

Case Study 2

The sports teacher of Sunrise Public School wanted to know which outdoor games were most popular among Class 7 students. A survey was conducted among 20 students, and each student was asked to name their favourite outdoor game. The collected data was organized and recorded in the following way:

Game	Number of Students
Cricket	8
Football	5
Badminton	4
Basketball	3

The teacher then asked students to calculate the mean number of students choosing each game. To understand which game was most liked, they identified the mode of the data. A bar graph was drawn to compare the number of students for different games. The students also prepared a pie chart to show the share of each game out of the total number of students.

Later, the teacher discussed how data handling helps schools plan sports periods, arrange equipment, and promote balanced physical activities. By interpreting the bar graph and pie chart, students understood how graphical representation makes large data easier to understand and apply in real-life decision making.

Questions

1. How many students participated in the sports survey?
 - A. 15
 - B. 18
 - C. 20
 - D. 22
2. What is the mean number of students per game?
 - A. 4
 - B. 5
 - C. 6
 - D. 7
3. Which game is the mode of the data?
 - A. Football
 - B. Badminton
 - C. Basketball
 - D. Cricket
4. Which game has the smallest number of students?
 - A. Football
 - B. Badminton
 - C. Basketball
 - D. Cricket

5. What fraction of students like Football?

- A. $\frac{1}{4}$
- B. $\frac{5}{20}$
- C. $\frac{1}{5}$
- D. $\frac{2}{5}$

Answer Key

1. **C**

Explanation: Total students = $8 + 5 + 4 + 3 = 20$. Hence, 20 students participated in the survey.

2. **B**

Explanation: Mean number of students per game = $\frac{20}{4} = 5$. Therefore, the mean is 5 students.

3. **D**

Explanation: Cricket has the highest frequency (8 students). Hence, Cricket is the mode of the data.

4. **C**

Explanation: Basketball is liked by only 3 students, which is the least among all games.

5. **B**

Explanation: Number of students who like Football = 5. Total students = 20. Fraction = $\frac{5}{20}$.