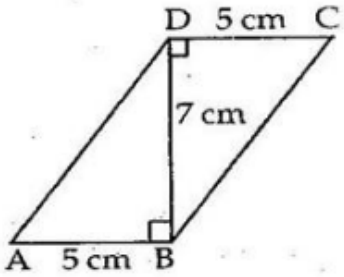
Exercise 10A

Question 1:



$$\text{Area of } \Delta ABD = \frac{1}{2} \times \text{base} \times \text{height}$$

$$= \left(\frac{1}{2} \times 5 \times 7\right) \text{cm}^2 = \frac{35}{2} \text{ cm}^2$$

$$\text{Area of } \Delta CBD = \left(\frac{1}{2} \times 5 \times 7\right) \text{cm}^2 = \frac{35}{2} \text{ cm}^2$$

Since the diagonal BD divides ABCD into two triangles of equal area.

$\therefore$ ABCD is a parallelogram.

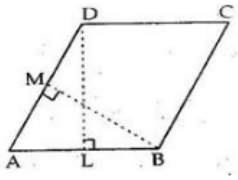
$\therefore$ Area of parallelogram = Area of ΔABD + Area of ΔCBD

$$= \left(\frac{35}{2} + \frac{35}{2}\right) \text{cm}^2 = \frac{70}{2} \text{cm}^2$$

$$= 35 \text{ cm}^2$$

$\therefore$ Area of parallelogram = 35 cm^2

Question 2:



Since ABCD is a parallelogram and DL is perpendicular to AB.

So, its area $= AB \times DL$

$= (10 \times 6) \text{ cm}^2$

$= 60 \text{ cm}^2$

Also, in parallelogram ABCD,

$BM \perp AD$

$\therefore$ Area of parallelogram $ABCD = AD \times BM$

$60 = AD \times 8 \text{ cm}$

$\therefore \quad AD \times 8 = 60$

$\Rightarrow \quad AD = \frac{60}{8} = 7.5 \text{ cm}$

$\therefore \quad AD = 7.5 \text{ cm}$

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