

Mathematics — Ganita Manjari

Chapter 2 Test 1

Introduction to Linear Polynomials

Class IX | 2026-27

Time Allowed: 45 Minutes

Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. Choose one option in A; show working in B-D.
2. Show the main steps and give reasons where asked. Calculators are not allowed.
3. Read graph scales carefully and state units where appropriate.

SECTION A

(5 questions × 1 mark = 5 marks)

1. The degree of $7x^2 - 4x + 9$ is:

- | | |
|-------|-------|
| (A) 1 | (B) 2 |
| (C) 3 | (D) 9 |

2. The coefficient of x in $12 - 5x$ is:

- | | |
|--------|---------|
| (A) 5 | (B) 12 |
| (C) -5 | (D) -12 |

3. Which expression is a linear polynomial in x ?

- (A) $x^2 + 1$
(B) 5
(C) $x^3 - x$
(D) $\frac{3}{4}x - 2$

4. Which point lies on $y = 3x - 4$?

- | | |
|------------|-------------|
| (A) (2, 2) | (B) (0, 4) |
| (C) (1, 1) | (D) (-1, 7) |

5. The slope of $y = -4x + 7$ is:

- | | |
|-------|--------|
| (A) 7 | (B) -4 |
| (C) 4 | (D) -7 |

SECTION B

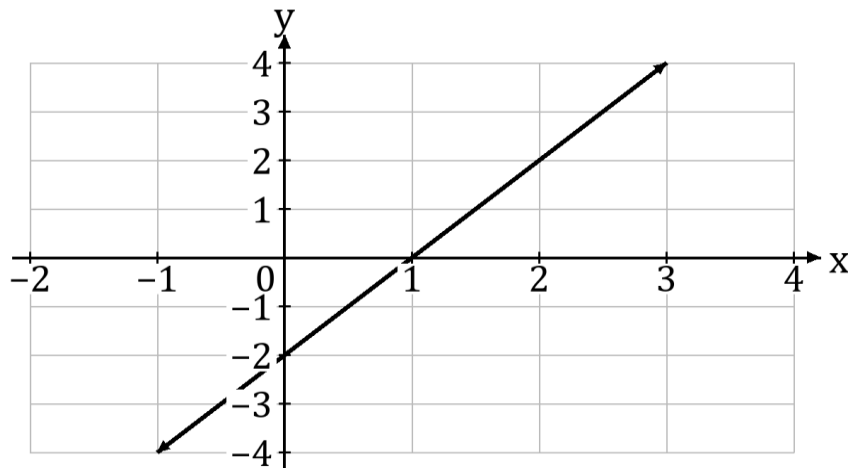
(4 questions $\times$ 2 marks = 8 marks)

6. For $p(x) = 6x - 5$, find $p(-2)$ and $p(3)$.
7. A square has side x cm. Write its perimeter as a polynomial. Find the increase in perimeter when its side increases by 0.75 cm.
8. A machine follows the rule $f(x) = 5x + 8$. Which input gives an output of -7 ?
9. A pattern has 4, 7, 10 and 13 dots at stages 1, 2, 3 and 4. It continues by adding 3 dots each time. Write its n th-stage rule and find the 12th-stage count.

SECTION C

(3 questions $\times$ 3 marks = 9 marks)

10. Read the intercepts of the drawn line. Hence find its slope and write its equation.



11. A learning centre charges a fixed fee plus a charge per session. Five sessions cost ₹650 and nine sessions cost ₹970. Find both charges and the cost of 12 sessions.
12. Find the equation of the line parallel to $y = 3x + 1$ and passing through $(2, -1)$. Also find its y-intercept.

SECTION D

(1 application question $\times$ 3 marks = 3 marks)

13. Mira has ₹450 and saves ₹120 at the end of every week. Write her total savings after n weeks. Find her savings after 8 weeks and when they first reach ₹1890.