Mathematics

Practice Test Paper 10

(Chapter 14: Probability)

Class X | 2026–27

Time Allowed: 45 Minutes | Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary steps and reasoning in Sections B, C and D.
4. Give probabilities in their simplest form. Use of calculators is not allowed.

SECTION A

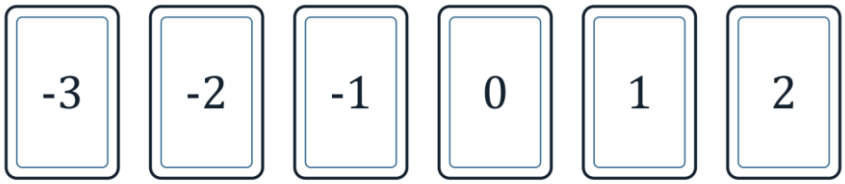
(5 questions × 1 mark = 5 marks)

1. If P(E) = 0.125, what is P(not E)?

(A) $\frac{1}{8}$ (B) $\frac{7}{8}$

(C) $\frac{3}{4}$ (D) $\frac{5}{8}$

2. The six cards shown are shuffled face down and one is drawn at random. What is the probability of a positive number?



(A) $\frac{1}{3}$ (B) $\frac{1}{2}$

(C) $\frac{2}{3}$ (D) $\frac{1}{6}$

3. One letter-slip is selected at random from separate identical slips spelling EQUATION. Find the probability of a vowel.

(A) $\frac{3}{8}$ (B) $\frac{1}{2}$

(C) $\frac{1}{4}$ (D) $\frac{5}{8}$

4. Two fair dice are rolled independently. What is the probability that both show the same number?

(A) $\frac{1}{36}$ (B) $\frac{5}{6}$

(C) $\frac{1}{6}$ (D) $\frac{1}{3}$

5. One prize is selected at random from the table. Find the probability that it is not a bookmark.

Prize	Badge	Bookmark	Pencil
Number	5	7	8

(A) $\frac{7}{20}$ (B) $\frac{13}{20}$

(C) $\frac{1}{4}$ (D) $\frac{2}{5}$

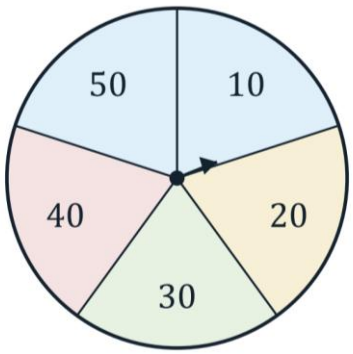
SECTION B

(4 questions × 2 marks = 8 marks)

6. A fair die is rolled once. Find the probability that the result is odd or divisible by 3. Explain why the face 3 must not be counted twice.

7. A card numbered from 1 to 100 is chosen at random. Find the probabilities that its number (i) ends in 7 and (ii) is divisible by 25.

8. The spinner shown has five equally likely sectors. Find the probabilities that the result is (i) a perfect square and (ii) less than 35.



9. All thirteen spades are removed from a standard deck. A card is chosen at random from the remainder. Find the probabilities that it is (i) black and (ii) red.

SECTION C

(3 questions × 3 marks = 9 marks)

10. Two fair coins and a fair die are used independently. Find the probabilities of (i) two heads and an even number and (ii) at least one head and a 6 on the die. Show the favourable outcomes.

11. A student is selected at random from the two classes in the table. Find the probabilities that the student is (i) a girl, (ii) a boy from X B and (iii) not a girl from X A.

Class	Boys	Girls
X A	12	18
X B	16	14

12. A bag contains only red and blue balls. It has 10 red balls and P(red) = 2/7 for a random draw. Find the total number of balls. Five blue balls are then removed; find the new probability of red.

SECTION D

(Application Based Question - 3 marks)

13. Twenty-four identical cards numbered 1 to 24 are mixed. One card is drawn at random. Find the following probabilities.

(i) The number is prime.

(ii) The number is a factor of 24.

(iii) The number is neither prime nor composite.