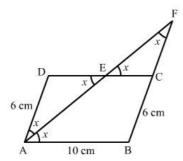


Understanding shapes-III special types of quadrilaterals Ex 17.1 Q29 ${\bf Answer}$:



AE is the bisector of $\angle A$.

$$\therefore \angle DAE = \angle BAE = x$$

$$\angle BAE = \angle AED = x$$
 (alternate angles)

Since opposite angles in \triangle ADE are equal, \triangle ADE is an isosceles triangle.

$$AB = CD = 10 \text{ cm}$$

$$CD = DE + EC$$

$$\Rightarrow$$
 EC = CD - DE

$$\Rightarrow$$
 EC = $10 - 6 = 4$ cm

$$\angle \text{DEA} = \angle \text{CEF} = x$$
 (vertically opposite angle)

$$\angle EAD = \angle EFC = x$$
 (alternate angles)

Since opposite angles in \triangle EFC are equal, \triangle EFC is an isosceles triangle.

$$\therefore$$
 CF = 4cm

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