

INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics (2023-24)

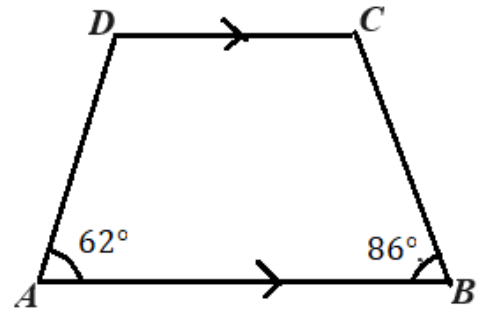
Worksheet DTQ – UNDERSTANDING QUADRILATERALS

SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)

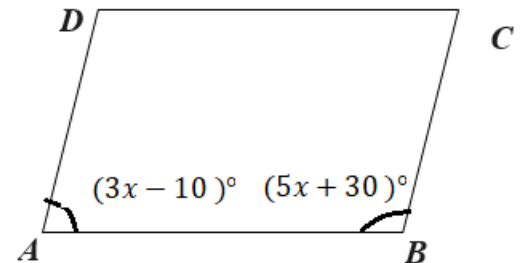
Q1. How many sides does a regular polygon have, if each of its interior angles is 108° ?

Q2. Find the number of diagonals of a polygon with 9 sides and write the name of the polygon.

Q3. If ABCD is a trapezium and $AB \parallel CD$, $\angle DAB = 62^\circ$ and $\angle ABC = 86^\circ$, find the measures of $\angle ADC$ and $\angle BCD$.



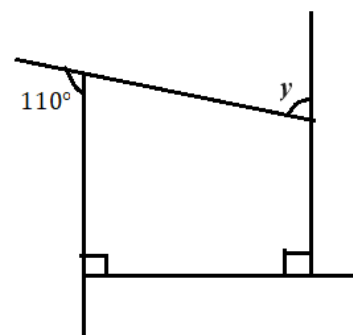
Q4. In parallelogram ABCD,
 $\angle A = (3x - 10)^\circ$, $\angle B = (5x + 30)^\circ$.
 Find all the angles of the parallelogram.



Q5. Adjacent angles of a parallelogram are in the ratio $2 : 7$. Find the values of all angles.

Q6. Measure of one angle of a parallelogram is 112° . Find the other three angles.

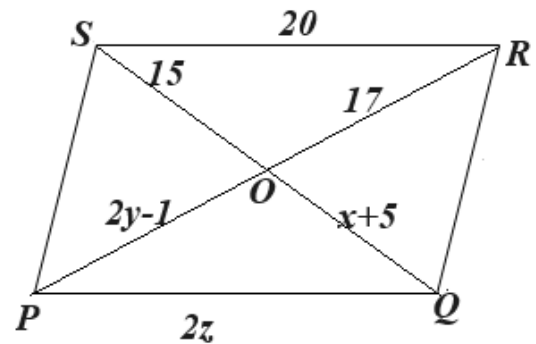
Q7. Find the unknown angle y .



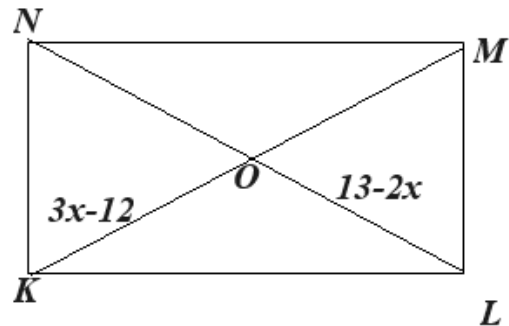
SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)

Q8. If the angles of a quadrilateral are x° , $(x - 10)^\circ$, $(x + 30)^\circ$ and $2x^\circ$. Find the measures of all the angles.

