Areas of Parallelograms and Triangles Ex 15.2 Q2

Answer :

Given: Here in the question it is given that

(1) ABCD is a parallelogram,

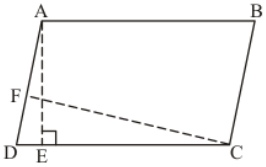
(2) $AE \perp DC$ and

(3) $CF \perp AD$

(4) AD = 6 cm

(5) AE = 8cm

(6) CF = 10cm



To Find : AB =?

Calculation: We know that formula for calculating the

Area of paralleogram = base × height

Therefore,

Area of paralleogram ABCD = DC × AE (Taking base as DC and Height as AE)

Area of paralleogram ABCD = AB × AE (AB = DC as opposite side of the parallelogram are equal)

Therefore, Area of paralleogram ABCd = 16 × 8

Area of Parallelogram ABCD = AB× 8 .....(1)

Taking the base of Parallelogram ABCD as AD we get

Area of paralleogram ABCD = AD × CF (taking base as AD and height as CF)

Area of paralleogram ABCD = 6 × 10 .....(2)

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

Hence equation 1 is equal to equation 2

Which means that,

$$AB \times 8 = 6 \times 10$$

$$AB = \frac{6 \times 10}{8}$$

$$AD = \boxed{7.5 \text{ cm}}$$

Hence we got the measure of AB equal to $\boxed{7.5 \text{ cm}}$

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