



Formulate statistical questions

1 What is the main problem with this survey question?

Survey question: How many cups of coffee do you drink?

- A Sensitive question
- B Ambiguous question
- C Assumption
- D Recall bias

2 Why is this survey question problematic?

Survey question: How much time do you spend using social media?

- A The wording may be unclear because people use different social media platforms.
- B The wording may be unclear because no time period is specified.

3 What is the best way to collect this data?

Goal: Popularity of different school clubs

- A Count posters advertising each club.
- B Ask club presidents to rank the popularity of every club based on the students they know personally.
- C Survey students from another school.
- D Use student participation records from each school club.

4 What is the best way to collect this data?

Goal: Average electricity use in homes

- A Survey only homes with solar panels.
- B Collect electricity usage records from a representative sample of homes.
- C Count the number of lights visible from outside.
- D Ask homeowners to estimate their monthly electricity use and explain how they believe it changes throughout the year.

5 What is the best way to collect this data?

Goal: Percentage of students who walk to school

- A Count students entering through the front entrance over several mornings and assume they represent the entire student body.
- B Ask teachers how most students travel to school.
- C Survey a representative sample of students about their usual travel method.
- D Survey students on a day with unusually poor weather.

6 What is the best way to collect this data?

Goal: Average height of students in a school

- A Ask parents to report how tall they think their children are.
- B Measure the height of a representative sample of students using the same procedure.
- C Ask students to estimate their own height and explain whether they believe they are taller or shorter than most of their classmates.
- D Estimate height from each student's shoe size.

7 What is the best way to collect this data?

Goal: Customer wait time at a coffee shop

- A Ask customers whether the wait seemed long and compare their opinions during different times of the day.
- B Record the order and pickup times for customers.
- C Measure wait times during one busy morning.
- D Count the number of drinks on the menu.

8 What is the best way to collect this data?

Goal: Amount of rainfall during a storm

- A Measure rainfall using rain gauges placed around the area.
- B Count umbrellas being used during the storm.
- C Ask residents to estimate how much rain fell and compare their estimates with those from other neighbourhoods.
- D Estimate rainfall from puddle sizes afterward.