Mensuration I Ex 20.3 Q7

**Answer :**

We have,

*ABCD* is a parallelogram with base *AB* = 20 cm and corresponding altitude *DL*.

It is given that the area of the parallelogram *ABCD* = 100 $cm^2$

Now,

Area of a parallelogram = Base x Height

$100\ cm^2 = AB \times DL$

$100\ cm^2 = 20\ cm \times DL$

$\therefore DL = \frac{100\ cm^2}{20\ cm} = 5\ cm$

Again by Pythagoras theorem, we have,

$(AD)^2 = (AL)^2 + (DL)^2$

$\Rightarrow (13)^2 = (AL)^2 + (5)^2$

$\Rightarrow (AL)^2 = (13)^2 - (5)^2$

$= 169 - 25 = 144$

$\Rightarrow (AL)^2 = (12)^2$

$\Rightarrow AL = 12\ cm$

Hence. length of *AL* is 12 cm.

Mensuration I Ex 20.3 Q8

**Answer :**

We have,

*ABCD* is a parallelogram with base *AB* = 35 cm and corresponding altitude *DL*. The adjacent side of the parallelogram *AD* = 20 cm.

It is given that the area of the parallelogram *ABCD* = 560 $cm^2$

Now,

Area of the parallelogram = Base x Height

$560\ cm^2 = AB \times DL$

$560\ cm^2 = 35\ cm \times DL$

$\therefore DL = \frac{560\ cm^2}{35\ cm} = 16\ cm$

Again by Pythagoras theorem, we have,

$(AD)^2 = (AL)^2 + (DL)^2$

$\Rightarrow (20)^2 = (AL)^2 + (16)^2$

$\Rightarrow (AL)^2 = (20)^2 - (16)^2$

$= 400 - 256 = 144$

$\Rightarrow (AL)^2 = (12)^2$

$\Rightarrow AL = 12\ cm$

From the figure,

$AB = AL + LB$

$35\ cm = 12\ cm + LB$

$\therefore LB = 35\ cm - 12\ cm$

$= 23\ cm$

Hence, length of *LB* is 23 cm.

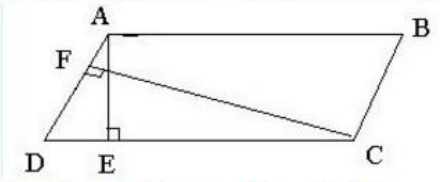
Mensuration I Ex 20.3 Q9

**Answer :**

We have,

*ABCD* is a parallelogram with side *AB* = 10 m and corresponding altitude *AE* = 4 m.

The adjacent side *AD* = 8 m and the corresponding altitude is *CF*.




Area of a parallelogram = Base × Height

We have two altitudes and two corresponding bases. So,

*AD* x *CF* = *AB* x *AE*

⇒ 8 m x *CF* = 10 m x 4 m

$\Rightarrow CF = \frac{10 \times 4}{8} = 5 \text{ m}$

Hence, the distance between the shorter sides is 5 m.

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