

MGS 9920 Prob & Stat Theory I
HW #1

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12. The Hawaii Visitors Bureau collects data on visitors to Hawaii. The following questions were among 16 asked in a questionnaire handed out to passengers during incoming airline flights in June 2003.

- This trip to Hawaii is my: 1st, 2nd, 3rd, 4th, etc.
- The primary reason for this trip is: (10 categories including vacation, convention, honeymoon)
- Where I plan to stay: (11 categories including hotel, apartment, relatives, camping)
- Total days in Hawaii

a. What is the population being studied?

Answer – *Visitors to Hawaii.*

b. Is the use of a questionnaire a good way to reach the population of passengers on incoming airline flights?

Answer – *No. There is a chance that not all the people to whom the questionnaire had been handed out would fill it out and turn it in. Some might even answer untruthfully, resulting in a voluntary response bias.*

c. Comment on each of the four questions in terms of whether it will provide nominal, ordinal, interval or ratio data?

Answer – Question 1 – Ordinal

Question 2 – Nominal

Question 3 – Nominal

Question 4 – Ratio

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19. A *Business Week* North American subscriber study collected data from a sample of 2861 subscribers. Fifty-nine percent of the respondents indicated an annual income of \$75,000 or more, and 50% reported having an American Express credit card.

a. What is the population of interest in this study?

Answer – *All the subscribers of the Business Week-North American*

b. Is annual income a qualitative or quantitative variable?

Answer – *Quantitative*

c. Is ownership of an American Express card a qualitative or quantitative variable?

Answer – *Qualitative*

d. Does this study involve cross-sectional or time series data?

Answer – *Cross Sectional Data*

e. Describe any statistical inferences *Business Week* might make on the basis of the survey.

Answer – *By calculating Confidence Intervals and possible margins of error,*

Approx. 59% of its subscribers have an annual income of 75,000 or more

Approx. 50% of its subscribers have an American Express Card