Mathematics

Practice Test Paper 3

(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. For the AP 0.6, 1.7, 2.8, …, the common difference is:

(A) 0.6 (B) 1.7

(C) 1.1 (D) 2.2

2. Which AP is decreasing?

(A) 4, 7, 10, …

(B) 9, 5, 1, …

(C) 2, 2, 2, …

(D) −5, −1, 3, …

3. If an AP has first term 6 and common difference −2, its fourth term is:

(A) 0 (B) 2

(C) −2 (D) 4

4. The sum of n terms of an AP with first term a and last term l is:

(A) $n(a + l)$

(B) $\frac{a + l}{2}$

(C) $\frac{n}{2}(a - l)$

(D) $\frac{n}{2}(a + l)$

5. If 3, k − 2 and 5 are consecutive terms of an AP, k equals:

(A) 4 (B) 6

(C) 8 (D) 2

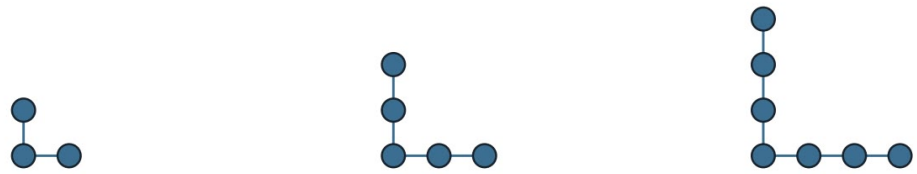
SECTION B

(4 questions × 2 marks = 8 marks)

6. Which term of the AP 3, 8, 13, 18, … is 78?

7. Find the sum of the first 100 terms of the AP 0.6, 1.7, 2.8, ….

8. The L-shaped dot pattern continues as shown, with both arms growing by one dot each stage. Find the number of dots in stage 20.



Stage 1 — 3 dots

Stage 2 — 5 dots

Stage 3 — 7 dots

9. An AP has twelfth term 37 and common difference 3. Find its first term and the sum of its first 12 terms.

SECTION C

(3 questions × 3 marks = 9 marks)

10. The third and ninth terms of an AP are 4 and −8. Find the first term, common difference and the position of its zero term.

11. The first and last terms of an AP are 17 and 350, and its common difference is 9. Find its number of terms and their sum.

12. Subba Rao started work in 1995 with an annual salary of ₹5000. His annual salary increased by ₹200 each year. In which year did it first reach ₹7000?

SECTION D

(Application Based Question - 3 marks)

13. An athlete runs 400 m on the first training day and increases the daily distance by 50 m each day.

(i) Find the distance run on day 7.

(ii) Find the total distance run in the first seven days.

(iii) On which day does the daily distance reach 1000 m?