

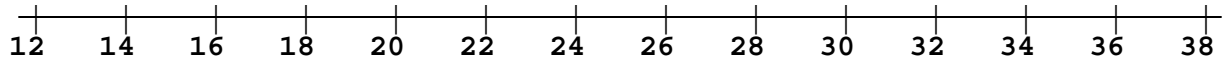
### Chapter 8 Worksheet 2 Confidence Interval for Population Mean

In an earlier assignment you selected a random sample of 6 slips from a population containing 60 slips of paper. The population of 60 values was approximately Normally distributed.

A) List the values in your sample:

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

B) Plot the dotplot:



C) You calculated the sample's mean and standard deviation. Show those results below:

$$\bar{x} = \text{_____} \qquad s = \text{_____}$$

D) Manually construct a 95% confidence interval for the true population mean. Show your work here.

E) Interpret your interval from step D above.

E) Plot the *endpoints* of your 95% confidence interval just below the x-axis of your dotplot. Also plot the value of the sample mean. Now, draw a line between the sample mean and each of the endpoints.

F) Manually construct a 99% confidence interval for the true population mean. Show your work here.

G) Compare the *margin of error* of the 95% interval to that of the 99% interval. Discuss the *tradeoff* between confidence level and margin of error.