

Learning Outcomes Covered:

9C: I can use either a population or a sample to answer a question.

CONTENT Questions:

1. In each case, describe the population.

- a) A social networking site wants to know the typical age of a person who uses the site.

Members of this social networking site.

- b) A book retailer wants to know which demographic groups buy travel books.

All the people who buy books

- c) A music store wants to know how many school-aged students take piano lessons.

All school-aged students

CURRICULAR COMPETENCIES Questions:

1. Should a census or sample be used to collect data about each topic? Explain your choice. (RA)

- a) The number of people in your neighbourhood who use public transit at least once a week

Sample, too many people in the neighbourhood.

- b) The number of grade 9 students in your school who participate in extra-curricular sports programs

Census, population is not that big.

Sample, it's ^{or} difficult to track down all students.

- c) The number of hours members of your family spend on the computer in a week

Census, population is small.

- d) The effectiveness of a new vaccine

Sample, too many people.

3. Suppose you are on the town council. You want to know whether residents would prefer a new tennis court or soccer field. (RA)

a) What population are you interested in surveying?

people who live in the town.

b) Would you survey a sample or population? Explain.

Sample, too many people in a town.

c) If you had to use a sample, what would you do to make sure your conclusions are valid?

- select enough people that will represent the population.
- select people randomly.

4. In each case, do you think the conclusion is valid? Justify your answers. (RA)

a) Ingrid surveyed 20 residents to find out if they thought pesticides were harmful to the environment. All of the residents said yes. Ingrid concluded that all residents in the town were in favour of a ban on pesticide use.

Invalid, sample size is too small.

b) A reporter asks 5 people on the street this question: "In light of the many recent home invasions, do you think police are doing all they can to keep us safe?" Four of those interviewed say the police are not keeping us safe. The reporter concludes "4 out of 5 citizens are worried about personal safety."

Invalid, sample size is too small.

ONGOING LEARNING ACTIVITIES:

CORE: Page 448: 3, 4, 5, 6, 7, 8, 9, 10