**Experimental Design Homework (Sampling Techniques)**

**Directions:** Be sure to show all work, communicate your thought process, and justify your reasoning.

Remember to check that your answers are complete, correct, and reasonable.

1. Which is an example of a random sample?

A. Choosing the best football players on a team to measure how fast they can run a mile

B. Surveying five of your friends about how fast they can run a mile

C. Both A and B

D. Neither A nor B

*State which sampling technique is applied in each situation.*

2. Telephone numbers are randomly generated, and the people who answer the phone are surveyed about how often they exercise.

3. Wanda asks 23 of her acquaintances to participate in a study she is conducting about the benefits of watching fewer hours of television on a daily basis.

4. A 50-acre field is portioned into two-acre subplots. Soil is collected from each subplot to analyze the quality of the soil.

5. There are seven of each animal at a zoo. The health of five animals chosen at random is studied.

6. The drink order of every fifth person who orders a drink at Starbucks is recorded to determine if the new flavor is popular or not.

7. Two-hundred students in a school district are chosen at random to participate in a study. The sample is chosen from each of the following grade levels: 1st grade, 2nd grade, 3rd grade, 7th grade, 8th grade, 11th grade, and 12th grade.

*\*Expect a quick quiz on these ideas tomorrow!* ☺

**Throwback!**

Simplify the expression:

 3 – 9|-18 / 6 \* -4 | + 2

Selected Solutions

1. D

3. Convenience Sampling (only asks people she knows)

5. Simple Random Sampling (each type of animal has an equal chance of being chosen)

7. Cluster Sampling (sample is chosen from some subgroups, but not all)