

6. Explain whether each source is an example of primary data or secondary data.
- telephone interviews
 - data from an encyclopedia
 - information from a newspaper

B Practising

7. Explain how each source could involve primary data or secondary data.
- completed questionnaires
 - votes at an election
 - observations of bird behaviour at a park
8. A survey may be biased in favour of or against different parts of a population. For each situation below, describe the groups for which the survey is likely to show bias.
9. For each survey question below, describe the sample you would use to avoid bias. Explain why your sample would avoid bias.
- What is the most common family size in your community?
 - What are the most popular television shows for families in Ontario?
 - What is the favourite type of music for people in your community?
 - Do more people in your province prefer hockey or soccer?
 - What is the best day of the week for students?
 - If a movie is shown at one time only at the theatre, should it start at 4:00 p.m., 7:00 p.m., or 10:30 p.m.?

Situation	Group that survey is likely biased in favour of	Group that survey is likely biased against
a) A company selects every 100th name in the telephone book to call between 10:00 a.m. and 2:00 p.m., and doesn't leave messages. The question is "How many teenagers live in your home?"		
b) Every 10th person who walks by a particular intersection in downtown Toronto is asked, "Should hunting be banned in Ontario?"		
c) Every third person who enters a large toy store is asked, "Should the old age pension be increased?"		
d) On Saturday mornings, from 9:00 a.m. to 11:00 a.m., every 10th family entering the local zoo is asked, "How much time, on average, do you spend with your children?"		
e) An Internet survey is conducted to find out about computer use in Canadian households.		

10. The following names have been suggested for a new kind of cookies: Chocolatines, Mocha Chews, and Choccolicious. Explain why you would or would not use each method for collecting data to decide the best name.
- census
 - interview
 - questionnaire
 - survey
11. Ms. Chan says that a census is the most accurate way to find out information about an entire population because each person in the population has an opportunity to respond. Why do you think a survey is used more often than a census?
12. When designing a survey, why should you be aware of bias? Explain one way to eliminate it.

C Extending

13. A town council needs to determine whether to spend money on building a new sports arena or a new library for the town. The council members want to make sure that they have the support of most of the 15 000 residents of the town. Decide on the best method to collect the data by ranking the following methods from best to worst. Then explain advantages and disadvantages of each method.
- telephone survey
 - census
 - mail-in questionnaire
 - presentations by citizens
 - research
 - door-to-door interviews

Mental Math

MULTIPLYING AND DIVIDING BY 10, 100, AND 1000

You can multiply or divide a whole number or a decimal number by 10, 100, or 1000 by thinking about place value.

For example, to multiply 21.34 by 100: tens become thousands, ones become hundreds, tenths become tens, hundredths become ones.

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
		2	1	3	4

× 100

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths
2	1	3	4	0	0

1. What happens to each digit in a number when the number is multiplied or divided by 10, 100, or 1000?

2. Calculate.

- 20×100
- $4200 \div 10$
- 10×0.425
- $14.55 \div 10$
- 0.035×1000
- $120.6 \div 100$
- 10.05×1000
- $1250 \div 1000$