INDIAN SCHOOL AL WADI AL KABIR

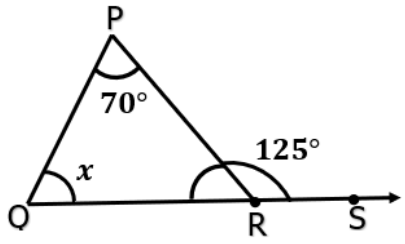
Post Mid-Term Examination (2023-24)

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

Date: 26-11-23 | **Set-I** **MARKING SCHEME** | Time: 1 hour

Section A: Multiple Choice Question (Q.1 to Q.6) of **1** mark each

1. Find the value of x in the given figure:

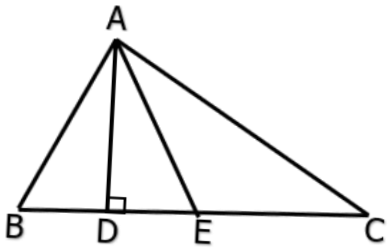


	A		**B**	**55°**	**C**		**D**	

2. Find the reciprocal of $\left(\frac{-2}{3} \times \frac{5}{3}\right)$

	A		**B**		**C**	$\mathbf{\frac{-9}{10}}$	**D**	

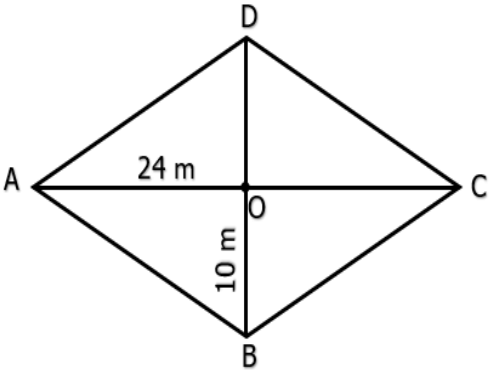
3. In the triangle ABC, point E is the midpoint of the side BC, then the median is:



	A		**B**		**C**		**D**	**AE**

4. Which of the following is equivalent to $\frac{28}{48}$?

	A		**B**		**C**	$\mathbf{\frac{7}{12}}$	**D**	

5.	In a triangle, two angles are $46°$and $76°$. Then the measure of third angle is:							
	A	$58°$	**B**		**C**		**D**	
6.	The sum of $\frac{5}{4} + \frac{-25}{4}$ is							
	A		**B**	-5	**C**		**D**	
	Section B: Source based questions (Q.7 to Q.11) of **1** mark each							
	Ram bought a rhombus shaped land. The adjoining figure show the outline of the land. The diagonals of the rhombus DB =10 m and AC = 24 m. Based on this context answer the following questions:							
7.	If the length of the diagonal AC =24 m, then the length of OC= -------							
	A		**B**		**C**		**D**	12 m
8.	The measure of the $\angle COD$= --------							
	A		**B**	$90°$	**C**		**D**	
9.	To find the side of the given rhombus which property can be used?							
	A		**B**		**C**	Pythagoras property	**D**	
10.	What is the length of the side DC?							
	A		**B**	13 m	**C**		**D**	

11.	Find the perimeter of the rhombus shaped land ABCD							
	A	52 m	**B**		**C**		**D**	

Section C: Long Answer Questions (Q12 to Q.15)

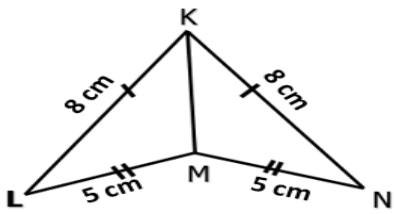
12. Find the value and write it in the standard form: **(2 marks)**

$$\frac{3}{-13} \div \frac{5}{26}$$

Ans: $\frac{3}{-13} \div \frac{5}{26} = \frac{3}{-13} \times \frac{26}{5}$ (1 mark)

$$\frac{3}{-1} \times \frac{2}{5} = \frac{-6}{5} \quad (\tfrac{1}{2}\ marks\ each)$$

