 1.218 | 1.290 | 1.361 | 1.433 | 1.505 |
| 20 | 100 | 0.068 | 0.136 | 0.204 | 0.272 | 0.340 | 0.408 | 0.476 | 0.545 | 0.613 | 0.681 | 0.749 | 0.817 | 0.885 | 0.953 | 1.021 | 1.089 | 1.157 | 1.225 | 1.293 | 1.361 | 1.429 |
| 21 | 100 | 0.065 | 0.130 | 0.194 | 0.259 | 0.324 | 0.389 | 0.454 | 0.519 | 0.583 | 0.648 | 0.713 | 0.778 | 0.843 | 0.908 | 0.972 | 1.037 | 1.102 | 1.167 | 1.232 | 1.296 | 1.361 |
| 22 | 100 | 0.062 | 0.124 | 0.186 | 0.248 | 0.309 | 0.371 | 0.433 | 0.495 | 0.557 | 0.619 | 0.681 | 0.743 | 0.804 | 0.866 | 0.928 | 0.990 | 1.052 | 1.114 | 1.176 | 1.238 | 1.299 |
| 23 | 100 | 0.059 | 0.118 | 0.178 | 0.237 | 0.296 | 0.355 | 0.414 | 0.473 | 0.533 | 0.592 | 0.651 | 0.710 | 0.769 | 0.829 | 0.888 | 0.947 | 1.006 | 1.065 | 1.125 | 1.184 | 1.243 |
| 24 | 100 | 0.057 | 0.113 | 0.170 | 0.227 | 0.284 | 0.340 | 0.397 | 0.454 | 0.510 | 0.567 | 0.624 | 0.681 | 0.737 | 0.794 | 0.851 | 0.908 | 0.964 | 1.021 | 1.078 | 1.134 | 1.191 |
| 25 | 100 | 0.054 | 0.109 | 0.163 | 0.218 | 0.272 | 0.327 | 0.381 | 0.436 | 0.490 | 0.545 | 0.599 | 0.653 | 0.708 | 0.762 | 0.817 | 0.871 | 0.926 | 0.980 | 1.035 | 1.089 | 1.143 |
| 26 | 100 | 0.052 | 0.105 | 0.157 | 0.209 | 0.262 | 0.314 | 0.366 | 0.419 | 0.471 | 0.524 | 0.576 | 0.628 | 0.681 | 0.733 | 0.785 | 0.838 | 0.890 | 0.942 | 0.995 | 1.047 | 1.099 |
| 27 | 100 | 0.050 | 0.101 | 0.151 | 0.202 | 0.252 | 0.303 | 0.353 | 0.403 | 0.454 | 0.504 | 0.555 | 0.605 | 0.655 | 0.706 | 0.756 | 0.807 | 0.857 | 0.908 | 0.958 | 1.008 | 1.059 |
| 28 | 100 | 0.049 | 0.097 | 0.146 | 0.194 | 0.243 | 0.292 | 0.340 | 0.389 | 0.438 | 0.486 | 0.535 | 0.583 | 0.632 | 0.681 | 0.729 | 0.778 | 0.826 | 0.875 | 0.924 | 0.972 | 1.021 |
| 29 | 100 | 0.047 | 0.094 | 0.141 | 0.188 | 0.235 | 0.282 | 0.329 | 0.376 | 0.422 | 0.469 | 0.516 | 0.563 | 0.610 | 0.657 | 0.704 | 0.751 | 0.798 | 0.845 | 0.892 | 0.939 | 0.986 |
| 30 | 100 | 0.045 | 0.091 | 0.136 | 0.182 | 0.227 | 0.272 | 0.318 | 0.363 | 0.408 | 0.454 | 0.499 | 0.545 | 0.590 | 0.635 | 0.681 | 0.726 | 0.771 | 0.817 | 0.862 | 0.908 | 0.953 |
| 31 | 100 | 0.044 | 0.088 | 0.132 | 0.176 | 0.220 | 0.263 | 0.307 | 0.351 | 0.395 | 0.439 | 0.483 | 0.527 | 0.571 | 0.615 | 0.659 | 0.703 | 0.746 | 0.790 | 0.834 | 0.878 | 0.922 |
| 32 | 100 | 0.043 | 0.085 | 0.128 | 0.170 | 0.213 | 0.255 | 0.298 | 0.340 | 0.383 | 0.425 | 0.468 | 0.510 | 0.553 | 0.596 | 0.638 | 0.681 | 0.723 | 0.766 | 0.808 | 0.851 | 0.893 |
| 33 | 100 | 0.041 | 0.083 | 0.124 | 0.165 | 0.206 | 0.248 | 0.289 | 0.330 | 0.371 | 0.413 | 0.454 | 0.495 | 0.536 | 0.578 | 0.619 | 0.660 | 0.701 | 0.743 | 0.784 | 0.825 | 0.866 |
