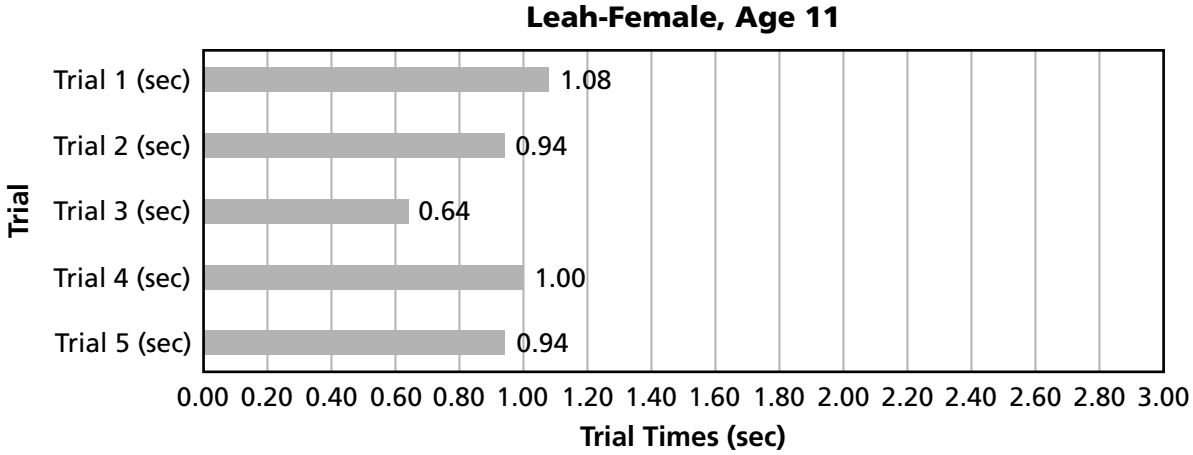
Name _____ Date _____ Class _____

Additional Practice

Investigation 3

Data Distributions

1. Write three different statements that describe the variability in Leah's reaction times from the value bar graph.

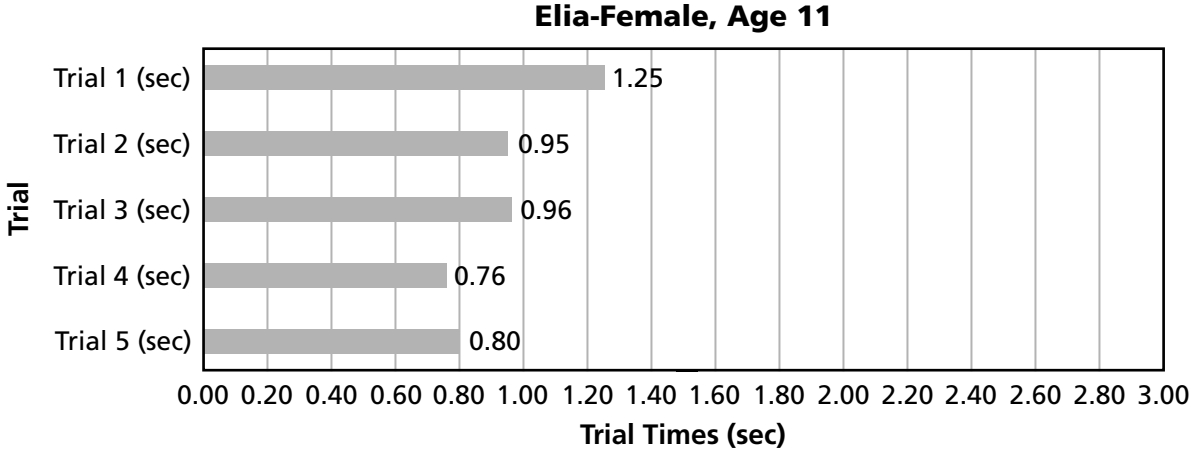


2. Below is a value bar graph showing data about Ella's reaction times. Compare Ella's reaction times to Leah's reaction times.

a. Determine statistics for each student: means, medians, and ranges.

b. Is one student quicker than the other student? Explain your reasoning.

c. Is one student more consistent than the other student? Explain.



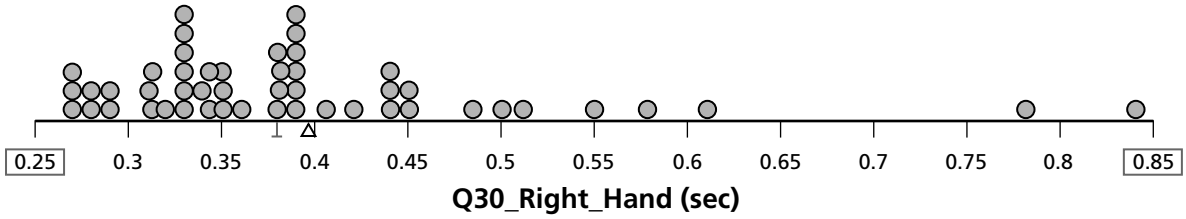
Additional Practice *(continued)*

3. The sample of data below is about from 50 students – 25 female students and 25 male students. Two questions on a survey asked students to respond to a stimulus, once with their right hands and once with their left hands. Their time to respond is recorded in seconds. Below are two graphs, one for RIGHT hand and one for LEFT hand response data.

