Statistical Reasoning
Unit 5 Review 2

Name: $\qquad$
Date: $\qquad$

1. Juan wants to know how many of his friends like Zaxby's. He creates an online poll on Survey Monkey and tells his friends to go answer it. 25 of his friends reply to the poll and $80 \%$ of them like Zaxby's.
a. What type of sample is this?
b. Will this sample provide accurate results? Why or why not?
2. Ayana wants to know how many seniors like rap music. She stand outside of the cafeteria at lunch and surveys the first 50 seniors she sees.
a. What type of sample is this?
b. Will this sample provide accurate results? Why or why not?
3. Identify the type of error or type of sample.
a. A student takes a random sample of her peers from each of her classes.
b. Dr. Stark takes a sample of 50 seniors by using a random number generator.
c. A student lies about how much time they spend at tutoring.
d. Mrs. Brattebo asked her students, "How terrible was the loss to the Cleveland Browns on Sunday?"
e. Brian types in the time as 28:12.
f. Tyler is chosen to participate in a school survey on dress code. She refuses to answer the questions.
g. Mrs. Brown takes a random sample of 5 students from each grade level.
h. A student has 35 absences in statistics. They state that they have 10 absences on a survey.
i. Michael wants to know how many people like candy. He asks his friends at lunch.
4. A local school would like to find an SRS of 6 students to serve on a committee. A list of all students are listed below. Names with the symbol ${ }^{* *}$ are males.

| RAQUEL | MIA | SARAH | LAUREN |
| :--- | :--- | :--- | :--- |
| MAX** | JOSH** | AMELA | AMANDA |
| PRINCE** | AIDAN** | BEN** | MarK** |
| LIZA | ANDI | JOHN** | BRITTNEY |
| JACK** | SEAN** | ANNA | TOM** |
| EVAN** | AMBER | JULIA | STEPHEN** |

Use the line given to answer the following:
a) Find an SRS of 6 teachers. (Line 127)
b) Find a systematic random sample of 6 teachers. Use an interval of 2. (Line 140)
b) Find a stratified random sample of 6 teachers based on gender. (Line 105)
5. In a survey of 35 people, $18 \%$ replied that their favorite fast food restaurant was American Deli.
a) HOW MANY people said that their favorite fast food restaurant was American Deli?
b) What is the margin of error for the survey?
c) Using a $95 \%$ confidence level, write a confidence statement for this data.
d) Do you think these results accurately describe the true percentage of people whose favorite restaurant is American Deli? Why or why not?
6. In a survey of 1000 people, 850 replied that their favorite color is red.
a. What percent of people said that their favorite color is red?
b. What is the margin of error for the survey?
c. Using a $95 \%$ confidence level, write a confidence statement for this data.
d. Do you think these results accurately describe the true percentage of people whose favorite color is red?

