

Review for Test 9

Find the mean, median, and standard deviation of each data set. Round to the nearest tenth.

1. 6, 22, 4, 15, 10, 8, 8, 7, 14, 20

2. 53, 52, 48, 44, 60, 48, 44, 57, 44

Mean = 11.4

Mean = 50

Median = 9

Median = 48

Std Dev = 5.8

Std Dev = 5.6

A set of data has a mean of 82 and a standard deviation of 4. Find the z-score of the given values.

$$z = \frac{x - \bar{x}}{\sigma}$$

3. 92 z = 2.5

4. 74 z = -2

A set of data has a mean of 100 and a standard deviation of 10.

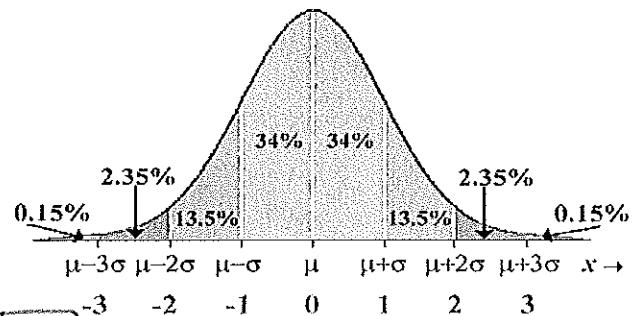
5. What percent of the data is less than 80? 2.5%

6. What percent of the data is between 90 and 110? 68%

7. What percent of the data is larger than 70? 99.85%

8. If 80 numbers are in the set of data, how many of those numbers would you expect to be larger than 120?  $2.5\% \times 80 =$  2

9. What is the probability that a number randomly selected from the set is smaller than 90? 16%



Use the z-score chart to find the area under the standard normal curve that lies between the given z-scores.

10. z = -2.3 and z = 2.3  $0.9893 - 0.0107 = 0.9786 =$  97.86%

11. z = 0 and z = 3.12  $0.9991 - 0.5000 = 0.4991 =$  49.91%

Determine if the following sets of data are right skewed, left skewed, or normal.

Normal 10. 92, 97, 95, 92, 84, 85, 92, 89, 100, 94 Mean = 92, Median = 92

Right Skewed 11. 80, 60, 65, 90, 45, 55, 70, 55, 65, 85, 65, 75 Mean = 67.5, Median = 65