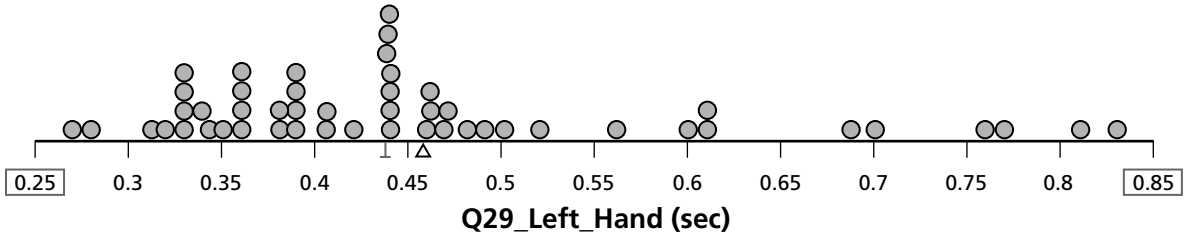
a. Are students quicker with their right hands or their left hands? Justify your reasoning.

b. Are students more consistent with their right hands or their left hands? Justify your reasoning.

c. We have been using data that look at a person's dominant hand and non-dominant hand in the Investigation. Is it possible that, for some of the students, their right hand was their non-dominant hand? Explain.



The mean is 0.39702 sec and the median is 0.38 sec.

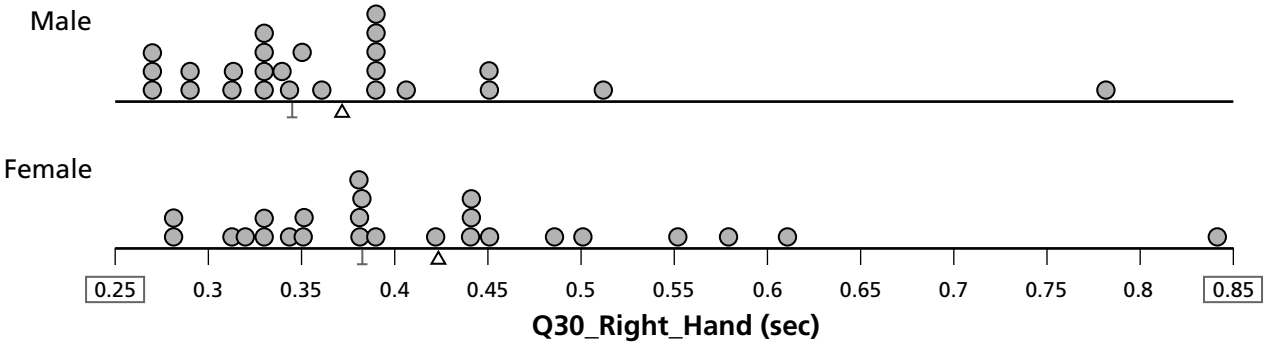


The mean is 0.45726 sec and the median is 0.4375 sec.

SOURCE: www.censusonline.net

Additional Practice *(continued)*

4. Using the same data set about reaction times, compare the male reaction times with their right hands to the female reaction times with their right hands. Look at the graphs below.



Males: mean = 0.37124 sec and median = 0.344 sec
Females: mean = 0.4228 sec and median = 0.382 sec

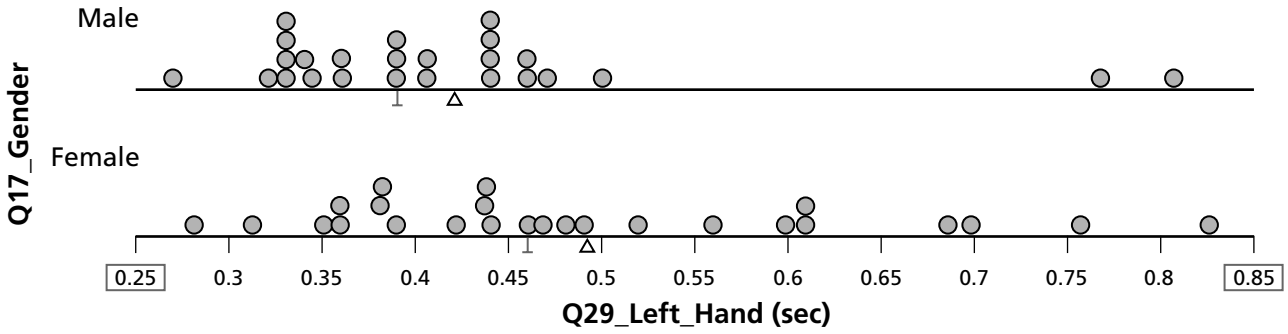
a. For both females and males, their means and medians are different. What accounts for this happening?

b. Are females quicker than males using their right hands? Justify your reasoning.

c. Are females more consistent than males using their right hands? Justify your reasoning.

Additional Practice *(continued)*

5. Using the same data set about reaction times, compare the male reaction times with their left hands to the female reaction times with their left hands. Look at the graphs below.



Males: mean = 0.42128 sec and median = 0.39 sec
Females: mean = 0.49324 sec and median = 0.461 sec

a. For both females and males, the means and medians are different. What might account for this happening?

b. Are females quicker than males using their left hands? Justify your reasoning.

c. Are females more consistent than males using their left hands? Justify your reasoning.