

## Answers:

1. a) all children      b) everyone who wrote the test  
c) all cars          d) all food stores
2. a) age when girls and boys learn to walk; sample  
b) test marks; census  
c) salaries of Canadian employees; sample  
d) people's heights and ages; sample  
e) make of car in school parking lot; census  
f) colour of cars driving by the school; sample
3. Answers will vary. Examples:  
a) Survey every fourth customer who comes into the cafe.  
b) Randomly select 1% of the teenagers in every high school across Ontario.  
c) Use a random number generator to select telephone numbers within Canada, and then survey the people who identify themselves as bilingual.  
d) Select households to survey by any random method, and then ask the people surveyed where they were born.
4. a) non-random sample; could be biased since University of Waterloo students may not be representative of all university graduates  
b) simple random sample; could be biased since the sample excludes anyone who does not have a telephone listing  
c) non-random sample; biased because it includes only people who have chosen to spend some of their free time going to a movie
5. by age, by grade, by gender
6. a) all Ontario farmers  
b) Answers will vary. Example: Randomly select 10% of the farmers in each county.
7. a) the company's employees  
b) Randomly select a starting point on an alphabetical list of the employees, and then select every sixth person until you have a total of 50.
8. a) members of the school teams  
b) Answers will vary. Example: Write each team member's name on a slip of paper, and then randomly draw 15% of the slips out of a box.
9. grade 9, 41; grade 10, 38; grade 11, 36; grade 12, 35
10. Answers for sampling methods will vary.  
a) students in the school  
b) all people in the community  
c) all people aged 18 to 30  
d) all senior citizens in Ontario  
e) all computer printers for sale in Canada  
f) gasoline prices at all vendors in the community
11. In the 1920s, many people did not have telephones. Since these people were not included in the surveys, the samples were not representative of the whole population.