

Quiz 4

⚠ This is a preview of the published version of the quiz

Started: Jun 22 at 9:12pm

Quiz Instructions



Question 1 1 pts

Which of the following is NOT a statistic?

☐

The median data point.

☐

The largest data point.

☐

The smallest data point.

☐

The population mean.



Question 2 1 pts

Which of the following statement is true about a statistic?

☐

It is a quantity that depends on your random sample.

☐

Its sampling distribution depends on sample size of the random sample.



It has a sampling distribution, which describes the probabilities of getting all possible random samples and their corresponding statistic values.



All of them!



Question 3 1 pts

If we know a sequence of random variable X_n converges to a random variable X in probability, what can we conclude?



X can only be a point mass.



X_n may not converge to X in distribution.



X_n must converge to X in quadratic mean.



X_n must converge to X in distribution.



Question 4 1 pts

Which of the statement is true about the Law of Large Numbers (LLN)?



The population distribution must be normal for LLN to hold.



There is no assumption about the data generating mechanism.



It tells us the sampling distribution of sample mean.



Sample mean converges to population mean in probability as sample size goes to infinity.



Question 5 1 pts

Which of the statement is true about the Central Limit Theorem (CLT)?

☐

It tells us the sampling distribution of sample mean is approximately normal when sample size is large.

☐

All of them!

☐

Data is assumed to be i.i.d.

☐

Population distribution can be any distribution as long as mean and variance exist.

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