

Homework 1: Data Fundamentals

A. Short answer

Talking Data

A. Short answer

B. Empirical exercise

Submission

Start Over

Question 1:

The term *data* is (singular/plural) _____.

plural

Correct!

Question 2:

A data set is made up of _____ that contain information on a specific entity.

records

Correct!

Question 3:

Each record is made of _____ that contain measurements of known types.

fields

Correct!

Question 4:

A data table is made up of rows containing _____ and columns containing _____.

observations, variables

Correct!

Question 5:

We say that data are *tidy* if each variable corresponds to a _____, each row an _____, and each cell a _____.

column, observation, single value

Correct!

Question 6:

A quick-serve restaurant chain records sales, staffing and customer traffic every day for each store. You recognize this as a _____ data set where the unit of observation is the store-day.

panel

Correct!

Continue

✓ Data Value Chain

Question 7:

We distinguish 4 stages of data analysis and refer to them compactly as _____ (in all caps).

ATAC

Correct!

Question 8:

Name the stages.

acquisition, transformation, analysis, communication

Correct!

Question 9:

The second stage involves, among other things, making sure the data are _____ (as the Posit folks would say).

tidy

Correct!

Question 10:

In the third stage, the workhorse will be the _____.

conditional expectation function

Correct!

Question 11:

A variable will not have _____ if it does not measure what it is supposed to.

validity

Correct!

Question 12:

How to handle missing data depends on whether they are missing _____.

endogenously

Correct!

Question 13:

A national company has developed a new product and is offering it for sale at a discount to introduce it to the market. Randomly surveying customer who purchased the product in the initial discount period (would/would not) _____ generate a sample representing the population of typical customers.

would not

Correct!

Continue

✓ Reproducibility

Question 14:

It is advisable to _____ the acquisition, transformation and analysis tasks.

separate

Correct!

Question 15:

One reason reproducibility matters is to protect and support your _____ self.

future

Correct!

Question 16:

Another reason reproducibility matters to guard against _____ and _____.

error, fraud

Correct!

Question 17:

One important component is describing the exact _____ of your raw input data.

provenance

Correct!

Question 18:

You should view a reproducible analysis as a _____ that you should be able to produce again and again.

product

Correct!

Continue

✓ Data Documentation

Question 19:

A _____ is a representation of the data structure comprising all of the attributes of the data and their types.

schema

Correct!

Question 20:

This representation of the data structure identifies the _____ to which each observation pertains.

entity

Correct!

Question 21:

This representation of the data also makes clear what are the _____ that identify an observation.

key variables

Correct!

Question 22:

A terabyte is equal to a _____ bytes.

trillion

Correct!

Question 23:

R stores real numbers as a _____ data type and allocates _____ bytes of data to each number.

num, 8

Correct!

Question 24:

A megabyte can store _____ `num` values, while a terabyte can store roughly a _____ times that.

131072, million

Correct!

Continue

Next Topic