## Algebra 2 Bellwork Wednesday, April 27, 2016

The amount of time it takes a group of students to finish a standardized test is normally distributed with a mean of 123 minutes and a standard deviation of 12 minutes. There were 420 students in the group.

1. What is the range of times for which 95% of the students will finish?

2. What percent of the students took more than 123 minutes to finish the test?

3. What percent of the students took between 87 and 111 minutes to finish the test?

4. How many students finished the test faster than 99 minutes?

5. If you are part of the slowest 2.5% of test takers you would have taken how many minutes to finish?

6. If a student is taken at random find the probability that they took between 99 and 135 min to finish?

7. If you took 2 hours and 15 minutes to complete the test, how many students were still working on the test when you finished?

## Algebra 2 Bellwork Wednesday, April 27, 2016 ANSWERS

The amount of time it takes a group of students to finish a standardized test is normally distributed with a mean of 123 minutes and a standard deviation of 12 minutes. There were 420 students in the group.

1. What is the range of times for which 95% of the students will finish? 99 to 147 minutes

2. What percent of the students took more than 123 minutes to finish the test? 50%

3. What percent of the students took between 87 and 111 minutes to finish the test? 16%

4. How many students finished the test faster than 99 minutes? 2.5% of 420 = (.025)(420) ≈ 11 STUDENTS

5. If you are part of the slowest 2.5% of test takers you would have taken how many minutes to finish? MORE THAN 147 MINUTES

6. If a student is taken at random find the probability that they took between 99 and 135 min to finish? 81.5%

7. If you took 2 hours and 15 minutes to complete the test, how many students were still working on the test when you finished? 2hrs 15min = 135 min
16% still working → (.16)(420) ≈ 67 STUDENTS