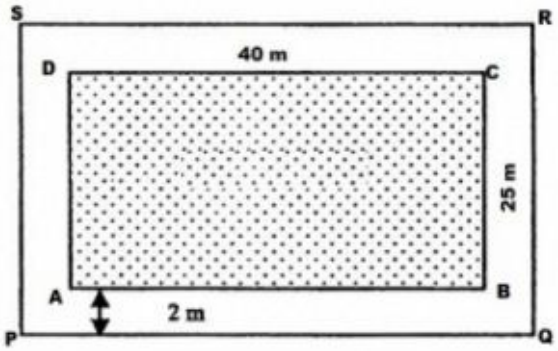
Mensuration I Ex 20.2 Q1

Answer :

We have,

Length AB = 40 m and breadth BC = 25 m



∴ Area of lawn $ABCD$ = 40 m x 25 m = 1000 m^2

Length PQ = (40 + 2 + 2) m = 44 m

Breadth QR = (25 + 2 + 2) m = 29 m

∴ Area of $PQRS$ = 44 m x 29 m = 1276 m^2

Now,

Area of the path = Area of $PQRS$ − Area of the lawn $ABCD$

= 1276 m^2 − 1000 m^2

= 276 m^2

Rate of levelling the path = Rs. 8.25 per m^2

∴ Cost of levelling the path = Rs. (8.25 x 276)

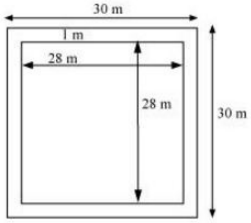
= Rs. 2277

Mensuration I Ex 20.2 Q2

Answer :

We have,

The side of the square garden (a) = 30 m



∴ Area of the square garden including the path = a^2 = $(30)^2$ = 900 m^2

From the figure, it can be observed that the side of the square garden, when the path is not included, is 28 m.

Area of the square garden not including the path = $(28)^2$ = 784 m^2

Total cost of covering the park with grass = Area of the park covering with green grass x Rate per square metre

1176 = 784 x Rate per square metre

∴ Rate per square metre at which the park is covered with grass = Rs. (1176 ÷ 784)

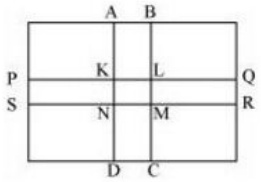
= Rs. 1.50

Mensuration I Ex 20.2 Q3

Answer :

We have,

Length of the rectangular field = 90 m and breadth of the rectangular field = 60 m



∴ Area of the rectangular field = 90 m x 60 m = 5400 m^2

Area of the road *PQRS* = 90 m x 3 m = 270 m^2

Area of the road *ABCD* = 60 m x 3 m = 180 m^2

Clearly, area of *KLMN* is common to the two roads.

Thus, area of KLMN = 3 m x 3 m = 9 m^2

Hence,

Area of the roads = Area (*PQRS*) + Area (*ABCD*) − Area (*KLMN*)

= (270 + 180)m^2 − 9 m^2 = 441 m^2

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