Math 45X – Review for Quiz #1

Topics covered

1). Categorical vs. Quantitative variables

Example:

In a survey people are asked "Which brand of toothpaste do you prefer?" The data gathered from this question would be what type of data?

a). categorical

b). quantitative

c). none of these

2). Explanatory vs. Response variables

Example:

The student plans to see if there is a relationship between the number of speeding tickets a student gets in a year and the type of vehicle he or she drives. Identify the response variable in this study.

a). college students

b). type of car

c). number of speeding tickets

d). average number of speeding tickets last year

3). Given a dataset in a table (a matrix), what fractions (ratios or percents) do you use to answer the questions?

Example:

A study was conducted to see if a person's low birth weight has any impact on whether this person graduates from high school. The data was then published in a *Time* magazine article.

	Graduated from high school by age 19	**Did not graduated from high school by age 19**	**Row Total**
Low birth weight	16	34	50
Normal birth weight	86	64	150
Column Total	102	98	200

(i) Is a person born with low birth weight less likely to graduate from high school? Which fraction should be compared to answer this question?

a). Compare: (i). $\frac{16}{50}$ (ii). $\frac{86}{150}$

b). Compare: (i). $\frac{16}{102}$ (ii). $\frac{34}{98}$

c). Compare: (i). $\frac{16}{50}$ (ii). $\frac{34}{50}$

d). none of these

(ii) What does this percent, $\frac{86}{150} = 57\%$, mean?

4). Use data to answer questions convincingly in a sentence or sentences.

Example: Answer the question in #3i (above), using at least one complete sentence and at least two percentages.