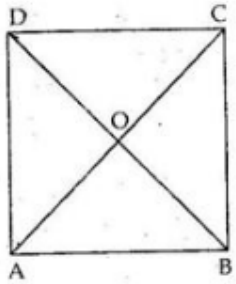
Exercise 10A

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 Δ ACD,
OD is its altitude and AC is its base.

$$\text{So, area of } \Delta ACD = \frac{1}{2} \times AC \times OD$$

$$= \frac{1}{2} \times 24 \times \frac{BD}{2}$$

$$= \left(\frac{1}{2} \times 24 \times 8\right) \text{cm}^2 \quad [\because BD = 16 \text{ cm}]$$

$$= 96 \text{ cm}^2$$

$$\Rightarrow \quad \text{Area of } \Delta ABC = \frac{1}{2} \times AC \times OB$$

$$= \left(\frac{1}{2} \times 24 \times 8\right) \text{cm}^2 = 96 \text{ cm}^2$$

$$\text{Now, area of rhombus} = \text{Area of } \Delta ACD + \text{Area of } \Delta ABC$$

$$= (96 + 96) \text{ cm}^2$$

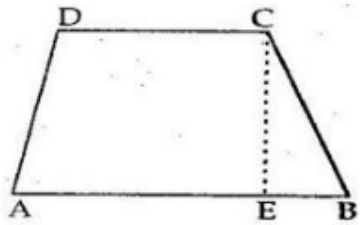
$$= 192 \text{ cm}^2$$

Question 4:

ABCD is a trapezium in which, AB ||CD

AB = 9 cm and CD = 6 cm

CE is a perpendicular drawn to AB through C and CE = 8 cm




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

$$= \left[\frac{1}{2}(9+6)\times 8\right] \text{cm}^2$$

$$= \left(\frac{1}{2}\times 15\times 8\right) \text{cm}^2 = 60 \text{ cm}^2$$

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

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