Try again once you are ready

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Try again

1. Which of the following statements accurately describe a point estimate? Select all that apply. **0.75 / 1 point**

- [x] A point estimate estimates a sample statistic.

  This should not be selected
  Review the video that introduces confidence intervals.

- [x] A point estimate estimates a population parameter.

  Correct

- [ ] A point estimate uses a range of values.
- [x] A point estimate uses a single value.

  Correct

2. A data professional working for a theme park is estimating the mean time visitors spend in the park. They construct the following 95% confidence interval based on a sample mean of 3.5 hours: [2.5, 4.5]. What is the margin of error? **1 / 1 point**

- ( ) +/- 4.5 hours
- ( ) +/- 2.5 hours
- (•) +/- 1 hour
- ( ) +/- 2 hours

Correct

3. A data professional working for a moving company is estimating the average time it takes to complete a move. Based on a sample mean of 3 hours, they construct the following 95% confidence interval: [2.5 , 3.5]. What does 95% refer to? **0 / 1 point**

- ( ) The percentage of data values in the dataset
- ( ) The margin of error
- (•) The percentage of all possible sample means that fall within the range of the interval
- ( ) The success rate of the estimation process

Incorrect
Review the video about interpreting confidence intervals.

4. According to the four steps that detail how to construct a confidence interval for a proportion, which of the following activities are involved in this process? Select all that apply. **1 / 1 point**

- [ ] Plot a histogram
- [x] Choose a confidence level

  Correct

- [x] Calculate the interval

  Correct

- [x] Find the margin of error

  Correct

5. A data analytics team at a book publisher researches the most popular book subject matter based on sample data. They construct a 95% confidence interval using a sample size of 250. They also construct a 95% confidence interval using a sample size of 5,000. What happens as the sample size increases? **0 / 1 point**

- ( ) The population parameter gets larger.
- ( ) The confidence interval gets wider

- The confidence interval gets wider.
- The margin of error decreases.
- (selected) The margin of error increases.

Incorrect
Review the video about constructing a confidence interval.

6. In the context of constructing a confidence interval of a population mean, what does the `loc` argument of the `scipy.stats.norm.interval()` function refer to? **1 / 1 point**

- (selected) Sample mean
- Confidence level
- Sample standard error
- Interquartile range

Correct

7. Fill in the blank: For small sample sizes, data professionals use the _____ to make calculations with the data. **1 / 1 point**

- s-distribution
- z-distribution
- normal distribution
- (selected) t-distribution

Correct

8. Which of the following statements accurately describe the graph of the t-distribution? Select all that apply. **1 / 1 point**

- [ ] As the sample size decreases, the t-distribution approaches the normal distribution.
- [x] As the sample size increases, the t-distribution approaches the normal distribution.

Correct

- [x] It has larger tails than the standard normal distribution.

Correct

- [ ] It has smaller tails than the standard normal distribution.