Name: _____ Date: _____

Check Your Understanding

Communicate the Ideas

1. Kris decides to survey everyone in Canada to find out which bands are the most popular.

   a) Is this a survey of a sample or a population? Circle SAMPLE or POPULATION.

   b) Do you agree with his method? Circle YES or NO.
   Give 1 reason for your answer.

   _____

   _____

2. Kim and Scott want to know how many people took public transit to a concert.
   There are 18 000 people at the concert.

   Kim: I plan to ask the first 20 people who arrive.

   Scott: I plan to ask the first 200 people.

   a) Whose sample best represents the population? Circle KIM or SCOTT.
   Give 1 reason for your choice.

   _____

   _____

   b) What other type of sample would give more accurate results? _____

   Give 1 reason for your answer.   correct

   _____

   _____

3. Describe the difference between surveying the population of British Columbia and surveying a
   sample of people who live there.

   _____

   _____

   _____

Name: _____ Date: _____

Practise

4. Write the matching letter beside the type of sample that should be used for the situation.

   a) A large school surveys 20% of the students from each grade. _____ random

   b) The school store asks the first 20 customers
      what type of juice they like the best. _____ voluntary

   c) A company picks every 100th person in a phone book. _____ convenience

   d) In a class of 40 students, each student is assigned a number.
      The teacher picks 5 numbers from a hat. _____ stratified

   e) Students are asked to do an online survey if they wish. _____ systematic

5. Write the population in each situation. Would you survey the whole population or a sample of the
   population? Give 1 reason for your answer.

   a) The principal wants to know if teachers and students are in favour of school uniforms.

      Population: _____

      I would survey _____ because _____
              (*sample* or *population*)

      _____

   b) An electronics store wants to know if its customers are happy with the repair department.

      Population: _____

      I would survey _____ because _____

      _____

   c) The town wants to know if buses are needed for people with disabilities.

      Population: _____

      I would survey _____

      because _____

      _____

Name: _____ Date: _____

Apply

6. For each situation, would you survey the population or a sample?
Give 1 reason for your answer.

   a) To determine the air quality in hospitals in Edmonton, Alberta:

   I would survey _____ because _____

   _____.

   b) To find out the plans of grade 9 students after they graduate from high school:

   I would survey _____ because _____

   _____.

   c) To test the quality of parachutes:

   I would survey _____ because _____

   _____.

   d) To test the quality of bike tires:

   I would survey _____ because _____

   _____.

7. Kristi wants to create a menu for a family picnic.
Her family includes 20 adults, 8 teens, and 12 children.
She only has time to talk to 10 people. How should she choose her sample?
Explain.

   _____

   _____

8. Erin plans to survey her friends to determine the average number of children per household in
Canada.

   a) Is this a random sample? Circle YES or NO.

   b) Give 1 reason for your answer.

   _____

   _____

Name: _____ Date: _____

9. Jason wants to ask each student who enters the cafeteria the following question.

> What is your favourite paint colour for the cafeteria walls? _____

a) What is the population? _____

b) What is the sample? _____

c) Will his results accurately represent the population? Circle YES or NO. Give 1 reason for your answer.

_____

Math Link

Write a research question about an endangered animal.

a) What endangered animal will you research? _____

b) Find the size of the animal's population before it was endangered. _____

What is the population now? _____

c) What is 1 reason for the decline of the population?

_____

_____

d) Write a question that you can research about the endangered animal.

_____

_____

_____

To answer your question, find data from studies and surveys that other people have done.

> **Research Question:** What are the population trends for beluga whales in Canada?
>
> **Beluga whale, Somerset Island, Nunavut**

e) What sampling method did researchers use to collect the data?

_____

Give 1 reason for your answer. _____

_____