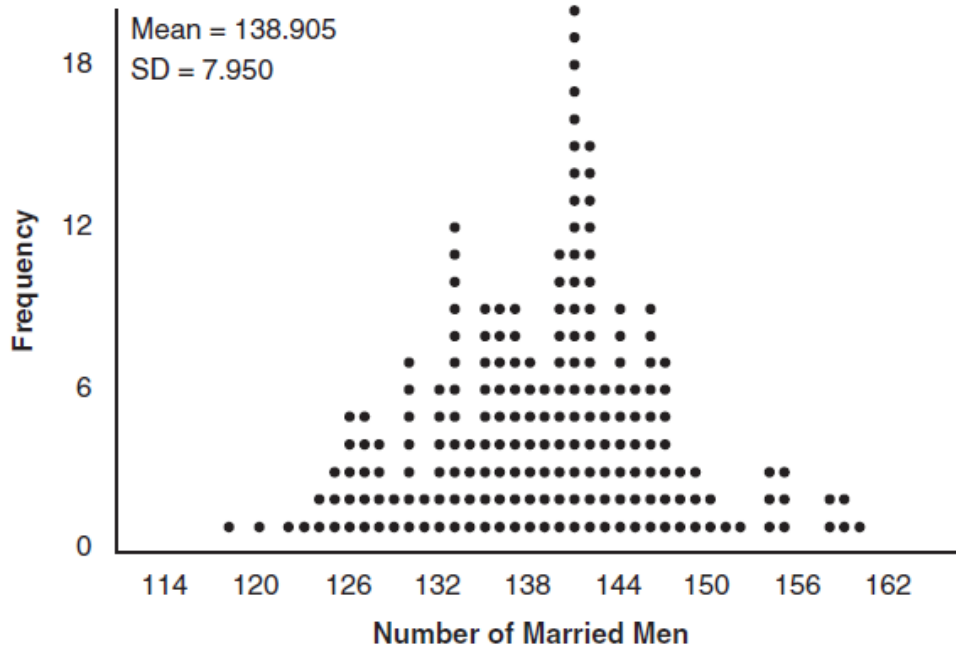


1.) In a random sample of 250 men in the United States, age 21 or older, 139 are married. The graph below simulated samples of 250 men, 200 times, assuming that 139 of the men are married.



a. Based on the simulation, create an interval in which the middle 95% of the number of married men may fall. **Round your answer to the nearest integer.**

b. A study claims “50 percent of men in the United States, age 21 or older, are married”.

Do your results from part a contradict this claim? **Explain.**

2.) Consumer Reports wants to determine the amount of tar in different brands of cigarettes.

A random sample of 15 brands of cigarettes had an average tar content (mg/cig) of 14.1 with a standard deviation of 0.58.

Some of the cigarettes sold in the US claim to be “low tar”. Another random sample of 15 brands of “low-tar” advertised cigarettes had an average tar content (mg/cig) of 9.9 with a standard deviation of 0.56.

a. Find a 95% confidence interval for the regular cigarette brands.

b. Find a 95% confidence interval for the “low tar” advertised cigarette brands.

c. If a randomly selected brand has a tar content of 11. Would you consider this a regular brand cigarette or a “low tar” brand cigarette. **Explain.**

3.) A sample of 50 randomly chosen homes produced a 95% confidence interval for the mean price in Orange County of (\$228,453 , \$242,947). Would you consider a home in Orange County that costs \$250,000 to be unusually high? **Explain**