

Topic: Two-way data

Question: Which is an example of two-way data?

Answer choices:

- A The price of a Honda Fit at a used car dealership is sold based on its mileage. A consumer report creates a table of the recent mileage paired with prices of each Honda Fit 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 two-way data 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 is an example of two pairs of numerical data that could not be organized in a two-way table.
- B This is an example of categorical one-way data because they are studying individual drivers and multiple variables about each car.
- C This is an example data that would work in a two-way table because the drivers are independent of the speed and miles per gallon.
- D This is an example of data that would be best displayed in a pie chart.



Solution: A

There isn't a way to organize the driver's speed on the highway and their fuel consumption in a two-way table that would make sense.



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Question: Which question can be answered by the one-way data table alone?

One-way table:

Reading	Sports	Art	Total
14	28	15	57

Two-way table:

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

Answer choices:

- A What percent of men prefer reading?
- B How many people preferred arts and crafts?
- C How many women were in the study?
- D What percent 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.

