

Name: _____

Date: _____

Empirical Rule Worksheet

1. Given an approximately normal distribution what percentage of all values are less than 1 standard deviation from the mean?

68%

2. Given an approximately normal distribution what percentage of all values are less than 2 standard deviations from the mean?

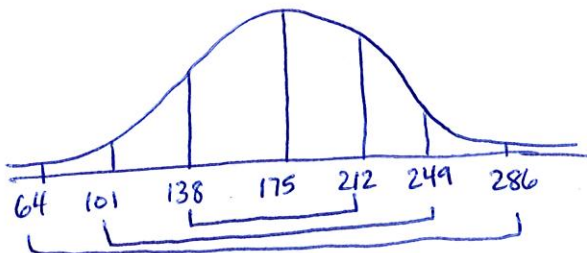
95%

3. Given an approximately normal distribution what percentage of all values are less than 3 standard deviations from the mean?

99.7%

4. Given an approximately normal distribution with a mean of 175 and a standard deviation of 37.

- a) Draw a normal curve and label 1, 2, and 3 standard deviations on both sides on the mean.



- b) What percent of values are within the interval (138, 212)?

68%

- c) What percent of values are within the interval (101, 249)?

95%

- d) What percent of values are within the interval (64, 286)?

99.7%

- e) What percent of values outside the interval (138, 212)?

$$100 - 68 = \boxed{32\%}$$

- f) What percent of values are outside the interval (101, 249)?

$$100 - 95 = \boxed{5\%}$$

- g) What percent of values are outside the interval (64, 286)?

$$100 - 99.7 = \boxed{.3\%}$$