Name: _____ Date: _____

BLM 3–17

Chapter 3 Test

1. If only 15% of people asked to mail in a survey respond, this is an example of
A non response bias
B response bias
C measurement bias
D there is no bias here

2. When you are stopped in a mall and asked for your opinion the pollster is using
A simple random sampling
B stratified random sampling
C voluntary response sampling
D cluster sampling

3. When a federal political party conducts a pre-election survey, the population is
A people who support the party
B all people in Ontario
C all people in Canada
D all Canadians who are eligible to vote

4. A graph of the population of towns in Ontario would have a
A skewed distribution
B bimodal distribution
C random distribution
D normal distribution

5. The measure that best describes the type of beverage typically bought at a snack shop is the
A mean **B** median
C mode **D** range

6. A school principal notices many of her students are arriving late every day. She asks the school secretary to record the reasons students give on their late slips for one week so she can find a solution to the problem.
a) Identify the population and the sample.
b) Is this primary or secondary data? Explain.

7. What is measurement bias? Give an example.

8. A market research firm wants to know the most popular colour of vehicle in Ontario.
a) How could the firm collect primary data to answer this question?
b) How could the firm collect secondary data to answer this question?
c) Which type of data is most reliable in this case? Explain.

9. Keegan is a Customs official at a large airport. She needs to randomly check 12 people's luggage over the next 12 h. She selects a time from midnight to noon 12 times. For each time selected, she randomly selects one of 30 gates. The person at that gate at the selected time will have their bags checked.
a) What type of sampling is Keegan using?
b) Use a random number generator to make a list of 12 random times and gates.
c) How likely is it that the same gate is chosen twice? Explain.

10. Mr D'Silva recorded his students' scores on the final exam in his English class.
99, 87, 88, 71, 34, 45, 78, 38, 64, 66, 58, 73, 77, 65, 61, 53, 73, 68, 62, 52, 49, 44, 77
a) Find the mean, the median, the mode, and the range of the exam scores.
b) Find the variance and the standard deviation of the exam scores.

11. Find the median, the first and third quartiles, and the interquartile range for the set of data. Then display the data using a box-and-whisker plot.
145, 183, 174, 181, 165, 162, 193, 177, 173, 177, 186, 184, 159, 163