Mensuration-I area of a trapezium and a polygon Ex 20.2 Q1

Answer :

(i)

Given:

Bases:

$12 \text{ dm} = \frac{12}{10} \text{ m} = 1.2 \text{ m}$

And, $20 \text{ dm} = \frac{20}{10} \text{ m} = 2 \text{ m}$

$\text{Altitude} = 10 \text{ dm} = \frac{10}{10} \text{ m} = 1 \text{ m}$

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

$= \frac{1}{2} \times \left(1.2 + 2\right) \text{ m} \times \left(1\right) \text{ m}$

$= 1.6 \times \text{m} \times \text{m}$

$= 1.6 \text{ m}^2$

(ii)

Given:

Bases:

$28 \text{ cm} = \frac{28}{100} \text{ m} = 0.28 \text{ m}$

And, $3 \text{ dm} = \frac{3}{10} \text{ m} = 0.3 \text{ m}$

$\text{Altitude} = 25 \text{ cm} = \frac{25}{100} \text{ m} = 0.25 \text{ m}$

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

$= \frac{1}{2} \times \left(0.28 + 0.3\right) \text{ m} \times \left(0.25\right) \text{ m}$

$= 0.0725 \text{ m}^2$

Mensuration-I area of a trapezium and a polygon Ex 20.2 Q2

Answer :

Given:

Lengths of the parallel sides are 15 cm and 9 cm.

Height=8 cm

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

$= \frac{1}{2} \times \left(15 + 9\right) \times \left(8\right)$

$= 96 \text{ cm}^2$

Mensuration-I area of a trapezium and a polygon Ex 20.2 Q3

Answer :

Given:
Lengths of the parallel sides are 16 dm and 22 dm.
And, height between the parallel sides is 12 dm.

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

$$= \frac{1}{2} \times \left(16 + 22\right) \times \left(12\right)$$

$$= 228 \text{ dm}^2$$

$$= 228 \times \text{dm} \times \text{dm}$$

$$= 228 \times \frac{1}{10} \text{ m} \times \frac{1}{10} \text{ m}$$

$$= 2.28 \text{ m}^2$$

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