

**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.

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