

Practicing with Normal Distribution Data

1. Given an approximately normal distribution with a mean of 122 and a standard deviation of 22,
 - a) Draw a normal curve and label 1, 2, and 3 standard deviations on both sides on the mean

 - b) What interval contains 68% of all values?
 - c) What interval contains 95% of all values?
 - d) What interval contains 99.7% of all values?
 - e) What percent of values are above 122?
 - f) What percent of values are below 78?

2. Given an approximately normal distribution with a mean of 159 and a standard deviation of 17,
 - 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 (142, 176)?
 - c) What percent of values are within the interval (125, 193)?
 - d) What interval contains 99.7% of all values?
 - e) What percent of values are above 176?
 - f) What percent of values are below 125?

3. Assume the heights of college women are normally distributed, with mean 65 in. and standard deviation 2.5 in,
- a) What percentage of women are taller than 65in?
 - b) What percentage of women are shorter than 65in?
 - c) What percentage of women are between 62.5 in and 67.5 in?
 - d) What percentage of women are between 60 in and 70 in?
 - e) What percentage of women are between 60 and 67.5 in?
 - f) What percentage of women are shorter than 70 in?
 - g) Approximately how tall would a woman need to be in order to be located in the 50th percentile? 97th percentile?