



SATISH CHANDRA MEMORIAL SCHOOL
CASE STUDY BASED EXAMINATION
STD-VI

D.O.E.-01/09/2026
MM 14

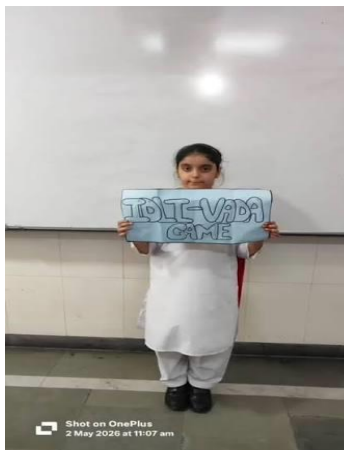
CASE STUDY 1: The School Fair Number Game

During the annual school fair, Class 6 students organise a game called “Number Challenge.” The teacher writes numbers from 1 to 120 on cards.

Three rules are announced:

- A card is called an “Idli” card if its number is a multiple of 3.
- A card is called a “Vada” card if its number is a multiple of 5.
- If a number is a multiple of both 3 and 5, it is called an “Idli-Vada” card.
- Students also have to identify whether selected numbers are prime, composite, or neither.

Riya selects the numbers 30, 45, 49, 51, 70 and 97.



Questions

1. Riya says, “Every Idli-Vada number must be a multiple of 15.” Is her statement always true? Explain why. 1 mark
2. Among the numbers 30, 45, 49, 51, 70 and 97, identify:
 - all composite numbers,
 - all prime numbers. 1 mark
3. Riya wants to find the smallest number greater than 50 that is both a multiple of 3 and 5. What number should she choose? 1 mark
4. The teacher says that one number between 90 and 120 is divisible by both 4 and 5. Find all possible numbers and explain the pattern you used. 2 marks
5. A student claims that 91 is prime because it is not divisible by 2, 3 or 5. Do you agree? Give a mathematical reason. 2 marks

CASE STUDY 2: The School Canteen Survey

The Eco Club of a Class 6 section wanted to find out which snacks students preferred in the school canteen. They surveyed 40 students and recorded their first choices.

The raw data collected was:

Samosa, Sandwich, Samosa, Idli, Poha, Sandwich, Samosa, Idli, Poha, Samosa, Sandwich, Idli, Samosa, Poha, Sandwich, Samosa, Idli, Samosa, Poha, Sandwich, Samosa, Idli, Sandwich, Samosa, Poha, Idli, Samosa, Sandwich, Poha, Samosa, Idli, Samosa, Sandwich, Poha, Samosa, Idli, Sandwich, Samosa, Poha, Samosa.

The students decided to organise the information using a frequency table and then represent it through a bar graph.



Questions

1. Prepare a frequency table for the four snacks: Samosa, Sandwich, Idli and Poha.
2. Which snack was the most popular and which was the least popular?
3. How many more students preferred Samosa than Idli?
4. The canteen manager says, "More than half of the students prefer either Samosa or Sandwich." Is this statement correct? Justify using the data.
5. If the school decides to prepare one snack for every 5 students, which snack would require the greatest number of portions? How many portions would be needed?
6. A student says, "The bar representing Samosa should be twice as tall as the bar representing Sandwich." Do you agree? Explain.
7. Suppose 4 students who originally chose Samosa change their choice to Idli. Without recounting the entire raw data, determine the new frequencies of all four snacks. Which snack would then become the most popular?