

1. Give two examples of quantitative variables and two examples of categorical variables.

2. A sports analyst collects information about all 30 major league baseball teams, recording which league (American League or National League), stadium capacity, number of wins last season, and whether or not the team reached the playoffs last season.
 - a. Identify the individuals.

 - b. Which variables are quantitative?

 - c. Which variables are categorical?

3. The 481 top-grossing movies in a recent year were classified by the genre of the movie. The results are shown in the table.

Genre of Movie	Drama	Documentary	Comedy	Action	Thriller	Horror	Other
Frequency	144	79	58	54	47	39	60

- a. Identify the variable. Is it quantitative or categorical?

- b. Make a bar graph showing relative frequencies.

- c. Name another type of graph that could be used to display the data.

4. A CBS News survey asked a random sample of U.S. adults to identify their age and their preferred format for listening to music. The results are shown in the table.

a. Identify the explanatory variable and the response variable.

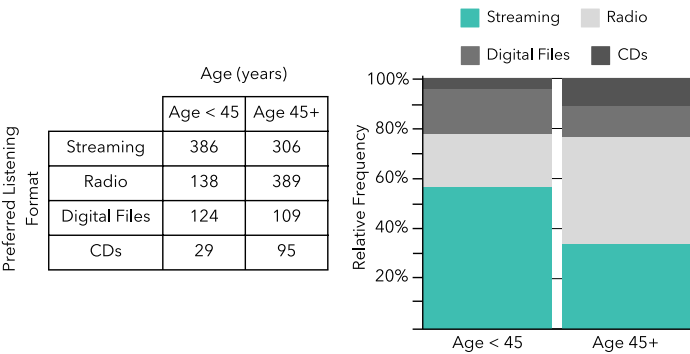
b. What percent of all adults surveyed are 45 years or older and prefer listening to CDs?

c. What percent of all adults surveyed prefer listening to the radio?

d. Of those adults that prefer streaming, what percent are less than 45 years old?

	Age (years)	
	Age < 45	Age 45+
Streaming	386	306
Radio	138	389
Digital Files	124	109
CDs	29	95

5. A CBS News survey asked a random sample of U.S. adults to identify their age and their preferred format for listening to music. A table and segmented bar graph of the results are shown.

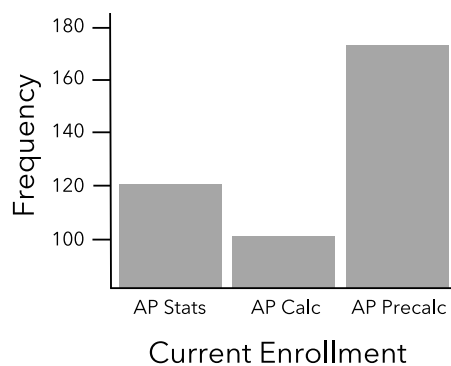


a. Of the adults in the survey who are less than 45 years old, what percent prefer streaming?

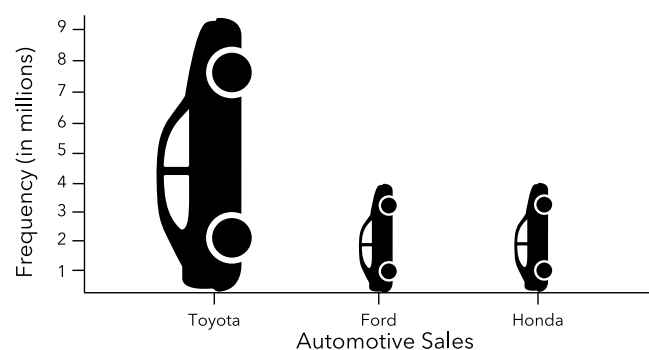
b. Of the adults in the survey who are 45 years or older, what percent prefer streaming?

c. Is there an association between age and preferred listening format? Explain.

6. Based on the following graph, a counselor concluded that the number of students enrolled in AP Precalculus was more than double the number of students enrolled in AP Statistics. Do you agree? Explain.



7. In the following graph, it appears that Toyota has sales that are more than 4 times as big as sales from Ford or Honda. Explain why this is misleading.



8. The National Center for Education Statistics shares data for all colleges in the United States. Here is the distribution of the type of college for the three states with the most colleges. For colleges in Texas, what proportion of them are private institutions?

- A) $\frac{155}{262}$
 B) $\frac{155}{659}$
 C) $\frac{159}{996}$
 D) $\frac{262}{996}$

	Type of college			Total
	Public	Private nonprofit	Private for-profit	
State				
California	151	148	137	436
New York	79	181	38	298
Texas	107	71	84	262
Total	337	400	259	996

9. A school district surveyed students about whether they prefer math or English class and found that there was no association between school level (middle school, high school) and preferred class. The survey included 100 middle school students and 200 high school students. In total, 180 of the students preferred math and 120 preferred English. Which two-way table represents this scenario?

A)

	Math	English	Total
Middle school	50	50	100
High school	130	70	200
Total	180	120	300

B)

	Math	English	Total
Middle school	40	60	100
High school	140	60	200
Total	180	120	300

C)

	Math	English	Total
Middle school	80	20	100
High school	100	100	200
Total	180	120	300

D)

	Math	English	Total
Middle school	60	40	100
High school	120	80	200
Total	180	120	300