**STATISTICS**

NOTES:

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1. The following data set shows the scores from a recent Math II test:

{61, 65, 65 , 65, 69, 72, 75, 77, 79, 81, 85, 85, 88, 89, 97, 99}

a. Determine the mean, median and mode of the data.

b. Determine the five-number summary of the data points.

c. Draw a box and whisker plot using the five number summary.

2. A normally distributed set of data has a mean of 125 and a standard deviation of 20.

a. Sketch the distribution and label the values at the first, second and third positive and negative standard deviation.

b. What percent of the data falls between:

i) 105 and 145 ii) 125 and 165 iii) 85 and 145 iv) 65 and 185

3. A data set is normally distributed. The mean is 50 and the standard deviation is 10. What is the z-score of a data point of 63?

4. A test score of 84 has a z-score of 0.9. Is that test score above or below the mean? If the standard deviation is 15, what is the mean?

**LOGARITHMS**

NOTES:

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**1.** Solve: 2. Solve: 3. Solve:

4. Solve: 5. Solve:

6**.** . If $6000 were invested continuously for 8 years, what rate would you need to triple your money?

7. How long will it take $30,000 to accumulate to $120,000 in a trust that earns a 10% annual return compounded semiannually?

8. A certain chemical has a half-life of 6 hours. If a sample originally contained 50 grams and has decreased in size to 8 grams, how many hours have passed?

9. A certain animal species can double its population every 30 years. Assuming exponential growth, how long will it take the population to grow from 40 specimens to 500?