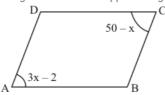


## Quadrilaterals Ex 14.2 Q1

## Answer:

It is given that the two opposite angles of a parallelogram are  $(3x-2)^0$  and  $(50-x)^0$ .



We know that the opposite angles of a parallelogram are equal.

Therefore,

$$3x - 2 = 50 - x$$

$$3x + x = 50 + 2$$

$$4x = 52$$

$$x = \frac{52}{4}$$

$$x = 13$$
 ..... (i)

Thus, the given angles become

$$\angle A = (3x-2)^0$$

$$\angle A = \left[3(13) - 2\right]^0$$

$$\angle A = [39-2]^0$$

$$\angle A = \boxed{37^{\circ}}$$

Also,  $AB \parallel DC$ 

Therefore the sum of consecutive interior angles must be supplementary.

That is;

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

$$37^{\circ} + \angle D = 180^{\circ}$$

$$\angle D = 180^{\circ} - 37^{\circ}$$

$$\angle D = \boxed{143^{\circ}}$$

Since opposite angles of a parallelogram are equal.

Therefore,

$$\angle C = \boxed{37^0}$$

And 
$$\angle D = \boxed{143^{\circ}}$$

Hence the four angles of the parallelogram are  $\boxed{37^0}$  ,  $\boxed{143^0}$  ,  $\boxed{37^0}$  and  $\boxed{143^0}$ 

\*\*\*\*\*\*\*\*\* END \*\*\*\*\*\*\*