Homework 2: Beginning to Learn

A. Short answer

B. Empirical exercise

Submission

Start Over

A. Short answer

✓ Learning about the DGP

Question 1:

The key idea behind _____ is that one draw from a population does not depend on another.

random sampling

Correct!

Question 2:

Because we generally do not know the underlying data-generating process, we try to _____ it from the data we observe.

infer

Correct!

Question 3:

The frequentist approach to probability defines the probability of some event A as the number of times it occurs out of an _____ number of random trials.

infinite

Correct!

Question 4:

This idea of relative frequency converging to the true probability is an example of the _____.

law of large numbers

Correct!

Question 5:

Because earnings distributions tend to be _____ right, the _____ distribution if often a good model for earnings data.

skewed, lognormal

Correct!

Question 6:

The _____ is the thing we want to learn about. An _____ is the thing we compute to learn about it, which for a given set of data, gives us an _____ .

estimand, estimator, estimate

Correct!

Question 7:

If $E(estimator)$ equals the thing we want to learn about, we say that it is _____

unbiased

Correct!

Question 8:

Sample selection may be a source of _____ if the data we have does not represent the population we want to learn about.

bias

Correct!

Continue

✓ Digression on logs

Question 9:

The natural log function is the inverse of the _____ function.

exponential

Correct!

Question 10:

The log of earnings is undefined if earnings equal _____.

0

Correct!

Question 11:

Log transformations help us talk about _____ differences or changes.

percentage

Correct!

Continue

✓ Making Comparisons

Question 12:

Comparing the earnings of women and men involves estimating the _____ expectation of _____ given _____.

conditional, earnings, gender

Correct!

Question 13:

The concept of a random variable's expected value is a _____ average of all the random variable's possible _____.

weighted, outcomes

Correct!

Question 14:

Because we rarely know a random variable's distribution, we typically _____ its expected value using its _____ average.

estimate, sample

Correct!

Question 15:

The expected value of an indicator variable that takes on the values 1 and 0 is equivalent to the _____ the random variable equals _____.

probability, 1

Correct!

Question 16:

The _____ says that the expected value of the CEF of, say, Y given X, is the expected value of Y.

law of iterated expectations

Correct!

Continue

Next Topic