

Topic: Two-way tables

Question: Which is an example of data that can be organized using a two-way table?

Answer choices:

- A The price of a Honda at a used car dealership is based on its mileage. A consumer report creates a table of the recent mileage paired with prices of each Honda sold so a customer can get an idea of what to pay for their new car.
- B Stacy's class is studying the temperature of their classroom in various parts of the room.
- C A flower company is creating a chart of the color of each flower after it blooms and using the information for its advertisements of fresh flower shipments to its customers.
- D Emma is taking a class survey. She asks each student who they would vote for in the upcoming student council election (Mark, Vanessa, or Anthony) and she plans on organizing the results by their grade (Junior or Senior).

Solution: D

Answer choice D is an example of data that can be organized using a two-way table because Emma is collecting and comparing information for two categorical variables.

She wants to compare who each student votes for as well as their grade. She could organize the information in a two-way table like this one:

Who will you vote for?	Mark	Vanessa	Anthony
Junior			
Senior			

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Question: A car magazine wants to create an article about how a driver's speed on the highway in miles per hour is correlated with their fuel consumption in gallons per mile. Which statement is true about the study?

Answer choices:

- A This numerical data can't be organized in a two-way table
- B This is categorical one-way data that captures multiple variables about each driver
- C This data fits in a two-way table because drivers are independent of speed and miles per gallon
- D This data would be best displayed in a pie chart

Solution: A

There isn't a way to organize driver speed and fuel consumption in a two-way table because two-way tables organize counts of data about two categorical variables, and this is numerical data.

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Question: Which question can be answered without using the two-way data table?

Favorite hobby for men:

Reading	Sports	Art	Total
14	28	15	57

Favorite hobby for men and women:

	Reading	Sports	Art	Total
Men	14	28	15	57
Women	8	13	7	28
Total	22	41	22	85

Answer choices:

- A What percentage of people prefer reading?
- B How many men preferred art?
- C How many women were in the study?
- D What percentage of women liked sports the best?

Solution: B

The questions that ask about two pieces of information, like gender and hobby, require the use of the two-way table. If the question only asks about people in general then you could use the one-way table.