INDIAN SCHOOL AL WADI AL KABIR

Post Midterm Examination (2025-26)

Class: VII | Sub: MATHEMATICS | Max Marks: 30

Date: 02/12/2025 | **Set – A (ANSWER KEY)** | Time: 1 hour

Instructions:

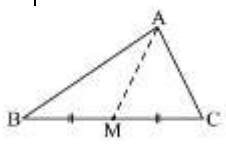
Section A: Multiple Choice Questions (Q.1 to Q.8)

Section B: Source based questions (Q.9 to Q.12)

Section C: Long Answer Questions (Q.13 to Q.16)

Section D: 4 Marks Question & Case study Question (Q.17 to Q.18).

NOTE: This question paper consists of 3 printed pages.

Section A: Multiple Choice Question (Q.1 to Q.8) of **1** mark each								
1.	The additive inverse of $\frac{-5}{6}$ is:							
	A		**B**	$\frac{5}{6}$	**C**		**D**	
2.	$\frac{-1}{8} \times \frac{-4}{5} =$							
	A	$\frac{1}{10}$	**B**		**C**		**D**	
3.	Choose the standard form of the rational number $\frac{12}{-18}$.							
	A		**B**		**C**	$\frac{-2}{3}$	**D**	
4.	In the given triangle ABC, M is the midpoint of BC. Then AM is called: 							
	A		**B**		**C**		**D**	Median of △ABC

5.	$\frac{5}{8}-\frac{-2}{8}=$							
	A	$\frac{7}{8}$	**B**		**C**		**D**	
6.	How many altitudes can a triangle have?							
	A		**B**		**C**	3	**D**	
7.	When Rayan drew a triangle, he noticed that all the angles were equal. What is the measure of each angle?							
	A		**B**	60°	**C**		**D**	
8.	In the Pythagoras property, the triangle must be:							
	A		**B**		**C**	Right-angled	**D**	
	Section B: Source based questions (Q.9 to Q.12) of 1 mark each Triangles are classified into different categories based on their angles and sides. Mina is designing a small triangular garden where all the angles are less than 90°, and she decides that two sides of the triangle should be equal. She marks the triangle ABC such that sides AB and AC are equal in length. 							
9.	What type of triangle has Mina designed, based on its sides?							
	A		**B**	Isosceles	**C**		**D**	
10.	What type of triangle has Mina designed, based on its angles?							
	A	Acute-angled	**B**		**C**		**D**	
11.	If ∠B = 50°, what is the measure of ∠C?							
	A		**B**		**C**		**D**	50°
12.	What is the measure of ∠A?							
	A		**B**	80°	**C**		**D**	

Section C: Long Answer Questions (Q13 to Q.16)

13. Savita divided a rational number $\frac{-8}{35}$ by another rational number $\frac{4}{15}$. Find the answer in the simplest form. (2m)

$\frac{-8}{35} \div \frac{4}{15} = \frac{-8}{35} \times \frac{15}{4}$ (1 mark - reciprocal and multiplication shown)

$\frac{-6}{7}$ (1 mark – calculations and simplification)

14. Is it possible to form a triangle with sides measuring 7 cm, 2 cm, and 4 cm? Give reason for your answer. (2m)

7+2 > 4 yes (1/2 mark)

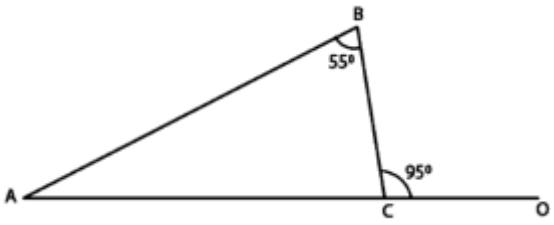
7+4 > 2 yes (1/2 mark)

2+4 $\not>$ 7 no (1/2 mark)

Property - sum of any two sides must be greater than the third.

So, it is not possible to form a triangle with given sides. (1/2 mark)

15. In the given triangle ABC, the exterior angle at vertex C measures 95°. One of the interior opposite angles measures 55°.By applying the appropriate properties, find the other two interior angles of △ABC (∠BAC and ∠ACB), without measuring them. Write the property used.



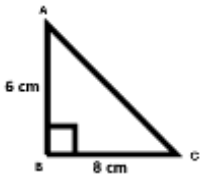
(3m)

$\angle BAC = 95° - 55° = 40°$ (1 mark), Exterior-angle property (1/2 mark)

$\angle BCA = 180° - 95° = 85°$ (1 mark), Linear pair (or angle sum property) (1/2 mark)

16. Draw a number line and represent the following rational numbers on it: (3m)

$\frac{-4}{5}, \frac{-2}{5}, 0, \frac{1}{5}$

	Number line (1 mark) 4 rational numbers $(4 \times \frac{1}{2} = 2$ marks)
Section D: Long Answer Question of 4 marks &Case study (Q.17 & Q.18)	
17.	Find any four rational numbers between $\frac{3}{8}$ and $\frac{3}{5}$. Show your working. $\frac{3}{8} = \frac{15}{40}$ (1 mark) $\frac{3}{5} = \frac{24}{40}$ (1 mark) $\frac{16}{40}, \frac{17}{40}, \frac{18}{40}, \frac{19}{40}, \frac{20}{40}, \frac{21}{40}, \frac{22}{40}, \frac{23}{40}$ $(any\ 4) - (4 \times \frac{1}{2} = 2$ marks)
18.	**Case Study:**   During a Maths activity, students are cutting paper triangles. Aisha cuts a right-angled triangle ABC with sides measures 6 cm and 8 cm. Meanwhile, Rahul cuts another triangle PQR with two of the angles measuring 100° and 55°. (i) What is the length of the longest side of Aisha's right-angled triangle ABC? Use the appropriate property to calculate it. (2 m) Pythagoras property (1/2 mark) $6^2 + 8^2 = 36 + 64 = 100$ (1 mark) Hypotenuse $= \sqrt{100} = 10$ cm (1/2 mark) (ii) Aisha now wants to find the perimeter of her right-angled triangle ABC. Using the longest side you calculated in part (i), find the perimeter of triangle ABC. (1 m) Perimeter $= 6 + 8 + 10$ (1/2 mark) $= 24$ cm (1/2 mark) (iii) Find the third angle of Rahul's triangle PQR. (1 m) Third angle $= 180° - (100° + 55°)$ (1/2 mark) $= 25°$ (1/2 mark)

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