

Name: Solution

(1 point; 1 minute)

1. Give a short definition of statistics:

Box: The art and science of making sense out of data.

Fisher: Statistical method = Scientific method

Triola: long definition that is equivalent to Fisher's.

(12 points; 6 minutes)

2. Circle the correct choice in each box.

	Are the data ... ?	Are the data ... ?
a. The <u>combined weight (in pounds)</u> of all the people <u>that ride the train</u> from New York to Boston each weekday.	Qualitative Quantitative and Discrete <u>Quantitative and continuous</u>	Nominal Interval Ordinal <u>Ratio</u>
b. The <u>average cost (in British pounds)</u> of all the gallons of gasoline sold in Great Britain last year.	Qualitative <u>Quantitative and Discrete</u> <u>Quantitative and continuous</u>	Nominal Interval Ordinal <u>Ratio</u>
c. The <u>radio talk show hosts</u> who have expressed their annoyance with a caller by telling them to "pound sand" during the last 365 days.	<u>Qualitative</u> Quantitative and Discrete Quantitative and continuous	<u>Nominal</u> Interval Ordinal Ratio
d. The <u>dates</u> on which Christmas parties were held by the staff at City dog "pounds" in the last 10 years.	Qualitative <u>Quantitative and Discrete</u> <u>Quantitative and continuous</u>	Nominal <u>Interval</u> Ordinal Ratio
e. The <u>dress sizes</u> worn by women known to have <u>eten "pound cake"</u> at some time in the last 10 years.	<u>Qualitative</u> Quantitative and Discrete Quantitative and continuous	Nominal Interval <u>Ordinal</u> Ratio
f. The <u>temperatures (°F)</u> at which "pound cake" mixes are to be baked according to directions supplied with the mix.	Qualitative <u>Quantitative and Discrete</u> <u>Quantitative and continuous</u>	Nominal Interval Ordinal <u>Ratio</u>

best → OK

names

OR

eaten

(5 points; 6 minutes)

3. A polling company wants to estimate the percentage of the vote that Candidate "A" will get next week when the people in Candidate A's district go to the polls to cast votes. To make their estimate, the polling company contacts a random sample of 4,000 residents of the district and asks them three questions: (1) Did you vote in the last election? (2) Do you plan to vote in this election? (3) Who do you plan to vote for? Based on the data from their survey, the company reports the "45.3% of 2,830 likely voters say they will vote for Candidate A." The "likely voters" answered "yes" to the first two questions.

Use the information in the "story" to answer the following:

- (a) What is the population of interest?

The votes of all voters during the election next week.

- (c) What statistic was used?

The percentage of 2830 "likely voters" who say they will vote for Candidate A.

- (d) ^{is} What the parameter of interest?

The percentage that will prefer (vote for) Candidate A among all votes cast next week.

- (d) Was a census or a sample used in the work?

A sample.

- (e) How do you know whether a census or a sample was used?

Because only 4000 residents were surveyed and of those only 2830 were judged to be from the population of interest.