Mensuration-I area of a trapezium and a polygon Ex 20.2 Q4

Answer :

Given:

Sum of the parallel sides of a trapezium $= 60$ cm

Area of the trapezium $= 600\ \text{cm}^2$

Area of trapezium $= \frac{1}{2} \times (\text{Sum of the parallel sides}) \times (\text{Height})$

On putting the values :

$600 = \frac{1}{2} \times 60 \times (\text{Height})$

$600 = 30 \times (\text{Height})$

$\text{Height} = \frac{600}{30} = 20$ cm

Mensuration-I area of a trapezium and a polygon Ex 20.2 Q5

Answer :

Given:

Area of the trapezium $= 65\ \text{cm}^2$

The lengths of the opposite parallel sides are 13 cm and 26 cm.

Area of trapezium $= \frac{1}{2} \times (\text{Sum of parallel bases}) \times (\text{Altitude})$

On putting the values :

$65 = \frac{1}{2} \times \left(13 + 26\right) \times \left(\text{Altitude}\right)$

$65 \times 2 = 39 \times \text{Altitude}$

$\text{Altitude} = \frac{130}{39} = \frac{10}{3}$ cm

Mensuration-I area of a trapezium and a polygon Ex 20.2 Q6

Answer :

Given:

Area of the trapezium $= 4.2\ \text{m}^2$

$\text{Height} = 280\ \text{cm} = \frac{280}{100}\ \text{m} = 2.8\ \text{m}$

$\text{Area of trapezium} = \frac{1}{2} \times (\text{Sum of the parallel bases}) \times (\text{Height})$

$4.2 = \frac{1}{2} \times (\text{Sum of the parallel bases}) \times 2.8$

$4.2 \times 2 = (\text{Sum of the parallel bases}) \times 2.8$

$\text{Sum of the parallel bases} = \frac{8.4}{2.8} = 3\ \text{m}$

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