



Chapter 3 Understanding Quadrilaterals

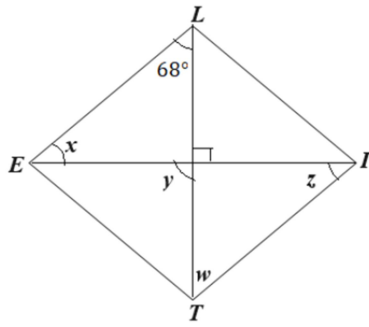
Name:

Class :VIII Sec:

Multiple choice questions

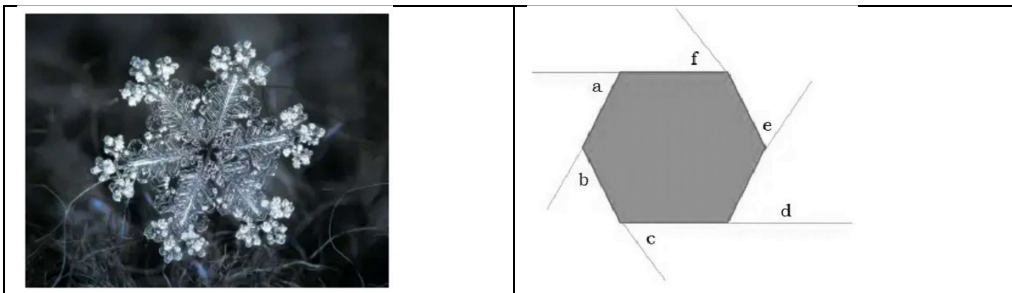
- Two adjacent angles of a quadrilateral measure 130° and 40° . The sum of the remaining two angles is
A. 190° B. 180° C. 360° D. 90°
- The sum of the measures of the exterior angles of any polygon is
A. 90° B. 180° C. 360° D. 720°
- What is the name of a regular polygon of 3 sides?
A. Square B. Equilateral triangle C. Regular hexagon D. Regular octagon
- The angle sum of a convex polygon with 7 number of sides is
A. 900° B. 1080° C. 1440° D. 720°
- 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°
- Assertion (A)** – Equilateral triangle is a regular polygon with 3 sides.
Reason (R) – A polygon that is equiangular (all angles are equal in measure) and equilateral (all sides have the same length) is called a regular polygon.
a) Both A and R are true and R is the correct explanation of A
b) Both A and R are true but R is not the correct explanation of A
c) A is true but R is false
d) A is false but R is true
- Assertion (A)** – The sum of the measures of the exterior angles of any polygon is 360° .
Reason (R) – The formula for calculating the measure of an exterior angle in a regular polygon is $(n-2)360^\circ$.
a) Both A and R are true and R is the correct explanation of A
b) Both A and R are true but R is not the correct explanation of A
c) A is true but R is false
d) A is false but R is true
- ABCD is a rhombus with $m\angle DAB = 56^\circ$. Determine $m\angle DBC$.
- If one angle of a parallelogram is 24° less than twice the smallest angle, find the largest angle of the parallelogram.
- Adjacent angles of a parallelogram are in the ratio 4: 5. Find the values of all Angles.
- One angle of a quadrilateral is 108° and the remaining three angles are equal. Find the measure of the three equal angles.
- How many sides does a regular polygon have if each of its interior angles is 144° ?
- The four angles of a quadrilateral are in the ratio 3: 5: 7: 9. Find the angles.
- Determine the number of sides of a polygon whose exterior and interior angles are in the ratio 1: 5.
- Measure of one angle of a parallelogram is 82° . Find the other three angles.
- In parallelogram PQRS, $\angle Q = (4x - 5)^\circ$ and $\angle S = (3x + 10)^\circ$, find $\angle Q$ and $\angle S$.
- 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.

18. Observe the given parallelogram and find the value of x , y , w and z



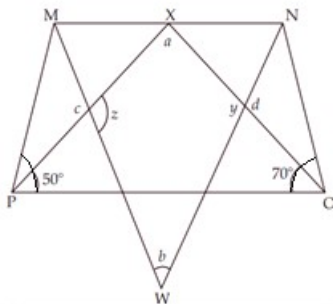
19. **Case study based question:**

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. Answer the following questions based on the information:



- What is the sum of measure of its exterior angles a , b , c , d , e , f ?
- Is $a = b = c = d = e = f$? Why?
- What is the sum of measure of interior angles?
- What is the measure of each interior angle?

20. **Case study based question:**



There is a trapezium $MNOP$, angle bisector of $\angle M$ and $\angle N$ meet at point W , and angle bisector of $\angle O$ and $\angle P$ meet at point X on side MN of trapezium $MNOP$.

- What is the value of a ?
- What is the value of d ?
- What is the value of c ?
- What type of triangle is POX ?
- What is the value of b ?