



INDIAN SCHOOL NIZWA - WORKSHEET

Chapter 3 Understanding Quadrilaterals

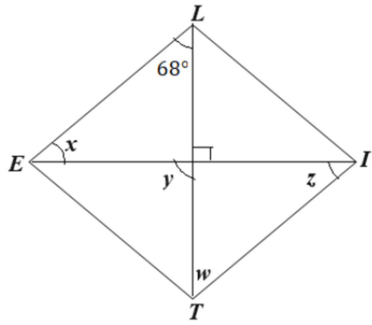
Name:

Class :VIII Sec:

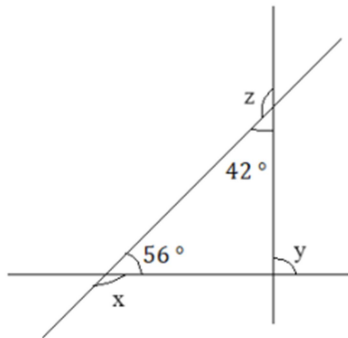
Multiple choice questions

1. The measure of each exterior angle of a regular polygon of 9 sides is _____
A. 30° B. 40° C. 60° D. 45°
2. The number of sides of a regular polygon whose exterior angle has a measure of 45° is
A. 4 B. 6 C. 8 D. 10
3. The three equal angles of a quadrilateral measure 70° each, the measure of the fourth angle is _____
A. 90° B. 140° C. 150° D. 70°
4. Two adjacent angles of a quadrilateral measure 130° and 40° . The sum of the remaining two angles is
A. 190° B. 180° C. 360° D. 90°
5. The measures of each of the four angles of a quadrilateral are equal. Find the measure of each angle.
A. 45° B. 30° C. 60° D. 90°
6. The sum of the measures of the exterior angles of any polygon is
A. 90° B. 180° C. 360° D. 720°
7. What is the name of a regular polygon of 6 sides?
A. Square B. Equilateral triangle C. Regular hexagon D. Regular octagon
8. What is the name of a regular polygon of 3 sides?
A. Square B. Equilateral triangle C. Regular hexagon D. Regular octagon

9.	The angle sum of a convex polygon with n number of sides is A. $(n - 2)180^\circ$ B. $(n + 2)180^\circ$ C. $(2n - 4)180^\circ$ D. $(2n + 4)180^\circ$
10.	The angle sum of a convex polygon with 7 number of sides is A. 900° B. 1080° C. 1440° D. 720°
11.	How many sides does a regular polygon have if each of its interior angles is 144° ?
12.	Adjacent angles of a parallelogram are in the ratio 4: 5. Find the measure of all the angles of the parallelogram.
13.	One angle of a quadrilateral is 108° and the remaining three angles are equal. Find the measure of the three equal angles.
14.	The interior angle of a regular polygon is 156° . Find the number of sides of the polygon.
15.	The four angles of a quadrilateral are in the ratio 3: 5: 7: 9. Find the angles.
16.	Determine the number of sides of a polygon whose exterior and interior angles are in the ratio 1: 5.
17.	Measure of one angle of a parallelogram is 82° . Find the other three angles.
18.	Write the definition and properties of each of the following: a. Kite b. Trapezium c. Parallelogram d. Rhombus e. Rectangle f. Square
19.	The sides of a pentagon are produced in order and the exterior angles so obtained are of measure x° , $(2x)^\circ$, $(3x+10)^\circ$, $(4x+5)^\circ$ and $(5x)^\circ$. Find the value of x and also find the measure of each exterior angle of a pentagon.
20.	Observe the given parallelogram and find the value of x , y , w and z .



21. In given triangle, find the value of x , y and z , hence verify that $x + y + z = 360^\circ$

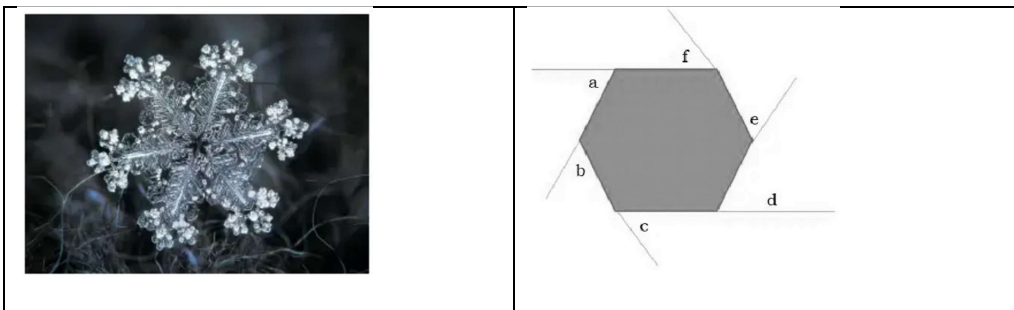


22. In parallelogram PQRS, $\angle Q = (4x - 5)^\circ$ and $\angle S = (3x + 10)^\circ$, find $\angle Q$ and $\angle S$.

23. **Case study based question:**

HEXAGONAL SNOWFLAKES

A snowflake is formed when water molecules join together to make a rigid shape. The water molecules combine more molecules, they extend and form a rigid crystalline structure i.e., hexagon shape. Sometimes we can see snowflakes with 12 sides, when two snowflakes grow together.



Consider a regular hexagon and answer the following questions:

(i) What is the sum of measure of its exterior angles a , b , c , d , e , f ?

	(ii) Is $a = b = c = d = e = f$? Why?
	(iii) What is the measure of each interior angle?