



Areas of Parallelograms and Triangles Ex 15.2 Q1

Answer :

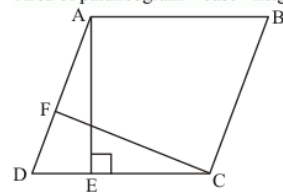
Given: Here in the question it is given

- (1) ABCD is a parallelogram,
- (2) $AE \perp DC$ and
- (3) $CF \perp AD$, $AB = 16$ cm
- (4) $AE = 8$ cm
- (5) $CF = 10$ cm

To Find : $AD = ?$

Calculation: We know that formula for calculating the

Area of parallelogram = base \times height



Therefore,

Area of parallelogram ABCD = $DC \times AE$ (Taking base as DC and Height as AE)

Area of parallelogram ABCD = $AB \times AE$ ($AB = DC$ as opposite side of the parallelogram are equal)

Therefore,

$$\text{Area of parallelogram ABCD} = 16 \times 8 \dots\dots(1)$$

Taking the base of Parallelogram ABCD as AD we get

Area of parallelogram ABCD = $AD \times CF$ (taking base as AD and height as CF)

$$\text{Area of parallelogram ABCD} = AD \times 10 \dots\dots(2)$$

Since equation 1 and 2 both represent the Area of the same Parallelogram ABCD , both should be equal.

Hence fro equation (1) and (2),

This means that,

$$16 \times 8 = AD \times 10$$

$$AD = \frac{16 \times 8}{10}$$

$$AD = \boxed{12.8 \text{ cm}}$$

Hence we get the result as $AD = \boxed{12.8 \text{ cm}}$

***** END *****