Understanding shapes-III special types of quadrilaterals Ex 17.1 Q9

Answer :

Given that one angle of the parallelogram is 70°.
Since opposite angles have same value, if one is 70°, then the one directly opposite will also be 70°.
So, let one angle be x°.
$x^\circ + 70^\circ = 180^\circ$ (the sum of adjacent angles of a parallelogram is 180°)
$x^\circ = 180^\circ - 70^\circ$
$x^\circ = 110^\circ$
Thus, the remaining angles are 110°, 110° and 70°.

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q10

Answer :

Let the angle be A and B.
*The a*ngles are in the ratio of $1:2$.
*M*easures of $\angle A$ and $\angle B$ are x° and $2x^\circ$.
Then, $\angle C = \angle A$ and $\angle D = \angle B$ $\left(o\text{pposite angles of } a \text{ parallelogram are congruent}\right)$
As we know that the sum of adjacent angle*s* of a parallelogram is 180°.
$\therefore \angle A + \angle B = 180^\circ$
$\Rightarrow x^\circ + 2x^\circ = 180^\circ$
$\Rightarrow 3x^\circ = 180^\circ$
$\Rightarrow x^\circ = \frac{180^\circ}{3} = 60^\circ$
Thus, measure of $\angle A = 60^\circ$, $\angle B = 120^\circ$, $\angle C = 60^\circ$ *and* $\angle D = 120^\circ$.

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q11

Answer :

In *a* parallelogram, opposite angles have the same value.
$\therefore \angle D = \angle B$
$= 135^\circ$
Also, $\angle A + \angle B + \angle C + \angle D = 360^\circ$
$\angle A + \angle D = 180^\circ$ (opposite angles have the same value)
$\angle A = 180^\circ - 135^\circ = 45^\circ$
$\angle A = 45^\circ$

********** END **********