Mathematics

Practice Test Paper 8

(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. When two distinguishable fair dice are rolled independently, how many equally likely ordered outcomes are possible?

(A) 6 (B) 11

(C) 12 (D) 36

2. What is P(a certain event) − P(an impossible event)?

(A) −1 (B) 0

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

3. A card numbered from 1 to 12 is selected at random. What is the probability that its number is a factor of 12?

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

(C) $\frac{5}{12}$ (D) $\frac{1}{6}$

4. A card is drawn at random from a standard well-shuffled deck. Find the probability that it is not a diamond.

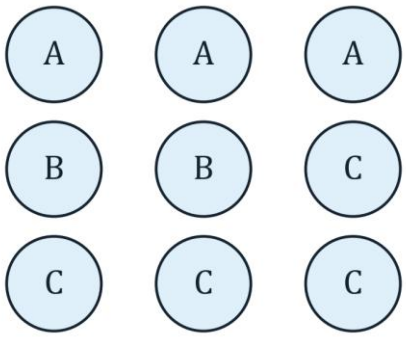
(A) $\frac{1}{4}$

(B) $\frac{3}{4}$

(C) $\frac{1}{2}$

(D) $\frac{12}{13}$

5. The nine counters shown are mixed and one is drawn at random. What is the probability that it shows B?



(A) $\frac{2}{9}$ (B) $\frac{1}{3}$

(C) $\frac{4}{9}$ (D) $\frac{7}{9}$

SECTION B

(4 questions × 2 marks = 8 marks)

6. One flowerpot is selected at random from the collection in the table. Find the probabilities that it contains (i) a rose or a marigold and (ii) a flower other than a rose.

Flower	Rose	Tulip	Marigold
Pots	10	8	12

7. A box contains 35 identical counters, some marked X. A random counter has probability 0.4 of showing X. Find the numbers marked X and not marked X.

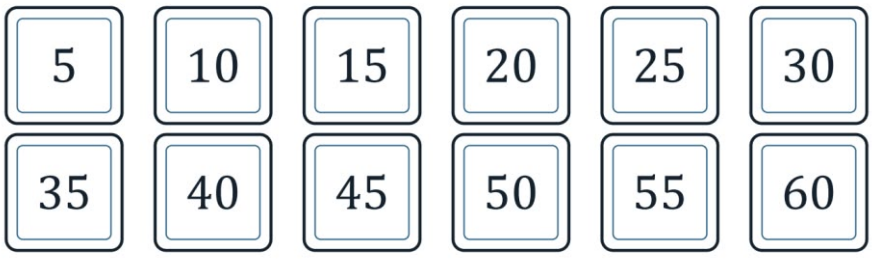
8. One of twenty equally likely tickets numbered 1 to 20 is drawn. Find the probability that its number is not a multiple of 3.

9. A day of the week is chosen at random, with each day equally likely. Find the probabilities of (i) Saturday or Sunday and (ii) a day from Monday to Friday.

SECTION C

(3 questions × 3 marks = 9 marks)

10. The twelve cards shown are shuffled face down. One is drawn at random. Find the probabilities that its number is (i) divisible by 15, (ii) a factor of 60 and (iii) greater than 35.



11. Two fair dice are rolled independently. List all ordered outcomes for which the product is a perfect square, and find the probability.

12. All balls from the three pouches in the table are mixed together. A ball is drawn at random. Find the probabilities of (i) green, (ii) green originally from B and (iii) red originally from A or C.

Pouch	Red	Green
A	6	4
B	3	7
C	5	5

SECTION D

(Application Based Question - 3 marks)

13. At a school fair, 60 identical tickets are mixed. Three give a first prize, 9 a second prize, 18 a consolation prize and 30 no prize. Each ticket belongs to exactly one category. One ticket is selected at random. Find the following probabilities.

(i) The ticket gives any prize.

(ii) The ticket gives a first prize.

(iii) The ticket does not give a second prize.