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1. What would a data professional use to estimate a population parameter using a range of values? 1 / 1 point

- (●) Interval estimate
- ( ) Point estimate
- ( ) Z-score
- ( ) Sampling frame

✓ 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

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

✓ Correct

3. A data professional working for a food delivery company is estimating the average time it takes to complete a delivery. Based on a sample mean of 20 minutes, they construct the following 95% confidence interval: [17.5 , 22.5]. What does 95% refer to? 0 / 1 point

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

✗ 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

- [x] Choose a confidence level

Correct

- [ ] Plot a histogram
- [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? 1 / 1 point

- ○ The margin of error increases.
- ○ The confidence interval gets wider.
- ◉ The margin of error decreases.
- ○ The population parameter gets larger.

Correct

6. A data professional is using `scipy.stats.norm.interval()` in Python to construct a confidence interval. Which of the following pieces of code can they use to choose a confidence level of 99%? 1 / 1 point

- ◉ `alpha = 0.99`
- ○ `loc = 0.99`
- ○ `std = 0.99`
- ○ `scale = 0.99`

Correct

7. Fill in the blank: Data professionals use the _____ when working with a small sample size and data that is approximately normally distributed. 1 / 1 point

- ◉ t-distribution

- ○ normal distribution
- ○ s-distribution
- ○ z-distribution

✓ Correct

8. What shape is the graph of the t-distribution? 1 / 1 point

- ☐ Rectangular shape
- ☐ Circular shape
- ☑ Bell shape

✓ Correct

- ☐ Square shape