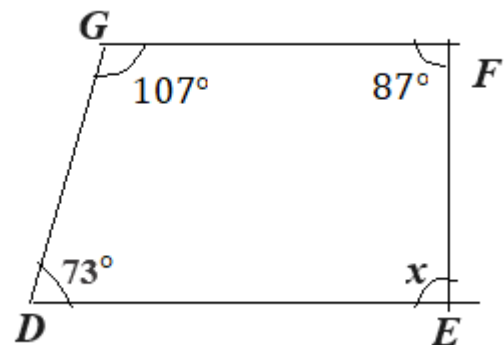
Q9. In parallelogram PQRS, find the value of x, y and z.



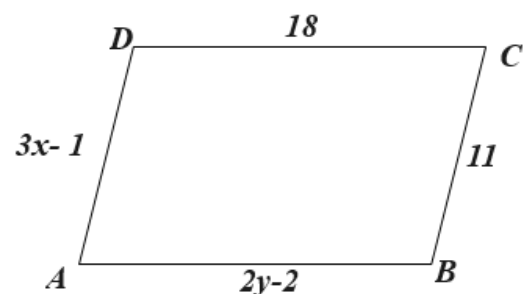
Q10. KLMN is a rectangle. Find the value of x and also find the length of the diagonal.



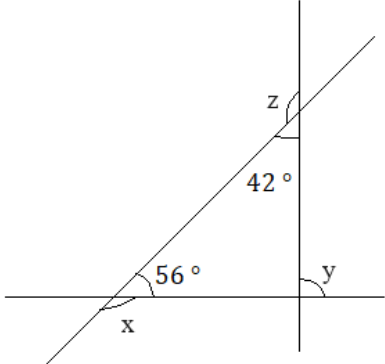
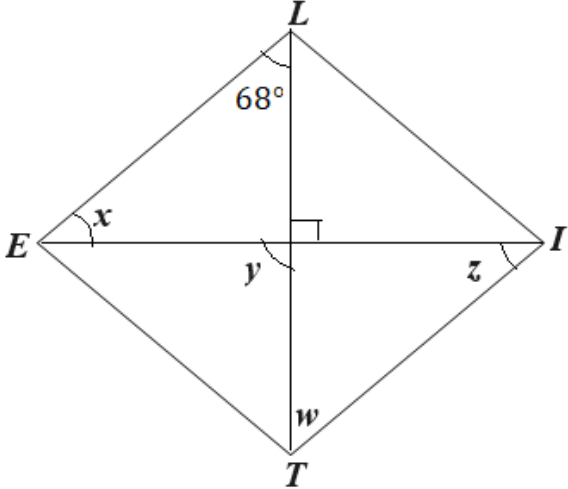
Q11. Find the value of $\angle DEF$. Also prove that DEFG is a trapezium.



Q12. In parallelogram ABCD, find the value of x, y and z.



LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)

Q.13	The angles of a quadrilateral are in the ratio 1 : 2 : 3 : 4. Find the measures of all the angles. (CBQ)
Q14.	<p>In given triangle, find the value of x, y and z, hence verify that $x + y + z = 360^\circ$ (CBQ)</p> 
Q15.	<p>Observe the given parallelogram and find the value of x, y, w and z.(CBQ)</p> 

ANSWERS					
Q1.	5 sides	Q2.	27	Q3.	$\angle ADC = 118^\circ$ and $\angle BCD = 94^\circ$
Q4.	$\angle A = 50^\circ, \angle B = 130^\circ,$ $\angle C = 50^\circ, \angle D = 130^\circ.$	Q5.	$50^\circ, 130^\circ, 50^\circ$ and 130°	Q6.	$112^\circ, 68^\circ, 112^\circ,$ and $68^\circ.$
Q7.	70°	Q8.	$68^\circ, 58^\circ, 98^\circ$ and $136^\circ,$	Q9.	$x=10, y=9$ and $z=10$
Q10.	$x=5,$ length of diagonal = 6	Q11.	93°	Q12.	$x=4$ and $y=10$
Q13.	$36^\circ, 72^\circ, 108^\circ$ and 144°	Q14.	$x = 124^\circ,$ $y = 98^\circ$ and $z = 138^\circ$	Q15.	$x = 22^\circ, y = 90^\circ, W=68^\circ$ and $z = 22^\circ$