

# Guideline Quizzes for Module 12

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## Question 1

1 point

What is the goal of bootstrapping in statistics?

Choose at least one correct answer

- ☐ (A) To replicate a study
- ☐ (B) To generate new data
- ☒ (C) To estimate the sampling distribution of a statistic
- ☐ (D) To calculate the mean of a dataset

Correct answer

## Question 2

1 point

Which method is most commonly used in bootstrapping to estimate confidence intervals?

Choose at least one correct answer

- ☐ (A) Z-Score Method
- ☒ (B) Percentile Method
- ☐ (C) T-Test
- ☐ (D) Chi-Square Test

Correct answer

## Question 3

1 point

How is bootstrapping performed?

Choose at least one correct answer

- ☒ (A) Repeatedly sampling with replacement from a single dataset
- ☐ (B) Collecting new samples from different populations

Correct answer

- ☐ C Increasing the sample size manually
- ☐ D Using a theoretical distribution for calculations

#### Question 4

1 point

What does each bootstrap sample consist of?

Choose at least one correct answer

- ☐ A A new dataset
- ☒ B Random samples drawn with replacement from the original sample
- ☐ C A summary statistic

Correct answer

#### Question 5

1 point

How does bootstrapping differ from traditional parametric methods?

Choose at least one correct answer

- ☒ A It requires fewer assumptions about the data
- ☐ B It always produces more accurate results
- ☐ C It does not involve resampling
- ☐ D It is used only for large datasets

Correct answer

#### Question 6

1 point

What is the primary assumption of bootstrapping?

Choose at least one correct answer

- ☐ A The sample size must be larger than 100
- ☐ B The data are normally distributed
- ☒ C The original sample is representative of the population

Correct answer

## Question 7

1 point

Bootstrapping is particularly useful when:

Choose at least one correct answer

- ☐ (A) Data is normally distributed
- ☒ (B) The theoretical distribution of the statistic is unknown
- ☐ (C) The sample size is large
- ☐ (D) The data is parametric

Correct answer