

REVIEW PROBLEMS FOR RECITATION #1

1. For each of the following, indicate whether the data is measured on a nominal, ordinal, interval, or ratio scale.

- _____ a) waist sizes of 65-year-old men
- _____ b) amount of alcohol in a can of Budweiser beer
- _____ c) countries of origin of CUNY students
- _____ d) temperature in centigrade of Starbuck's coffee
- _____ e) religions of CUNY college students
- _____ f) social class of CUNY students
- _____ g) weights of 65-year-old women
- _____ h) IQ of CUNY students
- _____ i) scores on the CPA exam for CUNY students
- _____ j) speeds of fastballs thrown by American League pitchers
- _____ k) strength categories of hurricanes (1, 2, ..., 5)
- _____ l) genders of Wal-Mart employees
- _____ m) rank of college professors (Instructor, Assistant Professor, Associate Professor, Full Professor)
- _____ n) class standing of CUNY students (Freshman, Sophomore, ...)

ANS:

1. a) ratio b) ratio c) nominal d) interval e) nominal f) ordinal g) ratio h) interval
 i) interval j) ratio k) ordinal l) nominal m) ordinal n) ordinal

2. Indicate which of the following are discrete measurements and which are continuous measurements:

Discrete Continuous

- | | | |
|-----|-----|--|
| ___ | ___ | a) the number of defective laptops in batches of 30 |
| ___ | ___ | b) life of a Duracell battery |
| ___ | ___ | c) mileage of Toyota Prius cars |
| ___ | ___ | d) weight of guinea pigs |
| ___ | ___ | e) span of butterfly wings |
| ___ | ___ | f) number of left-handed people on basketball teams |
| ___ | ___ | g) time to complete the New York City Marathon |
| ___ | ___ | h) amount of alcohol in a can of beer |
| ___ | ___ | i) number of foreign students in each statistics class |
| ___ | ___ | j) height of basketball players |
| ___ | ___ | k) number of pens in backpacks of college students |

ANS:

2. a) Discrete b) Continuous c) Continuous d) Continuous e) Continuous f) Discrete
 g) Continuous h) Continuous i) Discrete j) Continuous k) Discrete

3. Indicate which of the following is a parameter and which is a statistic:

Parameter Statistic

- | | | |
|-----|-----|---|
| ___ | ___ | a) sample mean |
| ___ | ___ | b) population standard deviation |
| ___ | ___ | c) sample standard deviation |
| ___ | ___ | d) population variance |
| ___ | ___ | e) population median |
| ___ | ___ | f) population mean |
| ___ | ___ | g) a mean obtained from the U.S. census |

ANS:

3. a) Statistic b) Parameter c) Statistic d) Parameter e) Parameter f) Parameter
g) Parameter

4. For each of the following, indicate the appropriate statistical measures that may be used for analysis (e.g., proportions, median, quantiles, mode, mean, ...). List as many as are appropriate.

- a) For data measured on a nominal scale, you may use: _____
b) For data measured on an ordinal scale, you may use: _____
c) For data measured on an interval scale, you may use: _____

ANS:

4. a) frequencies, proportions b) frequencies, proportions, median, percentiles and other quantiles c) frequencies, proportions, median, percentiles and other quantiles, mean, standard deviation

5. CUNY has 200,000 students. A researcher wants a sample of 2,000 students. Students are assigned numbers and then random numbers are used so that every student has an equal chance of being selected (1%).

- a) This is known as a: _____.
b) Measurements obtained from this are known as: _____.
c) Suppose the researcher decides to survey all 200,000 students. This is called a _____.
d) Any measurement obtained is known as a _____.

ANS:

5. a) simple random sample b) statistics c) census d) parameter