Data Inferences Practice

1. A random sample of 40 African elephants had a mean weight, in pounds, of 11,982 pounds. The estimate had a margin of error of 26 pounds at a 98% confidence level. Of the following, which is the most plausible value for the true mean African elephant weight? *(no calculator)*
   a. 12022
   b. 11942
   c. 11978
   d. 12009

2. A random sample of LA bus rides in 2015 showed that 82% of the rides arrived within 10 minutes of their scheduled arrival time, and this estimate had a margin of error of 2% at a 94% confidence level. Which of the follow conclusion is best? *(no calculator)*
   a. Exactly 82% arrived within 10 minutes of their scheduled times
   b. Exactly 80% arrived within 10 minutes of their scheduled times
   c. Between 80% and 84% arrived within 10 minutes of their scheduled times
   d. Between 92% and 96% arrived within 10 minutes of their schedule times

3. In a poll of 2,168 randomly selected high school students, 33.7% of the respondents said that they ate breakfast in the morning. The poll reported a margin of error of 4.5% at a 90% confidence level. Which of the following is most likely to be equal to the percentage of all high school students who eat breakfast in the morning. *(no calculator)*
   a. 38%
   b. 39%
   c. 56.3%
   d. 90%

4. A random sample 55 trucks had a mean gas mileage of 19.9 mpg. The estimate had a margin of error of 2.9 mpg at a 97% confidence level. Of the following, which is the most plausible value for the true mean gas mileage of all trucks. *(no calculator)*
   a. 17.3 mpg
   b. 35.1 mpg
   c. 23.1 mpg
   d. 57.7 mpg

5. If a is the average (arithmetic mean) of $4x$ and 19, b is the average of $\frac{3x}{2}$ and 8, and c is the average of $\frac{15x}{2}$ and 27, what is the average of $a, b, \text{and } c$ in terms of x ? *(no calculator)*
   a. $4x+18$
   b. $12x+54$
   c. $6x+27$
   d. $2x+9$

6. At a lion preserve, the mean age of all the lions who have been living at the preserve for less than 1 year is 3 years old, and the mean age of the lion who have been living at the preserve for a year or more is 8 years old. Which of the following must be true about the mean age *m* of the combined group of lions who have been living at the reserve for less than a year, and who have been living at the reserve for a year or more at the lion reserve? *(no calculator)*
   a. $m=5.5$
   b. $m>5.5$
   c. $m<5.5$
   d. $3<m<8$

7. A professor receives student evaluations between 1 and 10, inclusive. In the first 10 ratings the professor received, the average (arithmetic mean) of the ratings was 7.5. What is the least value the professor can receive for the 11th rating and still be able to have an average of at least 8.5 for the first 20 ratings. *(no calculator)*
   a. 7.5
   b. 6
   c. 5
   d. 1

8. A survey was taken of the value of cars in a city and it was found that the mean car value was 25,000 and the median car value was 18,000. Which of the following situations could explain the difference between the mean and median car values in the city. *(no calculator)*
   a. The cars have values that are close to each other
   b. There are a few cars that are valued much less than the rest
   c. There are a few cars that are valued much higher than the rest
   d. Many of the cars have values between $18,000 and $25,000.

For individual subscriber use only: unauthorized reproducing or sharing of this content is illegal. Subscribe at supertutortv.com.
Copyright © 2017 by Supertutor Media, Inc. Report misuse to info@supertutortv.com.

9. The mean score of 4 players in a video game was 16.8 points. If the highest individual score is removed, the mean score of the remaining 3 players becomes 12.2 points. What was the score of the player who left?
   a. 12.2
   b. 30.6
   c. 36.6
   d. 67.2

10. Based on a random sample of plant vegetation in a certain area each day, scientists estimate that the deer in the area consume approximately 2500 pounds of vegetation a year. The estimate has a margin of error of 160 pounds at the 90% confidence level. Which of the following is the most reasonable claim about the pounds of vegetation consumed annually by deer in that particular area?
    a. It is between 2500 and 2660 pounds
    b. It is between 2340 and 2660 pounds
    c. It is between 160 and 2500 pounds
    d. It is between 160 and 2340 pounds

supertutortv

For individual subscriber use only: unauthorized reproducing or sharing of this content is illegal. Subscribe at supertutortv.com.
Copyright © 2017 by Supertutor Media, Inc. Report misuse to info@supertutortv.com.