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Quiz name

Weekly quiz 6 (DUE: Fri Sep 1, 10am)

1 **MULTIPLE CHOICE** Edit

In permutation one variable is _____ with breaks association with all the other variables.

Answer choices

A	shuffled
B	removed
C	modeled
D	averages

2 MULTIPLE CHOICE

Edit

In simulation, values are randomly _____ from a known distribution or model.

Answer choices

A	drawn
B	dropped
C	averaged
D	shuffled

3 MULTIPLE CHOICE

Edit

In bootstrap, new samples are generated by _____ with replacement the existing sample.

Answer choices

A	sampling
B	shuffling
C	averaging
D	normalising

4 MULTIPLE CHOICE

Edit

Using a computer, we took 10,000 bootstrap samples and computed the standard deviation for each. This is called the _____ distribution of the standard deviation.

Answer choices

A	sampling
B	normal
C	bootstrap
D	null

5 MULTIPLE CHOICE

Edit

The textbook explanation of bootstrap is to study the distribution of a statistic that is complicated to do mathematically. It focuses on studying the standard deviation, and in particular looking at its sampling distribution, which is the distribution of the standard deviation computed on all possible samples from the population. The textbook states "The bootstrap distribution for the standard deviation will be a good approximation of the sampling distribution for the standard deviation when": (choose all that apply)

Answer choices

A	observations in the original sample are independent
B	the original sample size is at least 30
C	the bootstrap distribution is nearly normal
D	none of these

6 MULTIPLE CHOICE

Edit

To compute a 90% bootstrap confidence interval using the percentile method, you need to

(1) draw B bootstrap samples.

(2) compute the statistic of interest, call it thetahat, on each of these.

(3) order the values of thetahat, giving the sample quantiles

(4) select the x'th and the y'th values

What are x and y?

Answer choices

A	2.5, 97.5
B	5, 95
C	10, 90
D	None of these

7 TRUE/FALSE

Edit

A confidence interval for a predicted value is the same thing as a prediction interval.

Answer

False

8 **MULTIPLE CHOICE** Edit

In statistics, bootstrapping is any test or metric that relies on random sampling _____ replacement

Answer choices

A	with
B	without
C	not
D	and

9 **MULTIPLE CHOICE** Edit

Bootstrapping is the practice of estimating properties of an estimator by measuring those properties when sampling from an _____ distribution.

Answer choices

A	sampling
B	normal
C	bootstrap
D	approximating

10 MULTIPLE CHOICE

Edit

The bootstrap was inspired by earlier work on the _____.

Answer choices

A	pocketknife
B	jackknife
C	normal model
D	exact test

11 MULTIPLE CHOICE

Edit

Bootstrap is generally useful for estimating the distribution of a statistic (e.g. mean, variance) without using _____ (e.g. z-statistic, t-statistic)

Answer choices

A	sampling distributions
B	standard statistics
C	normal theory
D	normal tables

12 MULTIPLE CHOICE

Edit

_____ comes in handy when there is no analytical form or normal theory to help estimate the distribution of the statistics of interest

Answer choices

A	Permutation
B	Simulation
C	Bootstrap
D	The normal model

13 MULTIPLE CHOICE

Edit

Bootstrapping can be interpreted in a _____ framework using a scheme that creates new datasets through reweighting the initial data.

Answer choices

A	Bayesian
B	Parametric
C	Regression
D	Smooth

14 MULTIPLE CHOICE

Edit

The _____ bootstrap is used when the data, or the errors in a model, are correlated.

Answer choices

A	block
B	Bayesian
C	parametric
D	percentile

15 MULTIPLE CHOICE

Edit

The name “bootstrapping” comes from the phrase, “To lift oneself up by their _____.” This refers to something that is preposterous and impossible.

Answer choices

A	bootstraps
B	socks
C	ponytail
D	boots

+ Multiple Choice + True/False + Short Answer