

To win a prize, a tomato must be greater than 4 inches in diameter. The diameters of a crop of tomatoes grown on your farm are normally distributed with a mean of 3.2 inches and a standard deviation of 0.4 inches.

Find the probability that your crop will contain a winning tomato.

Tubs of a certain brand of butter have weights that are normally distributed and have a mean weight of 1 lb and a standard deviation of 0.06 lbs. At a quality control checkpoint a sample of tubs is taken and weighed. It turns out 12 of these tubs weigh less than 0.88 lbs.

How many tubs were in the sample?

To qualify as a contestant in a race, a runner has to be in the fastest 16% of all applicants. The running times are normally distributed with a mean of 63 minutes and a standard deviation of 4 minutes. What is the qualifying time for the race?

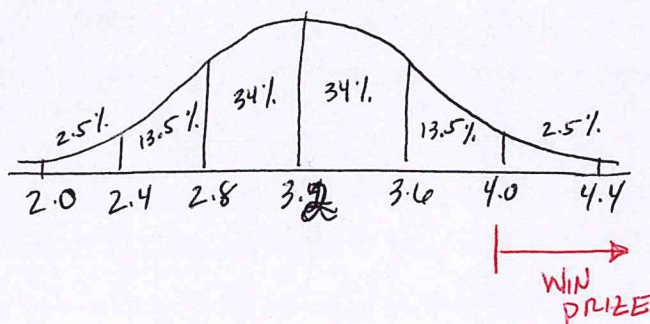
The mean score on the ACT is 18 with a standard deviation of 6.

1. You got your results back and scored a 30. You did better than what % of those who took the test?
2. If your ACT score was 27 you did better than what % of those who took the test?
3. You did better than what % if you score was 20?

Alg 2B 5th HR. BELLWORK

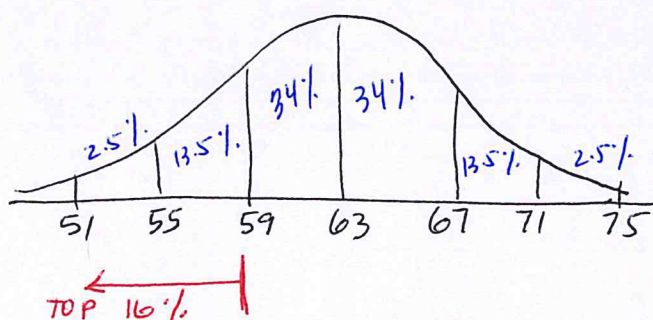
Mon 5-7-18

1. To win a prize, a tomato must be greater than 4 inches in diameter. The diameters of a crop of tomatoes grown on your farm are normally distributed with a mean of 3.2 inches and a standard deviation of 0.4 inches. Find the probability that your crop will contain a winning tomato.



$$p(\text{win prize}) = 2.5\%$$

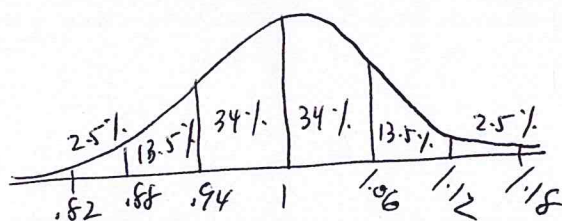
2. To qualify as a contestant in a race, a runner has to be in the fastest 16% of all applicants. The running times are normally distributed with a mean of 63 minutes and a standard deviation of 4 minutes. What is the qualifying time for the race?



Running Faster means less time!

$$\text{Qualifying time} \leq 59 \text{ min}$$

3. Tubs of a certain brand of butter have weights that are normally distributed and have a mean weight of 1 lb and a standard deviation of 0.06 lbs. At a quality control checkpoint a sample of tubs is taken and weighed. It turns out 12 of these tubs weigh less than 0.88 lbs. How many tubs were in the sample?



2.5% of the sample weighed less than 0.88 lbs

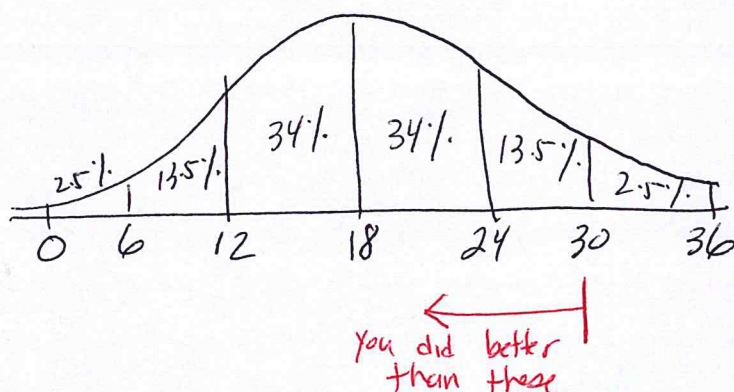
2.5% of what is 12?

$$(0.025)(\text{sample size}) = 12$$

$$\text{Sample size} = 480$$

12 tubs of butter

4. The mean score on the ACT is 18 with a standard deviation of 6. You got your results back and scored a 30. You did better than what % of those who took the test?



you did better than 97.5% of the others who took the test