Name: **Statistics**

Date: **Practice Quiz 2-E**

1. The test scores on the first Math 2 test last year were 30, 44, 46, 46, 52, 52, 53, 60, 63, 65, 68, 69, 71, 72, 73, 73, 74, 74, 74, 76, 76, 77, 77, 78, 80, 81, 81, 81, 81, 81, 84, 84, 84, 84, 86, 86, 86, 88, 89, 90, 90, 90, 91, 93, 94, 96, 96, 96, 96, 96, 96, 97, 97, 97, 98, 98, 98, 98, 98, 100, 101, 101, 102, 104, 104, and 105.

a) Make a box-and-whisker plot. Label the value of each quartile.

First draw the scale, and then draw a box from the first quartile to the third quartile and extend whiskers to the lowest and highest value.

b) State the range.

This is the total width of the plot, including the whiskers.

c) State the interquartile range.

This is the width of the box only.

d) Estimate the 10^{th} percentile.

Approximately what score is higher than 10% of the data?

e) Estimate the 55^{th} percentile

Approximately what score is higher than 55% of the data (slightly above the median)?

2. Answer the following questions, and use complete sentences to explain your reasoning.

a) Is trimmed mean a resistant measure?

Does it stay about the same when an outlier is added to the data set, or does it use the outlier in its calculation and change significantly?

b) What percentile score would you estimate for a score of 13/20 on this Statistics 2-E quiz?

What percent of students would you estimate will score lower than 13/20 on this quiz?

c) If Emily scores 80% on next week's test and Otto scores at the 80^{th} percentile, who probably did better?

Do you expect your score to be higher or lower than 80% if you score higher than 80% of the class?