MT 143, Quiz #1, Spring 2020   Name _____

Instructions: Show all work. Answers without work can only be graded all or nothing. Partial credit is available only when work is shown. Answer all parts of each problem. Provide explanations as indicated.

1. For each of the variables provided in the table below, indicate whether the variable is categorical or quantitative (if quantitative, is it discrete or continuous), and its level of measurement (nominal, ordinal, interval or ratio). Check the appropriate boxes.

Variable	Qualitative/ Categorical	Quantitative	Discrete	Continuous	Nominal	Ordinal	Interval	Ratio
Age (in years)		✔	✔					✔
Operating System	✔				✔			
Speed (mph)		✔		✔				✔
Number of People in Household		✔	✔					✔
Longitude		✔		✔			✔	
Grade Level in School	✔		✔				✔	
Annual Income		✔		✔				✔

2. Give an example of how data collection might qualify as a convenience sample.

Examples will vary, but using your own family members as the basis for a survey about all Americans.

3. Explain why convenience samples are unlikely to be representative of the population.

Explanations may depend on your specific example, but convenience samples tend to have variables in common with each other (being related to the researcher, or specific geographic location, etc.), and thus tends to belong to a specific subset of the population rather than being representative of the whole.