

11.1 Factors Affecting Data Collection

MathLinks 9, pages 414–421

Key Ideas Review

Choose from the following terms to complete the statements in #1 to 4.

bias

ethics

influencing factors

survey

1. A _____ can be used to collect opinions and/or information about a topic.
2. Several _____ affect how data are collected or how responses are obtained.
3. An influencing factor that shows a preference for a specific product is an example of _____.
4. An influencing factor that involves judgments of right and wrong is an example of _____.

Check Your Understanding

5. In each case, identify and describe any factors that may affect the collection of data.
 - a) Survey teachers about the new menu in the student cafeteria.
Influencing factor(s):
 - b) Ask customers at a sporting goods store about what brand of snowboard they prefer.
Influencing factor(s):
 - c) Survey students about the timetable in September. Students who respond will be entered in a draw for a digital audio player.
Influencing factor(s):
 - d) Ask grade 9 students if they would use a cell phone in class, even though it is not allowed.
Influencing factor(s):
6. For each situation, identify whether there is bias. If so, highlight the parts that show bias. Then, rewrite to correct the bias.
 - a) Ask customers in a sporting goods store the following question.

Titanium Skateboards are the fastest and smoothest skateboards in this store. What brand will you buy?

Bias: YES NO

Rewrite:

- b)** A sales representative in a grocery store asks customers the following question.

Which drink do you prefer?
A Cola
B Coffee
C Root beer

Bias: YES NO

Rewrite:

- 7.** In each case, describe the effect of any influencing factors on the collection of data. Then, write an improved survey question.

- a)** A government party member asks the following question.

Is the current premier not the best premier in Canadian history?
YES NO

Influencing factor(s):

Rewrite:

- b)** A small electronics company asks the following question.

Do you know about the RC Games Company that supplies the excellent games and systems that you and your friends need?
YES NO

Influencing factor(s):

Rewrite:

- 8.** For each situation, write two different survey questions that may have resulted in each conclusion.

- a)** Blue is the most popular car colour.

Question 1:

Question 2:

- b)** Four out of five mechanics surveyed recommend regular oil changes for family vehicles.

Question 1:

Question 2:

- 9.** Write a survey question for each situation. Identify whom you would ask to participate in the survey.

- a)** You want to find out which music group teens like best.

Question:

Whom to ask:

- b)** You want to find out if brand or options is more important when buying a digital music player.

Question:

Whom to ask:

- 10.** Rewrite the survey question so that it collects more helpful data.

Is lacrosse your favourite sport?
YES NO

Question: