

Name of the School: _____

SUMMATIVE ASSESSMENT – I (2026–27)

Class IX — MATHEMATICS

English Medium

Model Question Paper — Set A

Time: 3 Hours

Max. Marks: 80

Name of the Student: _____ Roll No.: _____

Syllabus covered: Ch. 1 Real Numbers, Ch. 2 Polynomials and Factorisation, Ch. 3 The Elements of Geometry, Ch. 4 Lines and Angles, Ch. 5 Co-ordinate Geometry, Ch. 6 Linear Equations in Two Variables, Ch. 7 Triangles

Instructions:

1. Part A (60 marks) is to be answered in the answer booklet within the first 2 hours 30 minutes.
2. Section I: Q.1–6 are very short answer questions. Answer all. Each carries 2 marks.
3. Section II: Q.7–12 are short answer questions. Answer all. Each carries 4 marks.
4. Section III: Q.13–16 are essay type questions with internal choice. Answer one from each question. Each carries 6 marks.
5. Part B (20 marks) is to be answered on the question paper itself in the last 30 minutes.
6. Use of calculators is not allowed. Graph sheets will be supplied where required.

PART – A

Time: 2 Hours 30 Minutes

Marks: 60

SECTION – I

Note: Answer ALL the questions. Each question carries 2 marks. ($6 \times 2 = 12$)

1. Find three rational numbers between $\frac{3}{5}$ and $\frac{4}{5}$.
2. Rationalise the denominator of $\frac{1}{(\sqrt{5} + \sqrt{2})}$.
3. Find the remainder when $x^3 + 3x^2 + 3x + 1$ is divided by $x + 1$.
4. Two lines intersect each other and one of the angles formed is 40° . Find the other three angles.
5. In which quadrant or on which axis do the points $(-3, 5)$ and $(0, -4)$ lie?
6. Check whether $(2, 3)$ is a solution of the equation $3x - 2y = 0$.

SECTION – II

Note: Answer ALL the questions. Each question carries 4 marks. ($6 \times 4 = 24$)

7. Express (i) $0.474747\dots$ and (ii) $1.222\dots$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.
8. Factorise $x^3 - 2x^2 - x + 2$ using the factor theorem.
9. State Euclid's five postulates.
10. Prove that if two lines intersect each other, the vertically opposite angles are equal.
11. Plot the points $A(2, 3)$, $B(-2, 3)$, $C(-2, -3)$ and $D(2, -3)$ on a graph sheet. Join them in order and name the figure formed.
12. The cost of a notebook is twice the cost of a pen. Write a linear equation in two variables to represent this statement and find any two solutions of it.

SECTION – III

Note: Answer ONE question (a or b) from each of Q.13 to 16. Each question carries 6 marks. ($4 \times 6 = 24$)

13. (a) Represent $\sqrt{3}$ on the number line. Write the steps of construction.

OR

- (b) Rationalise the denominators: (i) $\frac{1}{(7 + 3\sqrt{2})}$ (ii) $\frac{1}{(\sqrt{7} - \sqrt{6})}$. Also simplify $(3 + \sqrt{3})(2 + \sqrt{2})$.

14. (a) Factorise $2x^3 + x^2 - 2x - 1$ completely.

OR

(b) Using suitable identities, evaluate: (i) 104×96 (ii) 103^2 (iii) 99^3

15. (a) Prove that the sum of the angles of a triangle is 180° .

OR

(b) The angles of a triangle are in the ratio $2 : 3 : 4$. Find the angles. Also, an exterior angle of a triangle is 110° and one of its interior opposite angles is 45° . Find the other two angles of the triangle.

16. (a) Draw the graph of the linear equation $2x + y = 6$. Find the points where the line meets the x-axis and the y-axis.

OR

(b) Prove that the angles opposite to equal sides of an isosceles triangle are equal.

PART – B

Time: 30 Minutes

Marks: 20

I. Multiple Choice Questions*Choose the correct answer and write its letter in the bracket. ($10 \times 1 = 10$)*

1. Which of the following is an irrational number? []
(A) 0.5 (B) $\frac{22}{7}$ (C) $\sqrt{2}$ (D) $\sqrt{9}$
2. The decimal form of $\frac{1}{3}$ is []
(A) terminating (B) non-terminating, recurring
(C) non-terminating, non-recurring (D) an integer
3. The degree of the polynomial $5x^3 - 4x^2 + 7$ is []
(A) 2 (B) 3 (C) 5 (D) 7
4. The zero of the polynomial $p(x) = 2x - 6$ is []
(A) 2 (B) -3 (C) 3 (D) 6
5. According to Euclid, a point has []
(A) one dimension (B) two dimensions
(C) no part (no dimension) (D) length only
6. The complement of 35° is []
(A) 55° (B) 145° (C) 65° (D) 35°
7. The point (0, 5) lies on the []
(A) x-axis (B) y-axis (C) origin (D) first quadrant
8. The abscissa of the point $(-3, 7)$ is []
(A) 7 (B) -3 (C) 4 (D) -7
9. The equation of the x-axis is []
(A) $x = 0$ (B) $y = 0$ (C) $x = y$ (D) $x + y = 0$
10. Which of the following is NOT a congruence criterion for triangles? []
(A) SAS (B) ASA (C) SSS (D) SSA

II. Fill in the Blanks*($5 \times 1 = 5$)*

11. The rationalising factor of $\sqrt{5}$ is _____.
12. $(a + b)^2 =$ _____.
13. The sum of all the angles at a point on one side of a straight line is _____.
14. The point where the x-axis and the y-axis meet is called the _____.
15. A linear equation in two variables has _____ solutions.

III. Match the Following*Write the correct letter from Group B in the bracket. ($5 \times 1 = 5$)*

No.	Group A		Group B
16.	Sum of two supplementary angles ()	A.	180°
17.	The book written by Euclid ()	B.	Elements
18.	$x^2 - y^2$ ()	C.	$(x + y)(x - y)$
19.	Quadrant of the point $(-2, -5)$ ()	D.	Third quadrant
20.	Number of zeroes of a linear polynomial ()	E.	1
		F.	90°

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