| 34 | 100 | 0.040 | 0.080 | 0.120 | 0.160 | 0.200 | 0.240 | 0.280 | 0.320 | 0.360 | 0.400 | 0.440 | 0.480 | 0.520 | 0.561 | 0.601 | 0.641 | 0.681 | 0.721 | 0.761 | 0.801 | 0.841 |
| 35 | 100 | 0.039 | 0.078 | 0.117 | 0.156 | 0.194 | 0.233 | 0.272 | 0.311 | 0.350 | 0.389 | 0.428 | 0.467 | 0.506 | 0.545 | 0.583 | 0.622 | 0.661 | 0.700 | 0.739 | 0.778 | 0.817 |
| 36 | 100 | 0.038 | 0.076 | 0.113 | 0.151 | 0.189 | 0.227 | 0.265 | 0.303 | 0.340 | 0.378 | 0.416 | 0.454 | 0.492 | 0.529 | 0.567 | 0.605 | 0.643 | 0.681 | 0.718 | 0.756 | 0.794 |

# BAIT COLLECTION - GRAMS CAUGHT

**Table 2. Chart to determine pounds of fire ant bait caught per acre, based on grams of product caught for given calibration areas (yellow highlighted areas on the chart are the desired 1 to 1.5 pounds / acre range).**

| Grams Caught | | 1 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Calibration Area** | | | | | | | | | | | | | | | | | | | | | | |
| **Width (ft)** | **Length (ft)** | **Spreader Output (Pounds)** | | | | | | | | **Spreader Output (Pounds)** | | | | | | | **Spreader Output (Pounds)** | | | | | |
| **1** | **100** | 0.960 | 1.921 | 3.842 | 5.763 | 7.684 | 9.605 | 11.526 | 13.447 | 15.368 | 17.289 | 19.210 | 21.131 | 23.052 | 24.973 | 26.894 | 28.815 | 30.736 | 32.657 | 34.578 | 36.499 | 38.420 |
| **2** | **100** | 0.480 | 0.960 | 1.921 | 2.881 | 3.842 | 4.802 | 5.763 | 6.723 | 7.684 | 8.644 | 9.605 | 10.565 | 11.526 | 12.486 | 13.447 | 14.407 | 15.368 | 16.328 | 17.289 | 18.249 | 19.210 |
| **3** | **100** | 0.320 | 0.640 | 1.281 | 1.921 | 2.561 | 3.202 | 3.842 | 4.482 | 5.123 | 5.763 | 6.403 | 7.044 | 7.684 | 8.324 | 8.965 | 9.605 | 10.245 | 10.886 | 11.526 | 12.166 | 12.807 |
| **4** | **100** | 0.240 | 0.480 | 0.960 | 1.441 | 1.921 | 2.401 | 2.881 | 3.362 | 3.842 | 4.322 | 4.802 | 5.283 | 5.763 | 6.243 | 6.723 | 7.204 | 7.684 | 8.164 | 8.644 | 9.125 | 9.605 |
| **5** | **100** | 0.192 | 0.384 | 0.768 | 1.153 | 1.537 | 1.921 | 2.305 | 2.689 | 3.074 | 3.458 | 3.842 | 4.226 | 4.610 | 4.995 | 5.379 | 5.763 | 6.147 | 6.531 | 6.916 | 7.300 | 7.684 |
| **6** | **100** | 0.160 | 0.320 | 0.640 | 0.960 | 1.281 | 1.601 | 1.921 | 2.241 | 2.561 | 2.881 | 3.202 | 3.522 | 3.842 | 4.162 | 4.482 | 4.802 | 5.123 | 5.443 | 5.763 | 6.083 | 6.403 |
| **7** | **100** | 0.137 | 0.274 | 0.549 | 0.823 | 1.098 | 1.372 | 1.647 | 1.921 | 2.195 | 2.470 | 2.744 | 3.019 | 3.293 | 3.568 | 3.842 | 4.116 | 4.391 | 4.665 | 4.940 | 5.214 | 5.489 |
| **8** | **100** | 0.120 | 0.240 | 0.480 | 0.720 | 0.960 | 1.201 | 1.441 | 1.681 | 1.921 | 2.161 | 2.401 | 2.641 | 2.881 | 3.122 | 3.362 | 3.602 | 3.842 | 4.082 | 4.322 | 4.562 | 4.802 |
