INDIAN SCHOOL AL WADI AL KABIR

Post Mid-Term Examination (2023-24)

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

Date: 26-11-2023 | Set-I | Time: 1 hour

Instructions:

Section A: Multiple Choice Questions (Q.1 to Q.6)

Section B: Source based questions (Q.7 to Q.11)

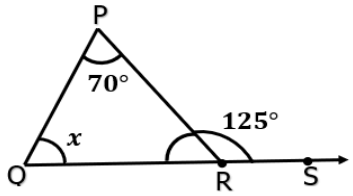
Section C: Long Answer Questions (Q.12 to Q.15)

Section D: Case study Questions (Q.16 to Q.17).

Note: This question paper consists of 04 printed pages.

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

1. The value of x in the given figure:

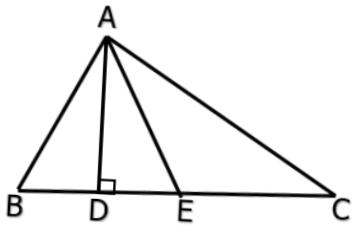


	A	65°	**B**	55°	**C**	75°	**D**	195°

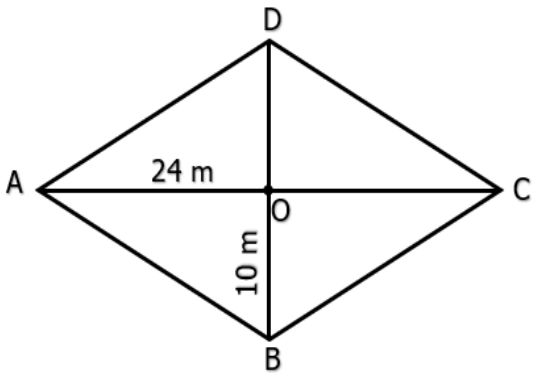
2. The reciprocal of $\left(\frac{-2}{3} \times \frac{5}{3}\right) =$ _____.

	A	$\frac{-10}{9}$	**B**	$\frac{15}{-6}$	**C**	$\frac{-9}{10}$	**D**	$\frac{-2}{5}$

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



	A	BE	**B**	DE	**C**	EC	**D**	AE

4.	Which of the following is equivalent to $\frac{28}{48}$?						
	A	$\frac{2}{4}$	**B**	$\frac{14}{12}$	**C**	$\frac{7}{12}$	**D**	$\frac{4}{7}$
5.	In a triangle, two angles are $46°$ and $76°$. Then the measure of third angle is:						
	A	$58°$	**B**	$120°$	**C**	$116°$	**D**	$30°$
6.	The sum of $\frac{5}{4} + \frac{-25}{4}$ is						
	A	-20	**B**	-5	**C**	5	**D**	30
	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	10 m	**B**	5 m	**C**	20 m	**D**	12 m
8.	The measure of the $\angle COD$= --------						
	A	$50°$	**B**	$90°$	**C**	$180°$	**D**	$45°$

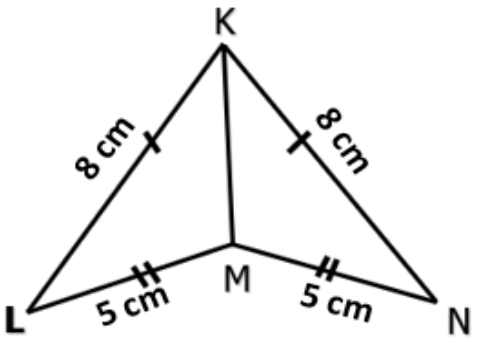
9.	To find the side of the given rhombus which property can be used?							
	A	Angle sum property	**B**	Exterior angle property	**C**	Pythagoras property	**D**	Inequality property
10.	What is the length of the side DC?							
	A	34 m	**B**	13 m	**C**	14 m	**D**	5 m
11.	The perimeter of the rhombus shaped land ABCD							
	A	52 m	**B**	169 m	**C**	240 m	**D**	196 m

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

12. Evaluate the following and write the answer in standard form: (2 marks)

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

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) ------

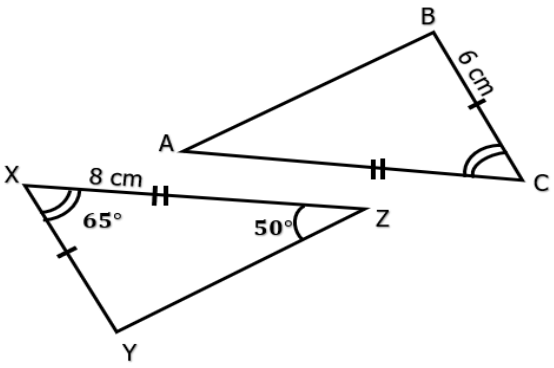
14. Represent the following rational numbers on a number line. (3 marks)

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

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

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:

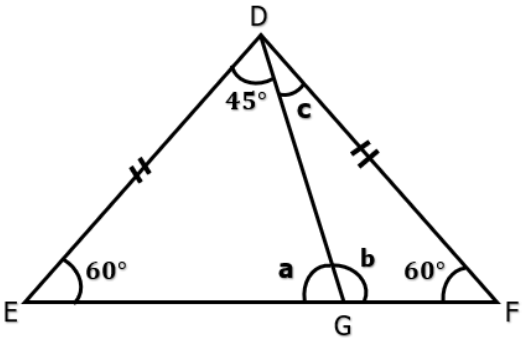
i) Which criterion can be used to prove $\Delta YXZ \cong \Delta BCA$,?

ii) The measure of AC=---------

iii) $m\angle ACB$ = ---------

iv) $m\angle Y$ = ------

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 the missing angles $\boldsymbol{a}$, $\boldsymbol{b}$ and $\boldsymbol{c}$.

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