

You can collect data many ways. In a **survey**, you ask a certain number of people a specific question. The accuracy of a survey depends on the **sample** of people surveyed. The larger the sample size, the better the results.

It is also important to avoid **bias** when choosing a sample. If you want to know how many students play a musical instrument, surveying 30 students in the school library gives more accurate results than surveying 30 students in the band room.

A **sample** is a group that represents a population as a whole.

A **biased sample** is a group that has a special interest in the answer.

Read each problem. Circle the letter of the best answer.

1 Esther wants to know how many students in her school visit state parks. Which group would be **best** for her to survey?

- A 10 students at an assembly
- B 20 students at an assembly
- C 10 students in the hiking club
- D 20 students in the hiking club

When conducting a survey, it is best to avoid biased groups of people. Students in a hiking club are more likely to go to state parks since there may be hiking trails there. Also, the more people surveyed, the better the results are likely to be. The correct answer is B.

2 Bryan wants to know how many people can identify at least five constellations in the night sky. Which group is most likely to be biased?

- A dancers in a ballet class
- B players on a football team
- C members of a science club
- D students in his English class

3 Reed and his friends each asked students if they like math. The results are shown below.

STUDENTS WHO LIKE MATH

Friend	Students Surveyed	Number Who Like Math
Reed	45	29
Gunther	25	10
Alexis	90	44
Elena	60	48

Which friend is likely to have the most accurate results?

- A Reed
- B Gunther
- C Alexis
- D Elena

4 Jessie is researching fashion. She plans to conduct a survey about clothing colors her peers think are popular. Which method for selecting her sample is likely to give her the **best** results?

- A Ask as many friends as possible.
- B Ask all students in a fashion class.
- C Ask as many teachers as possible.
- D Ask some students in the locker room.

Read each problem. Write your answers.

- 5 Labron has a spinner with the letters A through D on it. He spins the spinner 24 times and records the results shown below.

A A C A B A D C
A D D C A C A B
C D B B D D A A

SPINNER RESULTS

Letter	Number of Spins

- A Fill in the table at the right with Labron's results.

- B Explain how you completed the table.

- 6 Randi wants to know how many students in her school like cheese. She surveys 25 students in the cafeteria who bought pizza for lunch.

- A Is Randi's sample biased?

Answer: _____

- B Explain why or why not.

- C Describe two ways Randi can improve her survey to get more accurate results.