| **9** | **100** | 0.107 | 0.213 | 0.427 | 0.640 | 0.854 | 1.067 | 1.281 | 1.494 | 1.708 | 1.921 | 2.134 | 2.348 | 2.561 | 2.775 | 2.988 | 3.202 | 3.415 | 3.629 | 3.842 | 4.055 | 4.269 |
| **10** | **100** | 0.096 | 0.192 | 0.384 | 0.576 | 0.768 | 0.960 | 1.153 | 1.345 | 1.537 | 1.729 | 1.921 | 2.113 | 2.305 | 2.497 | 2.689 | 2.881 | 3.074 | 3.266 | 3.458 | 3.650 | 3.842 |
| **11** | **100** | 0.087 | 0.175 | 0.349 | 0.524 | 0.699 | 0.873 | 1.048 | 1.222 | 1.397 | 1.572 | 1.746 | 1.921 | 2.096 | 2.270 | 2.445 | 2.620 | 2.794 | 2.969 | 3.143 | 3.318 | 3.493 |
| **12** | **100** | 0.080 | 0.160 | 0.320 | 0.480 | 0.640 | 0.800 | 0.960 | 1.121 | 1.281 | 1.441 | 1.601 | 1.761 | 1.921 | 2.081 | 2.241 | 2.401 | 2.561 | 2.721 | 2.881 | 3.042 | 3.202 |
| **13** | **100** | 0.074 | 0.148 | 0.296 | 0.443 | 0.591 | 0.739 | 0.887 | 1.034 | 1.182 | 1.330 | 1.478 | 1.625 | 1.773 | 1.921 | 2.069 | 2.217 | 2.364 | 2.512 | 2.660 | 2.808 | 2.955 |
| **14** | **100** | 0.069 | 0.137 | 0.274 | 0.412 | 0.549 | 0.686 | 0.823 | 0.960 | 1.098 | 1.235 | 1.372 | 1.509 | 1.647 | 1.784 | 1.921 | 2.058 | 2.195 | 2.333 | 2.470 | 2.607 | 2.744 |
| **15** | **100** | 0.064 | 0.128 | 0.256 | 0.384 | 0.512 | 0.640 | 0.768 | 0.896 | 1.025 | 1.153 | 1.281 | 1.409 | 1.537 | 1.665 | 1.793 | 1.921 | 2.049 | 2.177 | 2.305 | 2.433 | 2.561 |
| **16** | **100** | 0.060 | 0.120 | 0.240 | 0.360 | 0.480 | 0.600 | 0.720 | 0.840 | 0.960 | 1.081 | 1.201 | 1.321 | 1.441 | 1.561 | 1.681 | 1.801 | 1.921 | 2.041 | 2.161 | 2.281 | 2.401 |
| **17** | **100** | 0.056 | 0.113 | 0.226 | 0.339 | 0.452 | 0.565 | 0.678 | 0.791 | 0.904 | 1.017 | 1.130 | 1.243 | 1.356 | 1.469 | 1.582 | 1.695 | 1.808 | 1.921 | 2.034 | 2.147 | 2.260 |
| **18** | **100** | 0.053 | 0.107 | 0.213 | 0.320 | 0.427 | 0.534 | 0.640 | 0.747 | 0.854 | 0.960 | 1.067 | 1.174 | 1.281 | 1.387 | 1.494 | 1.601 | 1.708 | 1.814 | 1.921 | 2.028 | 2.134 |
| **19** | **100** | 0.051 | 0.101 | 0.202 | 0.303 | 0.404 | 0.506 | 0.607 | 0.708 | 0.809 | 0.910 | 1.011 | 1.112 | 1.213 | 1.314 | 1.415 | 1.517 | 1.618 | 1.719 | 1.820 | 1.921 | 2.022 |
| **20** | **100** | 0.048 | 0.096 | 0.192 | 0.288 | 0.384 | 0.480 | 0.576 | 0.672 | 0.768 | 0.864 | 0.960 | 1.057 | 1.153 | 1.249 | 1.345 | 1.441 | 1.537 | 1.633 | 1.729 | 1.825 | 1.921 |
| **21** | **100** | 0.046 | 0.091 | 0.183 | 0.274 | 0.366 | 0.457 | 0.549 | 0.640 | 0.732 | 0.823 | 0.915 | 1.006 | 1.098 | 1.189 | 1.281 | 1.372 | 1.464 | 1.555 | 1.647 | 1.738 | 1.830 |
| **22** | **100** | 0.044 | 0.087 | 0.175 | 0.262 | 0.349 | 0.437 | 0.524 | 0.611 | 0.699 | 0.786 | 0.873 | 0.960 | 1.048 | 1.135 | 1.222 | 1.310 | 1.397 | 1.484 | 1.572 | 1.659 | 1.746 |
