

Question Bank

1. FILL IN THE BLANKS.

- The probability of getting a head when a coin is tossed is _____.
- In tossing a coin, getting a head and getting a tail are mutually exclusive outcomes: true or false? _____.
- In rolling a die, getting an odd number and getting the number 5 are mutually exclusive outcomes: true or false? _____.
- I roll a die twice. Getting an even number in the first trial and getting an even number in the second trial are independent events: true or false? _____.
- Fill in the blank: $P(A \cap B) =$ _____.
- Fill in the blank: $P(A \cup B) =$ _____.

2. CHOOSE THE CORRECT OPTION.

- The minimum value that any probability can have is:

i. -1 ii. 0 iii. 0.1 iv. 1

- The probability of getting either 3 or 4 while rolling a die is:

i. $\frac{1}{2}$ ii. $\frac{1}{3}$ iii. $\frac{1}{5}$ iv. $\frac{1}{6}$

- A die is rolled once. Which of the following is true?

i. p (getting less than 3) = p (getting greater than 3)

ii. p (getting less than 3) < p (getting greater than 3)

iii. p (getting less than 3) > p (getting greater than 3)

iv. p (getting less than 3) cannot be calculated

- In a random experiment, there are two possible outcomes A and B. The probability of A occurring is 0.3, that of B occurring is

0.7 and that of both occurring is 0.1. What is the probability of either A or B occurring?

- i. 0.1 ii. 0.4 iii. 1 iv. 0.9

3. ANSWER THE FOLLOWING.

- a. Define independent events.
Give an example.
- b. Define mutually exclusive outcomes.
Give an example.
- c. Two dice are rolled. This experiment has 36 equally likely outcomes. List all of them.
- d. Using the answer to question (iii), show that the probability of getting the same numbers on both dice is $\frac{1}{6}$.
- e. Using the answer to question (iii), show that the probability of getting a sum of 9 or more is $\frac{5}{18}$.
- f. If a letter is chosen at random from the word 'EXPERIMENT' what is the letter most likely to be chosen? What is the probability of choosing it?
- g. A coin is tossed twice. Calculate the probability of getting a head in the first trial AND a tail in the second trial. (Hint: Use the AND rule)
- h. A bag contains 6 red balls, 4 green balls and 2 blue balls.
- i. If a ball is drawn out in random, what is the probability that it will be a green ball?
- ii. If a ball is drawn out in random, what is the probability that it will be a green or blue ball?
- i. A bag contains 6 red balls, 4 green balls and 2 blue balls. Two balls are drawn out in random one by one. Calculate the probability of getting a red ball both times if (i) the first ball is replaced in the bag before drawing the second (ii) the first ball is not replaced before drawing the second.
- j. A spinner wheel is divided into three sectors painted red, white and black with sector angles of 200° , 100° , and 60° respectively. Calculate the probability that the arrow will point to (i) red (ii) white and (iii) black when the wheel is set to spin.