

Math 153 - Quiz 2

September 1, 2016

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) Biologists are trying to determine the average length of an adult brook trout in the Brule River. 937 brook trout are caught and measured. Their average length is determined to be 10.8 in.
 - (a) Are the lengths of brook trout discrete or continuous?

 - (b) Identify the level of measurement (nominal, ordinal, interval, ratio) for the lengths of the trout.

 - (c) Is the average length reported above a parameter or a statistic?

 - (d) Are the numbers of brook trout in the river discrete or continuous?

 - (e) One biologist reported that the average brook trout length was actually 10.83493356178643901 in. Why should you be skeptical of the biologist's report?

2. (1 point) The following survey was given to parents:

Question 1 – Are you aware of the recent study that shows that only bad parents spank their children?

Question 2 – Do you spank your children?

What is wrong with this survey?

3. (4 points) Determine whether each statement is true (T) or false (F).

(a) _____ A statistic is a numerical value that describes a population characteristic.

(b) _____ To select a cluster sample, divide a population into groups and then select all of the members of at least one of the groups.

(c) _____ Data at the ordinal level are quantitative only.

(d) _____ Numerical calculations can be performed on data at the nominal level.