13. Copy the table and write the missing reasons: (2 marks)



Statements		Reason	
i)	KL = KN	i)	------
ii)	LM = NM	ii)	------
iii)	KM =KM	iii)	------
iv)	Δ KML ≅ ΔKMN	iv)	------

Ans:
KL =KN ----- Given/ 8 cm
LM = NM ------Given/ 5 cm
KM = KM ------ Common side
Δ KML ≅ ΔKMN -----SSS congruence

$(\frac{1}{2}\ marks\ each)$

14. Represent the following rational numbers on the number line. (3 marks)

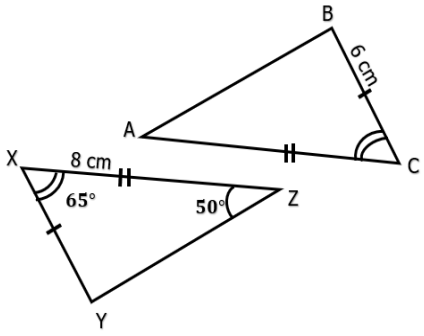
$\frac{-3}{4}$, $\frac{2}{4}$, 1 and $\frac{-1}{4}$

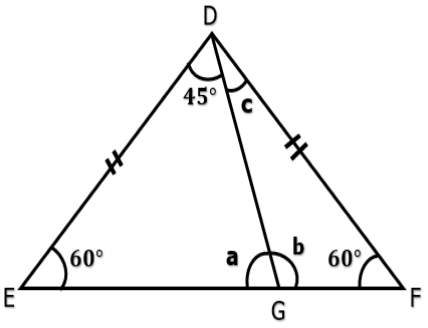
Ans: Number line (1 mark)

Each number $(\frac{1}{2}\ marks\ each)$

15. Find four rational numbers between $\frac{3}{5}$ and $\frac{1}{2}$ (4 marks)

Ans: $\frac{3}{5}$ and $\frac{1}{2}$ L CM = 5 X 2 = 10 $(\frac{1}{2}\ mark)$

	$\frac{3\times2}{5\times2}$ and $\frac{1\times5}{2\times5}$ $(\frac{1}{2}\ mark)$ $\frac{6}{10}$ and $\frac{5}{10}$ $(\frac{1}{2}+\frac{1}{2}\ marks\ )$ $\frac{6\times10}{10\times10}$ and $\frac{5\times10}{10\times10}$ $(\frac{1}{2}\ mark)$ $\frac{60}{100}$ and $\frac{50}{100}$ $(\frac{1}{2}\ mark\ )$ $\frac{51}{10}, \frac{52}{10}, \frac{53}{10}$ and $\frac{54}{10}$ $(1\ mark)$	
Section D: Case study (Q.16 & Q.17) of **4**marks each		
16.	**Case Study-1:** Manisha and Anisha were making triangular shaped greeting cards for Diwali celebrations. Observe the adjoining figure and answer the following questions: i) If $\Delta YXZ \cong \Delta BCA$, which criterion can be used to prove the congruence? ii) The measure of AC=--------- iii) $m\angle ACB$ = --------- iv) $m\angle Y$ = ------	
Ans:	i) $\Delta YXZ \cong \Delta BCA$ ----SAS congruence ii) The measure of AC= 8 cm iii) $m\angle ACB$ = 65° iv) $m\angle Y = 180 - (65 + 50)$ $= 180 - 115$ $= 65°$	(1 mark each)

17.	**Case Study-2:** The Planning commission ordered to make three tunnels for the sewage water connections to connect three cities (E, G and F) in a state. Also, they told there must be a common point D, such that one can view all the three cities through the tunnels. So, they made an outline diagram for that. Based on this, answer the following questions: i) If DE=DF, What type of triangle is Δ DEF ii) Find the value of a, b and c.	
Ans:	i) If DE=DF, What type of triangle is Δ DEF---- Isosceles triangle ii) **a** = $180 - (60 + 45) = 180 - 105 = 75°$ **b** =$180 - 75 = 105°$ **or** $60 + 45 = 105°$ **c** =$180 - (60 + 105)$ $= 180 - 165 = 15°$ **or** $60 - 45 = 15°$	(1 mark each answer)
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