

Name of the School: _____

SUMMATIVE ASSESSMENT – I (2026–27)

Class VIII — MATHEMATICS

English Medium

Model Question Paper — Set A

Time: 2 Hours 45 Minutes

Max. Marks: 80

Name of the Student: _____ Roll No.: _____

Syllabus covered: Ch. 1 Rational Numbers, Ch. 2 Linear Equations in One Variable, Ch. 3 Construction of Quadrilaterals, Ch. 4 Exponents and Powers, Ch. 5 Comparing Quantities using Proportion, Ch. 6 Square Roots and Cube Roots, Ch. 7 Frequency Distribution Tables and Graphs, Ch. 8 Exploring Geometrical Figures, Ch. 9 Area of Plane Figures

Instructions:

1. Part A (60 marks) is to be answered in the answer booklet within the first 2 hours 15 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. Keep your geometry box and graph sheets ready.

PART – A

Time: 2 Hours 15 Minutes

Marks: 60

SECTION – I

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

1. Write the additive inverse and the multiplicative inverse of $-3/7$.
2. Solve: $3x + 5 = 20$.
3. Simplify: $(2^3 \times 2^5) \div 2^4$.
4. Express 0.000035 in standard form.
5. Find the square root of 1764 by prime factorisation.
6. Find the area of a trapezium whose parallel sides are 10 cm and 6 cm and the distance between them is 5 cm.

SECTION – II

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

7. Find three rational numbers between $1/4$ and $1/2$ and represent them on a number line.
8. The sum of three consecutive multiples of 7 is 357. Find the multiples.
9. If $5^{2x+1} \div 25 = 125$, find the value of x .
10. Find the compound interest on ₹10,000 for 2 years at 10% per annum, compounded annually.
11. Find the smallest number by which 2250 must be multiplied to make it a perfect cube. Also find the cube root of the product.
12. The marks (out of 50) of 20 students are given below. Prepare a frequency distribution table using the class intervals 0–10, 10–20, 20–30, 30–40 and 40–50. Data: 12, 25, 36, 8, 41, 19, 27, 33, 45, 5, 14, 29, 38, 22, 17, 31, 44, 9, 26, 35

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) Construct a quadrilateral ABCD in which AB = 4.5 cm, BC = 5.5 cm, CD = 4 cm, AD = 6 cm and AC = 7 cm.

OR

- (b) Construct a parallelogram ABCD in which AB = 5 cm, BC = 4 cm and $\angle B = 70^\circ$.

14. (a) Draw a histogram for the following frequency distribution of marks of students.

Marks	0–10	10–20	20–30	30–40	40–50
Number of students	4	7	12	9	5

OR

- (b) Solve: $(x - 5)/3 = (x - 3)/5$. Also, the present ages of Rahul and Haroon are in the ratio 5 : 7. Four years later, the sum of their ages will be 56 years. Find their present ages.

15. (a) Find the square root of 7056 by the long division method. Also find the cube root of 13824 by prime factorisation.

OR

- (b) ₹8,000 is invested for $1\frac{1}{2}$ years at 10% per annum, compounded half-yearly. Find the amount at the end of the period.

16. (a) The area of a rhombus is 240 cm^2 and one of its diagonals is 16 cm. Find the other diagonal. Also find the area of a circular ring whose outer radius is 14 cm and inner radius is 7 cm. (Take $\pi = 22/7$)

OR

- (b) Draw the lines of symmetry of a square, a rectangle and an equilateral triangle. Write the order of rotational symmetry of each figure.

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. The multiplicative identity for rational numbers is []
(A) 0 (B) 1 (C) -1 (D) 2
2. The reciprocal of $-5/8$ is []
(A) $5/8$ (B) $-8/5$ (C) $8/5$ (D) $-5/8$
3. The solution of $2x - 3 = 7$ is []
(A) 2 (B) 4 (C) 5 (D) 10
4. The value of 5^0 is []
(A) 0 (B) 5 (C) 1 (D) 50
5. $10^{-2} =$ []
(A) -100 (B) $1/100$ (C) -20 (D) 100
6. If the cost price is ₹500 and the selling price is ₹450, the loss per cent is []
(A) 5% (B) 10% (C) 50% (D) 15%
7. The unit digit of 13^2 is []
(A) 3 (B) 6 (C) 9 (D) 1
8. The cube root of 1000 is []
(A) 100 (B) 10 (C) 30 (D) 300
9. The number of independent measurements needed to construct a unique quadrilateral is []
(A) 3 (B) 4 (C) 5 (D) 6
10. The area of a trapezium is []
(A) $\frac{1}{2} h(a + b)$ (B) $h(a + b)$ (C) $\frac{1}{2} ab$ (D) $a \times b$

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

11. The rational number which is its own additive inverse is _____.
12. $2^5 \times 2^3 = 2^{\quad}$.
13. The number of zeroes at the end of the square of 100 is _____.
14. The difference between the highest and the lowest values of the data is called the _____.
15. Figures having the same shape but not necessarily the same size are called _____ figures.

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

No.	Group A		Group B
16.	Multiplicative inverse of $-3/7$ ()	A.	$-7/3$
17.	A perfect cube ()	B.	27
18.	Amount at compound interest ()	C.	$P(1 + R/100)^n$
19.	Area of a rhombus ()	D.	$\frac{1}{2} d_1 d_2$
20.	Histogram ()	E.	Graph of grouped data drawn with bars
		F.	πr^2

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