

Math 153 - Quiz 1

August 28, 2014

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (1 point) Identify the population and the sample: A survey of 202 pilots found that 20% admit that they have made serious errors due to sleepiness.

Population: All pilots

Sample: 202 pilots surveyed

2. (1 point) The average annual salary for 35 of a company's 1200 accountants is \$68,000. Is \$68,000 a statistic or parameter? Explain.

IT'S A STATISTIC. IT DESCRIBES 35 OF THE
COMPANY'S TOTAL 1200 ACCOUNTANTS.

3. (1 point) Sixty-two of the 97 passengers aboard the Hindenburg airship survived its explosion. Is 62 a statistic or parameter? Explain.

62 IS A PARAMETER. IT DESCRIBES
ALL OF THE SURVIVORS.

4. (2 points) The items below appear on a physician's intake form. Determine the level of measurement of each. Choose from *nominal*, *ordinal*, *interval*, or *ratio*.

(a) Body temperature _____ INTERVAL _____

(b) Allergies _____ NOMINAL _____

(c) Weight _____ RATIO _____

(d) Pain level (scale of 0 to 10) _____ ORDINAL _____

5. (2 points) Determine whether the given data value is from a discrete or continuous data set.

(a) The Honda Civic has 4 cylinders. DISCRETE

(b) George Washington was 188 cm tall. CONTINUOUS

6. (1 point) Identify the level of measurement and explain what is wrong with the calculation: In a survey of likely voters, political parties of respondents are identified as 1 for Democrat, 2 for Republican, 3 for Independent, and 4 for anything else. The average is calculated for the 850 respondents and the result is 1.7.

THE LEVEL OF MEASUREMENT IS NOMINAL.

IT MAKES NO SENSE TO DETERMINE AN
AVERAGE VALUE OF LABELS!

7. (1 point) Stephanie collected sample data by randomly selecting 12 different pages from *Harry Potter and the Sorcerer's Stone* and then finding the number of words in each sentence on each of those pages. What type of sampling was used?

CLUSTER SAMPLING --- EACH

PAGE IS A CLUSTER,

SEVERAL CLUSTERS WERE SELECTED

AT RANDOM.

8. (1 point) A sample of 50 PSC students was obtained by randomly selecting 25 males and 25 females. Is this a simple random sample?

No, NOT EVERY SAMPLE OF SIZE 50 IS

EQUALLY LIKELY. IN FACT, A SAMPLE

OF 50 MALES IS IMPOSSIBLE.