

Warm-Up

- _____ 1. In an anonymous survey, students were asked:
"Do you agree that everyone should become a vegetarian?"
In this survey, which of the following might be a problem?
i) Cultural sensitivity
ii) Ethics
iii) Privacy
iv) Use of Language
a. iv b. i c. ii d. iii
- _____ 2. Ms. Coplick interviewed her students and asked each one how much he or she was given each week as an allowance.
In this survey, which of the following might be a problem?
i) Privacy
ii) Timing
iii) Use of Language
iv) Cost
a. iv b. ii c. iii d. i
- _____ 3. Marissa asked everyone in her class what chocolate bar they liked best.
Before her next test, she gave her teacher the chocolate bar he'd said he liked best.
What was a problem with Marissa's survey?
i) Use of Language
ii) Cost
iii) Ethics
iv) Timing
a. iii b. ii c. iv d. i

Identify the potential problem: bias, use of language, ethics, culture, cost, time, timing, privacy

A. To determine people's reactions to a possible increase in minimum wage, a student asked: "Don't you agree minimum wage should be increased?"

Use of language
Bias

B. For a class project, a student needed to determine if college students were maintaining healthy weights. After the student completed the project, she gave a weight loss company the addresses of any overweight participants

Ethics
Privacy

Section 9.3

Using Sampling and Populations to collect data

Population: the set of all the things or people being considered

Census: a data collection using each member of the population

Sample: a portion of a population.

Valid conclusions: results of data collection that represent what is typical of the population

A school wants to survey its grade 9 students to determine which elective courses they would like to take in grade 10. They are considering whether to survey all the grade 9 students or just a sample.
census

Describe the population...

BHS Gr 9 students

Which would you suggest?

census

**Would your answer change if I told you it was
Fredericton High**

Sample

Census or Sample???

A. What is the best way to collect the data, census or sample?

1. The number of Canadian families with internet access?

2. To determine the average height of a grade 9 student in your class

Census

3. Reaction to new cell phone ban while driving

Sample

B. Which students in your school would you survey to get their opinion on: quality of cafeteria service

Population?

Students who use the cafeteria

You work at a chocolate factory. Your job is to test the quality of the chocolate do you use a sample or census, explain.



Sample!

What flavor of ice cream do students at Blackville prefer?



Would we do a census?

Would we pick a sample?

Section 9.4 Selecting a Sample

- **Representative sample: the chosen sample represents the population.**

We are going to look at 6 sampling methods:

1. **Simple Random Sampling**-- each member of the population has an equal chance of being picked [Example: drawing a name from a hat]

2. **Systematic or interval sampling**--Every "nth" person of the population is selected
[Examples: testing products like chocolate, appliances]

3. **Cluster sampling**-- every member of each randomly selected group from a population is selected
[Example: favorite ice cream in school choose one grade and ask all students in that grade]

4. **Self-selected sampling**-- members of the population volunteer
[Example: choose to participate in a survey on line]

5. **Convenience sampling**-- members of the population who are convenient to include
[Example: For a survey about how many hours are spent at the rink during winter months, ask people who are at the rink]

6. **Stratified random sampling**--some members from each group of the population are randomly selected.
[Example: 5 students from each grade selected to answer a survey.]

The basketball team and soccer team are getting new jerseys. To see what color is preferred all of the players on the basketball team were asked the color they wanted. What type of sample is this?

Population:



Bball team
Soccer team

Sample:

[method]

Cluster Sampling



What type of sampling is being used.

[simple random sampling, interval sampling, cluster sampling, stratified random sampling, convenience sampling, self-selected sampling]

A. A car factory subjects every 100th vehicle to a crash test.

Systematic
Interval
Sampling



B. 6 students from each team [soccer, basketball, golf and volleyball] are selected to complete a survey.

Stratified



C. A juice company sets up a booth in a local mall and allows anyone who wishes to participate in the taste test to try the juice.

Self-selected



D. 15 people from a youth group are chosen by drawing their name from a hat.

Simple-Random



E. To determine who will win the Stanley cup a survey is conducted at a local hockey rink

Convenience

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