| **23** | **100** | 0.042 | 0.084 | 0.167 | 0.251 | 0.334 | 0.418 | 0.501 | 0.585 | 0.668 | 0.752 | 0.835 | 0.919 | 1.002 | 1.086 | 1.169 | 1.253 | 1.336 | 1.420 | 1.503 | 1.587 | 1.670 |
| **24** | **100** | 0.040 | 0.080 | 0.160 | 0.240 | 0.320 | 0.400 | 0.480 | 0.560 | 0.640 | 0.720 | 0.800 | 0.880 | 0.960 | 1.041 | 1.121 | 1.201 | 1.281 | 1.361 | 1.441 | 1.521 | 1.601 |
| **25** | **100** | 0.038 | 0.077 | 0.154 | 0.231 | 0.307 | 0.384 | 0.461 | 0.538 | 0.615 | 0.692 | 0.768 | 0.845 | 0.922 | 0.999 | 1.076 | 1.153 | 1.229 | 1.306 | 1.383 | 1.460 | 1.537 |
| **26** | **100** | 0.037 | 0.074 | 0.148 | 0.222 | 0.296 | 0.369 | 0.443 | 0.517 | 0.591 | 0.665 | 0.739 | 0.813 | 0.887 | 0.960 | 1.034 | 1.108 | 1.182 | 1.256 | 1.330 | 1.404 | 1.478 |
| **27** | **100** | 0.036 | 0.071 | 0.142 | 0.213 | 0.285 | 0.356 | 0.427 | 0.498 | 0.569 | 0.640 | 0.711 | 0.783 | 0.854 | 0.925 | 0.996 | 1.067 | 1.138 | 1.210 | 1.281 | 1.352 | 1.423 |
| **28** | **100** | 0.034 | 0.069 | 0.137 | 0.206 | 0.274 | 0.343 | 0.412 | 0.480 | 0.549 | 0.617 | 0.686 | 0.755 | 0.823 | 0.892 | 0.960 | 1.029 | 1.098 | 1.166 | 1.235 | 1.304 | 1.372 |
| **29** | **100** | 0.033 | 0.066 | 0.132 | 0.199 | 0.265 | 0.331 | 0.397 | 0.464 | 0.530 | 0.596 | 0.662 | 0.729 | 0.795 | 0.861 | 0.927 | 0.994 | 1.060 | 1.126 | 1.192 | 1.259 | 1.325 |
| **30** | **100** | 0.032 | 0.064 | 0.128 | 0.192 | 0.256 | 0.320 | 0.384 | 0.448 | 0.512 | 0.576 | 0.640 | 0.704 | 0.768 | 0.832 | 0.896 | 0.960 | 1.025 | 1.089 | 1.153 | 1.217 | 1.281 |
| **31** | **100** | 0.031 | 0.062 | 0.124 | 0.186 | 0.248 | 0.310 | 0.372 | 0.434 | 0.496 | 0.558 | 0.620 | 0.682 | 0.744 | 0.806 | 0.868 | 0.930 | 0.991 | 1.053 | 1.115 | 1.177 | 1.239 |
| **32** | **100** | 0.030 | 0.060 | 0.120 | 0.180 | 0.240 | 0.300 | 0.360 | 0.420 | 0.480 | 0.540 | 0.600 | 0.660 | 0.720 | 0.780 | 0.840 | 0.900 | 0.960 | 1.021 | 1.081 | 1.141 | 1.201 |
| **33** | **100** | 0.029 | 0.058 | 0.116 | 0.175 | 0.233 | 0.291 | 0.349 | 0.407 | 0.466 | 0.524 | 0.582 | 0.640 | 0.699 | 0.757 | 0.815 | 0.873 | 0.931 | 0.990 | 1.048 | 1.106 | 1.164 |
| **34** | **100** | 0.028 | 0.056 | 0.113 | 0.169 | 0.226 | 0.282 | 0.339 | 0.395 | 0.452 | 0.508 | 0.565 | 0.621 | 0.678 | 0.734 | 0.791 | 0.847 | 0.904 | 0.960 | 1.017 | 1.073 | 1.130 |
| **35** | **100** | 0.027 | 0.055 | 0.110 | 0.165 | 0.220 | 0.274 | 0.329 | 0.384 | 0.439 | 0.494 | 0.549 | 0.604 | 0.659 | 0.714 | 0.768 | 0.823 | 0.878 | 0.933 | 0.988 | 1.043 | 1.098 |
| **36** | **100** | 0.027 | 0.053 | 0.107 | 0.160 | 0.213 | 0.267 | 0.320 | 0.374 | 0.427 | 0.480 | 0.534 | 0.587 | 0.640 | 0.694 | 0.747 | 0.800 | 0.854 | 0.907 | 0.960 | 1.014 | 1.067 |

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