GREENLAWNS SCHOOL, WORLI
MATHEMATICS
Final Examination – 2025-2026

STD: VIII **Marks: 80**
Date: 20/02/2026 **Time: 2½hr**

Attempt **all** questions from **Section A** and **any four** questions from **Section B All** *working, including rough work, must be clearly shown, and must be done on the same sheet as the rest of the answer.*
Omission of essential working will result in loss of marks. The intended marks for questions or parts of questions are given in brackets [ ]

SECTION A
*(Attempt **all** questions from this Section)*

Question 1. Choose the correct answers to the questions from the given options. **[15]**
(Do not copy the questions, write the correct answer only)

i. If $(-3)^{m+1} \times (-3)^5 = (-3)^7$, then the value of m is:
   a. 5 **b.** 7 **c.** 1 **d.** 3

ii 1 litre is equal to how many cubic centimetres?
   a. 10 cu.cm **b.** 100 cu.cm **c.** 1000 cu.cm **d.** 10000 cu.cm

iii. The value of $(x - y)(x + y) + (y - z)(y + z) + (z - x)(z + x)$ is:
   a. $x + y + z$ **b.** $x^2 + y^2 + z^2$ **c.** $xy + yz + zx$ **d.** 0

iv. The factors of $6xy - 4y + 6 - 9x$ are:
   a. $(3x + 2)(2y + 3)$ **b.** $(3x - 2)(2y - 3)$ **c.** $(3x - 2)(2y + 3)$ **d.** $(3x -+2)(2y - 3$

v. Which of the following quadrilaterals has two pairs of adjacent sides equal and its diagonals intersect at 90º?
   a. square **b.** Kite **c.** Rhombus **d.** Rectangle

vi. If AB and CD are two parallel sides of a parallelogram, then:
   a. AB>CD **b.** AB<CD **c.** AB=CD **d.** None of the above

vii. If ∠A and ∠B are two adjacent angles of a parallelogram. If ∠A = 70°, then ∠B = ?
   a. 70° **b.** 90° **c.** 110° **d.** 180°

viii. The degree of equation $x^2 - 9 = 2x^2$ is:
   a. 4 **b.** 1 **c.** 2 **d.** 3

ix. When a number is added to itself, it becomes 24. What is the number?
   a. 2 **b.** 4 **c.** 12 **d.** 21

x. To construct a quadrilateral, we need to know two adjacent side and _____ angles.
   a. One **b.** Two **c.** Three **d.** All four angles

xi. If two diagonals are given, then we can construct a:
    a. Rhombus   **b.** Rectangle   **c.** Kite   **d.** Parallelogram

xii. If x and y are directly proportional, then which of the following is correct?
    a. x + y=constant   **b.** x - y=constant   **c.** x y=constant   **d.** x / y = constant

xiii. If x and y are inversely proportional, then which one is true?
    a. $x_1/y_1 = x_2/y_2$ **b.** $x_1/x_2 = y_1/y_2$ **c.** $x_1/x_2 = y_2/y_1$ **d.** $x_1.x_2 = y_1.y_2$

xiv. The longest chord of the circle is:
    a. Radius   **b.** Arc   **c.** Diameter   **d.** Segment

xv. The ratio of the circumference of a circle to its diameter is always:
    a. $1 : 1$ **b.** $\pi : 1$ **c.** $2\pi : 1$ **d.** $1 : \pi$

