



INDIAN SCHOOL AL WADI AL KABIR
Pre Mid-Term Examination (revision paper) (2025-26)
Sub: MATHEMATICS (041)

Class: IX
Date: 11.05.2025

Max Marks: 30
Time: 1 hour

General Instructions:

1. This question paper is divided into 4 sections- A, B, C and D.
2. Section A comprises of 7 questions of 1 mark each.
3. Section B comprises of 3 questions of 2 marks each.
4. Section C comprises of 3 questions of 3 marks each.
5. Section D comprises of 2 Case based integrated units of assessment (4 marks each) with sub-parts of the values 2 and 1 marks.
6. All questions are compulsory. However, an internal choice in one question of 2 marks, one question of 3 marks has been provided. An internal choice has been provided in the 2 marks questions of section D.

Section A

PART-1(MCQ-1 mark each)

- Q.1.** $(2^2 \div 3^0) \times 5^2$
- A** 100 **B** $\sqrt{5}$ **C** 1 **D** 5
- Q.2.** The simplest rationalizing factor of $\frac{1}{\sqrt{72}}$ is
- A** $\sqrt{2}$ **B** 72 **C** $\sqrt{7}$ **D** 1
- Q.3.** If $x = 3 + 2\sqrt{2}$, find the value of $x^2 + \frac{1}{x^2}$
- A** 1 **B** $\sqrt{34}$ **C** 30 **D** 34
- Q.4.** The value of x such that, if $\left(\frac{3}{7}\right)^6 \times \left(\frac{7}{9}\right)^3 = \left(\frac{1}{7}\right)^{2x-3}$
- A** 0 **B** 3 **C** 6 **D** 5
- Q.5.** Area of a right triangle whose sides are in the ratio 3:4:5 and the perimeter is 24m.
- A** 12 **B** 24 **C** 48 **D** 60
- Q.6.** The area of an equilateral triangle whose perimeter is 12cm:
- A** $\sqrt{3} \text{ cm}^2$ **B** $4\sqrt{3} \text{ cm}^2$ **C** $12\sqrt{3} \text{ cm}^2$ **D** $8\sqrt{3} \text{ cm}^2$

Section A

PART-2 ASSERTION AND REASON TYPE QUESTIONS (1 mark)

DIRECTION: A statement of **Assertion (A)** is followed by a statement of **Reason (R)**.

Choose the correct option.

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
- (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A).
- (c) Assertion (A) is true but Reason (R) is false.
- (d) Assertion (A) is false but Reason (R) is true.

Q.7. Assertion (A): $\sqrt{5} \pm \sqrt{20}$ is an irrational number.

Reason (R): Addition or subtraction of two irrational numbers is irrational.

Section B (2 marks each)

Q.8. Simplify: $(2\sqrt{3} + \sqrt{3})(10 + \sqrt{3})$

Q.9. The perimeter of a rhombus ABCD is 40cm. Find the area of rhombus if its diagonals BD measures 12cm.

(OR)

Find the perimeter and area of a triangle whose sides are of length 24cm, 50cm and 50cm.

Q.10. Represent 0. 2353535.. in the form of $\frac{p}{q}$, where p and q are integers and q $\neq$ 0.

Section C (3 marks each)

Q.11. There is a slide in a park. One of its sides walls has been painted in some colour with a message “KEEF THE CITY GREEN AND CLEAN”. If the sides of the wall are 15m, 11m and 6m. Find the area painted in colour.

Q.12. Represent geometrically $\sqrt{11.2}$ on the number line.

Q.13. Simplify: $(3\sqrt{5} - 5\sqrt{2})(4\sqrt{5} + 3\sqrt{2})$

(OR)

Find the value of $(x - \frac{1}{x})^3$ if $x = 1 + \sqrt{2}$

Section D

(CASE STUDY BASED QUESTIONS – 4 MARKS EACH)

Q.14. Mrs. Rakhi lives in an undeveloped area where there is no facility of proper education. But one thing is available in that area i.e., network. Since she was very keen to take education, so she decided to complete her education through e-learning. One day she was learning number system, where she learnt about rational numbers, irrational numbers and decimal numbers, etc. On the basis of the above information, solve the following question:

- (i) Find the decimal expansion of $\frac{12}{17}$ 1 m
- (ii) Write two irrational numbers between $\frac{5}{9}$ and $\frac{13}{15}$ 1 m
- (iii) Determine whether $(5\sqrt{2} + 2\sqrt{7})^2$ is rational or irrational. 2 m

Q.15. A landscape architect is designing a triangular garden in a public park. The garden will be bordered by three walkways with lengths of 40 meters, 60 meters, and 80 meters. To plan the irrigation system and estimate the cost of planting grass, the architect needs to know the area of the garden.

Based on the above information, answer the following questions:

- (i) Calculate the semi-perimeter. 1 m
- (ii) What is the area 2 m
- (iii) If the cost of grass planting is ₹15 per square meter, determine the total cost of covering the garden with grass. ($\sqrt{15} = 3.87$ Approx). 1 m



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Revision Prem Midterm (2025 - 2026)
Answer Key

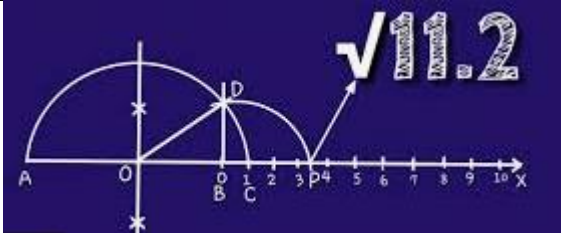
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1	(a) 100
2	(a) $\sqrt{2}$
3	(b) $\sqrt{34}$
4	(a) 0
5	(b) 24
6	(b) $4\sqrt{3} \text{ cm}^2$
7	(c)
8	$9+30\sqrt{3}$
9	96cm^2 OR Perimeter=124cm Area = $24\sqrt{589} \text{ cm}^2$
10	$X = \frac{233}{990}$
11	$20\sqrt{2} \text{ m}^2$
12	
13	$30 - 11\sqrt{10}$ OR 8
14	(i) 0.7058823.. (ii) 0.585885888.. and 0.878878887.. (iii) $78+20\sqrt{14}$
15.	i) 90m ii) $300\sqrt{15} \text{ m}^2$ ₹17,415.
