

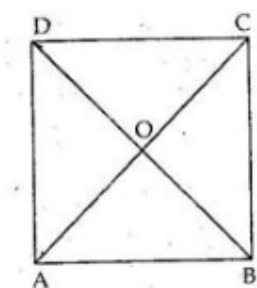


### Exercise 10A

Question 3:

ABCD is a rhombus in which diagonal  $AC=24$  cm  
and  $BD=16$  cm.

These diagonals intersect at O.



Since diagonals of a rhombus are perpendicular to each other. So, in  $\triangle ACD$ ,  
OD is its altitude and AC is its base.

$$\begin{aligned}\text{So, area of } \triangle ACD &= \frac{1}{2} \times AC \times OD \\ &= \frac{1}{2} \times 24 \times \frac{BD}{2} \\ &= \left( \frac{1}{2} \times 24 \times 8 \right) \text{ cm}^2 \quad [\because BD = 16 \text{ cm}] \\ &= 96 \text{ cm}^2\end{aligned}$$

$$\begin{aligned}\Rightarrow \text{Area of } \triangle ABC &= \frac{1}{2} \times AC \times OB \\ &= \left( \frac{1}{2} \times 24 \times 8 \right) \text{ cm}^2 = 96 \text{ cm}^2\end{aligned}$$

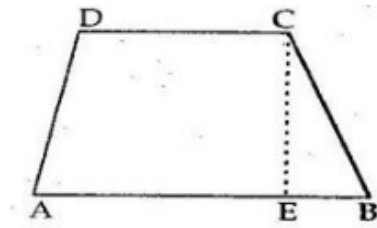
$$\begin{aligned}\text{Now, area of rhombus} &= \text{Area of } \triangle ACD + \text{Area of } \triangle ABC \\ &= (96 + 96) \text{ cm}^2 \\ &= 192 \text{ cm}^2\end{aligned}$$

Question 4:

ABCD is a trapezium in which,  $AB \parallel CD$

$AB = 9 \text{ cm}$  and  $CD = 6 \text{ cm}$

CE is a perpendicular drawn to AB through C and  $CE = 8 \text{ cm}$



Area of trapezium =  $\frac{1}{2}(\text{sum of parallel sides}) \times \text{distance between them}$

$$\begin{aligned} &= \left[ \frac{1}{2}(9 + 6) \times 8 \right] \text{ cm}^2 \\ &= \left( \frac{1}{2} \times 15 \times 8 \right) \text{ cm}^2 = 60 \text{ cm}^2 \end{aligned}$$

$\therefore$  Area of trapezium =  $60 \text{ cm}^2$

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