## CASE STUDY: 1

One day Bubbly, Shilpa, Priya, and Sandhya were playing Ludo during their summer break. On first throw Bubbly got 5 in her die, Shilpa also got 5, Priya got 6, and Sandhya got 0 .

## Answer the following questions:

1. What is the wrong or error in the above case study statements?
2. What is probability of getting 5 in a throw?
3. What is the Probability of getting 7 in a throw?
4. What is the probability of getting an even number?
5. What is the probability of getting an odd number?
6. What is the probability of getting a prime number?
7. What is the probability that Bubbly will be winning the game?
8. Find the ratio of probabilities of getting an even and odd number.
9. What is the probability of certain and sure event and impossible event?
10. What is the probability range of uncertain event?

## CASE STUDY: 2



## Answer the following questions:

1. What information is depicted from the given double bar graph?
2. What is the marks difference of all four students from pretest to test?
3. Which student showed no improvement?
4. Which students showed minimum improvement between tests?
5. Which student showed maximum improvement between tests?
6. Find the mean of pretest marks of all four students.
7. Find the average of test marks of all four students.
8. Find the ratio of the arithmetic mean marks of pretest and test of all four students.
9. How many students secured less than $75 \%$ marks in pretest?
10. Who is the best performer combining both pretest and test?

## HOTS QUESTIONS

1. Find the value of ' $x$ ' if the mean of the following data is 9 .
$12,5,3,18,10,17, x, 6,6$.
2. What is the probability of selecting a consonant from English alphabets?
3. What will be the range of possible probabilities?
4. Give 3 examples for each of the following:
(a) Sure and certain events
(b) Impossible events
(c) Uncertain events
5. Prove the following statements by citing examples:
(a) The mode is always one of the numbers in a data.
(b) The mean is not always one of the numbers in a data.
(c) There can be more than one mode.
(d) The median is not always one of the numbers in a data.

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