Mensuration-I area of a trapezium and a polygon Ex 20.2 Q18

Answer :

Given:

Area of the trapezium $= 28\ \text{cm}^2$

Length of one of its parallel sides $= 6$ cm

Altitude $= 4$ cm

Let the other side be x cm.

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

$\Rightarrow 28 = \frac{1}{2} \times (6+x) \times (4)$

$\Rightarrow 28 = 2 \times (6 + x)$

$\Rightarrow 6+x = \frac{28}{2} = 14$

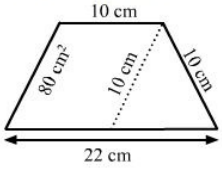
$\Rightarrow x = 14-6 = 8$ cm

Hence, the length of the other parallel side of the trapezium is 8 cm.

Mensuration-I area of a trapezium and a polygon Ex 20.2 Q19

Answer :

The given figure is:



From above figure, it is clear that the length of the parallel sides of the trapezium are 22 cm a

Also, it is given that the area of the parallelogram is 80 cm^2 and its base is 10 cm.

We know:

Area of parallelogram=Base$\times$Height

$\therefore 80 = 10 \times$Height

Height $= \frac{80}{10} = 8$ cm

So, now we have the distance between the parallel sides of trapezium, which is equal to 8 cm.

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

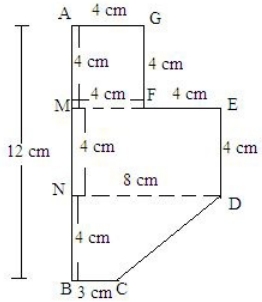
$= \frac{1}{2} \times (22+10) \times (8)$

$= 128\ \text{cm}^2$

Mensuration-I area of a trapezium and a polygon Ex 20.2 Q20

Answer :

The given figure can be divided into a square, a parallelogram and a trapezium as shown in f



From the above figure:

Area of the figure=(Area of square AGFM with sides 4 cm)+(Area of rectangle MEDN with

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