

## Honors Math 3 Empirical Rule & Z-Score Practice!

1. Given an approximately normal distribution what percentage of all values are within 1 standard deviation from the mean?
2. Given an approximately normal distribution what percentage of all values are within 2 standard deviations from the mean?
3. Given an approximately normal distribution what percentage of all values are within 3 standard deviations from the mean?
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)?

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

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

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

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

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

**h)** What percent of values are outside the interval (101, 286)?

**i)** What percent of values are below 138?

**j)** What percent of values are above 286?

