Algebra 2 Bellwork Friday, April 22, 2016

1. Use the two sets of data below.

Set A: $68, 57, 59, 66, 65, 63, 66, 58, 59, 64, 65$ Set B: $113, 108, 112, 116, 114, 119, 112, 113, 119, 109$

a) Which set of data has more variation? Explain your answer.

b) What is the range for Set A?

c) What is the Interquartile Range for Set B?

Use this set of data for 2 to 5:

$28, 29, 29, 31, 32, 32, 34, 35, 36, 38, 40, 43, 43, 44, 47, 48, 50, 51, 55, 59$

2. What percentile is 43 at?

3. What number is at the 90th percentile?

4. What number is at the 35th percentile?

5. What percentile is 28 at?

Use this set of test scores for 6 - 8. Round answers to the nearest tenth.

$66, 67, 68, 68, 71, 75, 75, 76, 78, 79, 81, 82, 84, 85, 86, 88, 91, 95, 98, 99, 100$

$\bar{x} = 81.5$ $\sigma = 10.5$

6. Using the mean and standard deviation of this data set what range of values would be within one standard deviation of the mean?

7. How many of the data values are within one standard deviation of the mean?

8. What percent of data is within one standard deviation of the mean?

Algebra 2 Bellwork Friday, April 22, 2016 **Answers**

1. Use the two sets of data below.

Set A: 68, 57, 59, 66, 65, 63, 66, 58, 59, 64, 65 $\sigma = 3.62$

Set B: 113, 108, 112, 116, 114, 119, 112, 113, 119, 109 $\sigma = 3.5$

a) Which set of data has more variation? Explain your answer.

SET A HAS MORE VARIATION BECAUSE IT HAS A BIGGER ST. DEV.

b) What is the range for Set A?

MAX - MIN
$68 - 57 = 11$

c) What is the Interquartile Range for Set B?

$Q_3 - Q_1$
$116 - 112 = 4$

Use this set of data for 2 to 5:

28, 29, 29, 31, 32, 32, 34, 35, 36, 38, 40, 43, 43, 44, 47, 48, 50, 51, 55, 59 20 DATA ITEMS

2. What percentile is 43 at?

$11/20 \rightarrow$ 55th percentile

3. What number is at the 90th percentile?

$(.9)(20) = 18$ 55 IT has 18 #s below

4. What number is at the 35th percentile?

$(.35)(20) = 7$ 35 IT HAS 7 #s below

5. What percentile is 28 at?

$0/20 \rightarrow$ 0TH percentile

Use this set of test scores for 6 - 8. Round answers to the nearest tenth.

66, 67, 68, 68, 71, 75, 75, 76, 78, 79, 81, 82, 84, 85, 86, 88, 91, 95, 98, 99, 100

71 to 92

$\bar{x} = 81.5$ $\sigma = 10.5$

6. Using the mean and standard deviation of this data set what range of values would be within one standard deviation of the mean?

$\bar{x} \pm 1\sigma \rightarrow$ 71 TO 92

7. How many of the data values are within one standard deviation of the mean?

13

8. What percent of data is within one standard deviation of the mean?

$\frac{13}{21} \approx$ 61.9% of the data is within 1 σ of the mean.