

Select the single best answer for each question or statement, then transfer your answers to the appropriate scan sheet provided.

1 Is Drug B superior to the currently used Drug A in treating pancreatitis?

- a. Observational
- b. Case-controlled observational
- c. Double blind experiment
- d. Single blind experiment

2 A survey of 100 dog owners showed that the average dog 'checked the mail' eleven times during an evening walk. Which question most probably represents the purpose of the study?

- a. How many 'mail check stops' can a dog be expected to make on an evening walk?
- b. How many dog owners take dogs for an evening walk?
- c. How many dogs 'check the mail' on an evening walk?
- d. How many pet owners have dogs?

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3 A bar graph in which the bars are arranged in frequency order is a:

- a. dotplot.
- b. pie chart.
- c. line chart.
- d. pareto chart.

4 Six football players, all defensive linemen, decide that they will gain an average of 10 pounds over the summer. At the start of the season, only five showed up for the weigh-in. They had gained 9, 13, 11, 6, and 7 pounds. How many pounds does the last person have to gain in order that the group can attain its goal?

- a. 12 pounds
- b. 14 pounds
- c. 13 pounds
- d. 14.5 points

5 The heights of 10 randomly selected fourth grade boys are (in inches) are 53, 53, 54, 56, 56, 56, 50, 57, 59, and 56. Find the sample standard deviations to 2 decimal places.

- a. 2.67
- b. 2.54
- c. 3.54
- d. 2.56

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6 Salesmen for the ABC Plastics Company drive an average of 240 miles per day with a standard deviation of 36 miles. If samples of 25 daily mileages are taken, what is the standard deviation of the distribution of sample means?

a. 6.8

b. 7.0

c. 7.1

d. 7.2

7 In 2003, the U.S. death rate was 1.2 per 100,000 people due to motorcycle accidents. Motorcycles in the U.S. were involved in fatal crashes at the rate of 35.0 per 100 million miles driven. If the population of the U.S. is 300,000,000, what is the expected number of deaths due to motorcycle accidents?

a. 3600

b. 10500

c. 1200

d. 11700

8 In one city, there are 1,780 5-year old children of whom 556 live with one parent only. Among a sample of 615 of the 5-year old children from this city, 226 live with one parent only. Find the population proportion of 5-year olds who live with only one parent.

a. 0.35

b. 556

c. 0.37

d. 0.31

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A manufacturer wishes to test the claim that one of its pancake mixes has a mean weight that does not equal 24 ounces as advertised. Determine the conclusion of the hypothesis test assuming that the results of the sampling lead to rejection of the null hypothesis.

a. Conclusion: Support the claim that the mean is greater than 24 ounces.

b. Conclusion: Support the claim that the mean is not equal to 24 ounces.

c. Conclusion: Support the claim that the mean is equal to 24 ounces.

d. Conclusion: Support the claim that the mean is less than 24 ounces.

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A 95% confidence interval for the mean of a normal population is found to be $17.6 < \mu < 23.6$. What is the margin of error?

a. 2

b. 2.7

c. 3

d. 4