

QUIZ

True or False: Because it is a subset of the population, a random sample will always perfectly represent the population.

True

False



Correct! A random sample cannot be guaranteed to be a perfect representation of the population.

Given the description of the dataset, determine the type of each categorical variable.

Variable	Description
ID	Student ID
Name	Name of the person
Age	Numerical value for each student's age
Letter_Grade	Categorical value for the student's grade (A, B, C, D or F)
Class_Subject	Subject of class (Math, Chemistry, History, etc.)



Letter_Grade

is an ordinal variable and



Class_Subject

is a nominal variable.



You got it!

What types of problems can messy data create?



inconsistent

coding can result in



splitting

categories,



missing

data can contribute to



inaccurate

summaries, and



typos

can make grouping similar terms difficult.



You got it!

True or False? You should always fill in missing numeric variables with the mean of the column

True

False



Correct! There are no universal solutions to dealing with missing data.

Which of these issues would compromise the accuracy of a dataset?

Some researchers measured distances in meters and others measured in yards and records the values without units.



Different units of measurement will result in inconsistent measurements if the units are not recorded with the values.

Some researchers use iPads to record the data and others use pencil and paper before inputting the values into the system.

A researcher measures the weight of some inanimate objects in the morning and other inanimate objects in the evening.

Some measurements are made mechanically and some are made digitally.

What questions should you ask yourself to ensure data validity?

Does this ☒ **variable** measure what I think it does?

Do I have ☒ **data** that aligns to my ☒ **question** ?



You got it!

What are the two types of categorical variables?

Categorical variables can be either ☒ **ordinal** (ordered) or ☒ **nominal** (unordered).



You got it!

Which one of these is *NOT* a categorical variable?

Student grades: A, B, C, D, E

Blood pressure measured daily: 110/90, 120/92, 115/86, 120/90



Correct! This is a quantitative variable and is not a categorical variable.

Survey responses: Strongly Disagree, Disagree, Somewhat Disagree, Somewhat Agree, Agree, Strongly Agree

Country of birth: Italy, Mexico, United States, Thailand, Spain