

Learning Outcomes Covered:

9D: I can understand and use different sampling methods.

CONTENT Questions:

1. Identify a potential problem with each sampling method.

- a) A politician wants to know what people think of the healthcare system. He interviews people as they leave a walk-in medical clinic about their opinions.

Convenient samples are biased.

- b) A movie theatre wants to predict the success of several new movies. On its website, it posts a poll asking people to vote for the movie they most want to see.

Self-select samples are biased.

CURRICULAR COMPETENCIES Questions:

1. Explain whether each sample is appropriate. Justify your answer. (CmRp)

- a) Suppose you want to know what sports equipment people in your community are most likely to purchase. You survey every 10th customer who makes a purchase at your store.

Systematic sampling is fine.

- b) A researcher phones every 10th person on a union's membership list to determine union members' opinions about the services the union provided.

Systematic sampling is fine.

- c) A town's recreation director wants to know what residents think about building a swimming pool in the community centre. He posts a survey in the local newspaper and tells people they can mail it to him or drop it off at the community centre.

Convenient sampling is biased.

3. a) In each case, will the selected sample represent the population? Explain. (RA)

i) To find out consumers' reaction to a new soft drink, a soft-drink company invites people to rate how much they like the new drink on its website.

No, self-selected sample is biased.

ii) To discover the most popular shoe brands purchased at a mall, Laurel asks every customer entering a shoe store which brand they are most likely to buy.



iii) To determine the effectiveness of a new advertisement campaign, a company tracks sales of the product at every tenth store on the list of stores to which they distribute the product.



b) If the sample does not represent the population, suggest another sample that would. Describe how you would select that sample.

Pay to survey, so this will encourage everybody to do it. This better represents the population.

4. Describe an appropriate sampling method for each situation. Justify your answers. (CmRf)

a) The city council wants to know what citizens who live near a two-lane road think about widening the road to four lanes.

Number all citizens who live near a two-lane road, and pick numbers randomly using a random # generator.

(Simple random sample)

b) A college wants to know high school students' opinion of a career in the entertainment industry.

(clustered sampling)

Randomly select 50 high schools in the country and ask all the students in those high schools.

ONGOING LEARNING ACTIVITIES:

CORE: Page 456: 3, 4, 5, 6, 7, 8, 9, 10