Mathematics

Practice Test Paper 6

(Chapter 5: Arithmetic Progressions)

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. Use algebraic methods where required. Use of calculators is not allowed.

SECTION A

(5 questions × 1 mark = 5 marks)

1. The AP 100, 70, 40, … has common difference:

(A) 30 (B) −30

(C) 40 (D) −40

2. If $a = -3$ and $d = 7$, then a_{36} is:

(A) 249

(B) 235

(C) 242

(D) 252

3. If $a_n = pn + q$, the common difference is:

(A) p (B) q

(C) $p + q$ (D) $p - q$

4. The sum of the first 25 positive integers is:

(A) 300

(B) 350

(C) 625

(D) 325

5. Which number is a term of the AP 4, 9, 14, …?

(A) 40 (B) 44

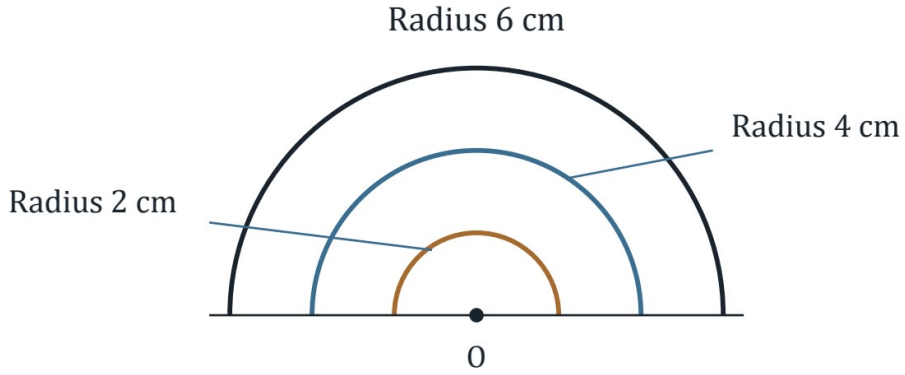
(C) 46 (D) 50

SECTION B

(4 questions × 2 marks = 8 marks)

6. Find the twentieth term from the end of the AP 3, 8, 13, …, 253.

7. The semicircular arcs shown have radii 2 cm, 4 cm, 6 cm, … . Find the radius of the ninth arc and the sum of the first nine radii.



8. Find the sum of the first 15 positive multiples of 8.

9. An AP has common difference −4 and sixth term 3. Find its twenty-sixth term.

SECTION C

(3 questions × 3 marks = 9 marks)

10. Find the sum of the first 16 terms of an AP whose fourth and ninth terms are −15 and −30.

11. An AP has $S_n = 4n - n^2$. Find its first term, common difference and tenth term.

12. How many integers strictly between 10 and 300 leave remainder 3 when divided by 4? Find their sum.

SECTION D

(Application Based Question - 3 marks)

13. A theatre has 12 rows. The first row has 24 seats and each successive row has two more seats.

(i) How many seats are in the last row?

(ii) Find the total number of seats.

(iii) Which row has 44 seats?