

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q12 **Answer:**

Opposite angles of a parallelogram are equal.

$$\therefore \angle \mathbf{C} = 70^{\circ} = \angle \mathbf{A}.$$

$$\angle \mathbf{B} = \angle \mathbf{D}$$

Also, the sum of the adjacent angles of a parallelogram is 180°.

$$\therefore \angle \mathbf{A} + \angle \mathbf{B} = 180^{\circ}$$

$$70^{\circ} + \angle B = 180^{\circ}$$

$$\angle B = 110^{\circ}$$

$$\therefore \angle B = 110^{\circ}, \angle C = 70^{\circ} \text{ and } \angle D = 110^{\circ}$$

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q13

Answer:

Let the angles be A, B, C and D.

It is given that the sum of two opposite angles is 130°.

$$\therefore \angle A + \angle C = 130^{\circ}$$

 $\angle A + \angle A = 130^{\circ}$ (opposite angles of a parallelogram are same)

$$\angle A = 65^{\circ}$$

and
$$\angle C = 65^{\circ}$$

The sum of adjacent angles of a parallelogram is 180°.

$$\angle A + \angle B = 180^{\circ}$$

$$65^{\circ} + \angle B = 180^{\circ}$$

$$\angle B = 180^{\circ} - 65^{\circ}$$

$$\angle B = 115^{\circ}$$

$$\angle D = 115^{\circ}$$

$$\therefore$$
 $\angle A = 65^{\circ}$, $v \angle B = 115^{\circ}$, $\angle C = 65^{\circ}$ and $\angle D = 115^{\circ}$.

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q14 **Answer:**

Let the angle be x.

All the angles are equal.

$$\therefore x + x + x + x = 360^{\circ}$$

$$4x = 360^{\circ}$$

$$x = 90^{\circ}$$

So, each angle is 90° and quadrilateral is a parallelogram. It is a rectangle.

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