Activity 1 Go to the course web site: www.stat.psu.edu/~rho/stat200/. Locate the data set entitled "Stat 200 Physical Measurement Data." Use the link to view the data, then copy and paste the data into Minitab. We'll demonstrate this at the start of the class.

In Minitab, use **Basic Statistics>Display Descriptive Statistics** to compare the left foot lengths of men and women (Be sure to click "By variable" and put the variable gender into the box beside "By variable")

What is the mean left foot length for women? _______ For men? _______

What is the difference between the means for men and women? _______

What is the standard error of the mean for women? _______ For men?_________

What does the standard error of a mean measure?

How is the "standard error of the mean" calculated?

Calculate an approximate 95% confidence interval for the mean left foot length of women. Write a sentence that interprets this interval.

Calculate an approximate 95% confidence interval for the mean left foot length of men. Write a sentence that interprets this interval.

Use Minitab to calculate a 95% confidence interval for the difference between the population means. **Basic Statistics>2 Sample t**, **Samples** are in LeftFoot, **Subscripts** are in gender. Write a sentence that interprets this interval.

What population(s) do you think are represented by this sample?
Activity 2. Compare the mean nose lengths of men and women. Again, the measurements are in millimeters.

What is the mean nose length for Men?______ For Women _______?

What is the difference between means? _______

Determine a 95% confidence interval for the difference between the mean nose lengths of men and women. Based on this interval, do you think there is a statistically significant difference between the mean nose lengths of men and women? Why or why not?

Determine a 95% confidence interval for the mean nose length of women. Write a sentence that interprets this interval.

Determine a 95% confidence interval for the mean nose length of men.

Why do you think the interval for men is wider than the interval for women?
Attendance

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