Question 2

  a. Find the least number which must be added to 4515600 make it a perfect square   **[3]**

  b. $(3x - 2)(2x - 3) + (5x - 3)(x + 1)$ **[3]**

  c. If $x^2 + y^2 = 29$ and $xy = 2$, find the value of
    i) x + y
    ii) x − y   **[3]**

  d. Evaluate each of the following using identities:
    i) $(2x - 1/x)^2$
    ii) $(2x + y)(2x - y)$ **[3]**

  e. Subtract the sum of $3l - 4m - 7n^2$ and $2l + 3m - 4n^2$ from the sum of
    $9l + 2m - 3n^2$ and $-3l + m + 4n^2$ **[3]**
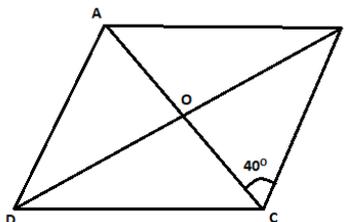
Question 3

  a. Raghu has enough money to buy 75 machines worth Rs. 200 each. How many machines can he buy if he gets a discount of Rs. 50 on each machine?   **[2]**

  b. Find the volume of a cuboid whose length = 12 cm, breadth = 8 cm, height = 6 cm   **[2]**

  c. If $a - b = 4$ and $ab = 21$, find the value of $a^3 - b^3$.   **[2]**

  d. Factorise: $abx^2 + (ay - b)x - y$ **[2]**

  e. Find the value of: $(1/2)^{-2} + (1/3)^{-2} + (1/4)^{-2}$ **[2]**

(Attempt **any four** questions from this section)

Question 4

   a. If a + b + c = 0 and $a^2 + b^2 + c^2 = 16$, find the value of ab + bc + ca. **[2]**

   b. If x + 1/x = 12 find the value of $x^2 - 1/x^2$ **[2]**

   c. Divide $3x^3 + 4x^2 + 5x + 18$ by x + 2 **[3]**

   **d.** ABCD is a rhombus. If ∠ACB = 40°, find m ∠ADB. **[3]**

Question 5

   a. Factorise: $(x - 4y)^2 - 625$ **[2]**

   b. Find the area of the field in the form of a rhombus, if the length of each side be 14 cm and the altitude be 16 cm. **[2]**

   c. Solve : $\dfrac{x}{3} + \dfrac{1}{4} < \dfrac{x}{6} + \dfrac{1}{2}$, x ε W. Also represent its solution on the number line. **[3]**

   d. Draw a rectangle whose one side measures 8 cm and the length of each of whose diagonals is 10 cm. **[3]**

Question 6

   a. Kavish can do a piece of work in 5 days and Ankur in 4 days. How long will they take to do the same work, if they work together? **[2]**

   b. Find the height of a trapezium, the sum of the lengths of whose bases (parallel sides) is 60 cm and whose area is 600 cm^2. **[2]**

   c. In a rational number, twice the numerator is 2 more than the denominator, if 3 is added to each, the numerator and the denominator. The new fraction is 2/3. Find the original number. **[3]**

   d. In the adjacent figure HOPE is a parallelogram. Find the measure of angles represented by x, y and z. **[3]**
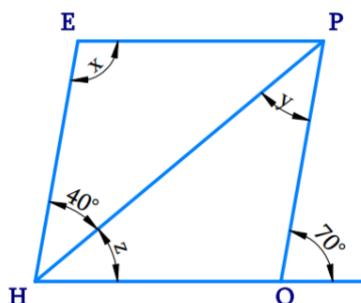
Question 7

a. Solve: $\dfrac{(x+3)}{(x-3)} + \dfrac{(x+2)}{(x-2)} = 2$ [3]

b. A metal cube of edge 12 cm is melted and re casted into three smaller cubes. If the edges of the two smaller cubes are 6 cm and 8 cm, find the edge of the third smaller cube.   [3]

c. i. Find the area of a triangle whose sides are 5 cm, 12 cm, and 13 cm.

   ii. Find the length of the tangent to a circle with radius 5 cm, from a point at a distance of 13 cm from its center.   [4]

Question 8

a. Factorise: $x^2 + 12x - 45$ [3]

b. The area of the base of a right circular cylinder is 616 cm^2 and its height is 2.5 cm. Find the curved surface area of the cylinder.   [3]

c. The walls and ceiling of a room are to be plastered. The length, breadth and height of the room are 4.5 m, 3 m and 350 cm, respectively. Find the cost of plastering at the rate of Rs. 8 per square metre.   [4]

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