Surface Area and volume of A Right Circular cylinder Ex 19.1 Q12

Answer :

Given data is as follows:

r = 3cm

h = 10.5cm

We have to find the area of cardboard required to make 35 cylinders of above given dimensions.

The pen stand is not covered at the top. Therefore,

Total surface area = $2\pi rh + \pi r^2$

$= 2\times\frac{22}{7}\times3\times10.5+\frac{22}{7}\times3\times3$

$=\frac{22}{7}\times3(2\times10.5+3)$

$=\frac{22}{7}\times3\times24$

For making 35 such cylinders,

Area required = 35 × Total surface area of each cylinder

$=35\times\frac{22}{7}\times3\times24$

Area required = 7920 cm^2

Surface Area and volume of A Right Circular cylinder Ex 19.1 Q13

Answer :

Given data is as follows:

Diameter = $1.5m$

$h = 84cm$

Cost of levelling = $50 paise/m^2$

100 revolutions required to cover the whole field

Given is the diameter of the roller which is 1.5m. Therefore, radius = $\frac{1.5}{2}$

Also height of the cylinder is in centimeters, that is, 84cm = $\frac{84}{100}m$

Curved surface area of the roller will give the area covered in 1 revolution.

Curved Surface Area = $2\pi rh$

$=2\times\frac{22}{7}\times\frac{1.5}{2}\times\frac{84}{100}$

$=\frac{396}{100}$

Now, we have to find the area of the ground.

Area covered in 100 revolutions = Area of the grounnd = $\frac{396}{100}\times100$

= 396 m^2

Cost of leveling for 1 m^2 = 0.50

Cost of leveling for 396 m^2 = $396\times.50$

Cost of leveling for 396 m^2 = Rs.198

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