**Statistics** **Chapter 1 Review**

**Determine if each statement is a parameter or statistic.**

1. The average credit card debt of 100 families sampled in Ohio is $12,375.

2. In a study of all 2147 parolees in a city, 392 had violated parole in the last 6 months.

3. The number of home runs hit by all Major League baseball players in the 2005 season was 5017. (Baseball Almanac)

4. In a recent survey of 2000 school-age children, it was found that they spend 6.5 hours per day watching TV, using computers, or enjoying other electronic devices.

**For the questions 5 and 6, identify the (a) sample and the (b) population from each study.**

5. A survey of 2850 smokers found that 78% had tried quitting smoking at least once in the last year.

(a)

(b)

6. A survey 100 patients in a hospital ER showed the average wait time was 36 minutes.

(a)

(b)

**Determine if the data below is:**
**A) qualitative or quantitative?**
**B) at the nominal, ordinal, interval or ratio level of measurement?**

7. The rating of a restaurant, on a scale from 1 to 5. (1 being terrible, 5 being great)

A) B)

8. A list of states you have visited.

A) B)

9. The number of chicken wings John can eat.

A) B)

10. The years in which all of your teachers were born.

A) B)

**Determine if the data below consists of qualitative or quantitative data.**

11. The salaries of football players on a professional football team.

12. Favorite breed of dog among 30 second-graders.

**Identify which data collection method is best for each situation below: *observation, experiment, simulation, or survey.***

13. A study on the effect of eliminating a turn lane on a major road to examine if it increases or decreases the number of car crashes.

14. A study on how often a child puts toys in their mouth.

15. A study of student ratings about school lunches.

16. A study of the effect of eating oatmeal every day to see if it lowers blood pressure.

**For #7 – 21, identify which types of sampling are being used below: *random, systematic, convenience, stratified, or cluster.***

17. Arrange all students in school in alphabetical order, and then choose every $50^{th}$ person to participate in a survey.

18. To do a survey on smoking, a sample of 500 people is divided into age groups (10-19, 20-29, 30-39, etc). Then 15 people from each age group are given the survey.

19. A city needs to collect data on services used. Households in the city are numbered from 1 to 45,000. A computer is used to generate random numbers to choose 150 households to participate in this survey.

20. A researcher stands outside Target to survey shoppers about their spending habits.

21. The office of the Mayor of New York City wants to know what residents think about the subway system. The city has 176 zip codes. A survey of all the residents in 12 zip codes is conducted.

22. Fifty people who walked in the 3-Day Breast Cancer walk are selected at random and their ages are recorded.

A. Is the data qualitative or quantitative? _____

B. What level (nominal, ordinal, interval, ratio) of measurement are the data? _____

C. What is the population?

23. Give an example of a convenience sample that is biased.

24. Give an example of an experiment that has a confounding variable.

25. How is a data value at the interval level different from a data value at the ratio level?

26. Use the information "In a sample of 350 college seniors, 318 had applied to college by February of their senior year."

A) What is the descriptive branch?

B) Make an inference about the sample:

27. What is replication and why is it important?

28. What methods are used to ensure that subjects are randomly assigned to a treatment/placebo group?