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 $= 2\pi rh + \pi r^2$

$= 2 \times \dfrac{22}{7} \times 3 \times 10.5 + \dfrac{22}{7} \times 3 \times 3$

$= \dfrac{22}{7} \times 3(2 \times 10.5 + 3)$

$= \dfrac{22}{7} \times 3 \times 24$

For making 35 such cylinders,

Area required $= 35 \times$ Total surface area of each cylinder

$= 35 \times \dfrac{22}{7} \times 3 \times 24$

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 $= \dfrac{1.5}{2}$

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

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

Curved Surface Area $= 2\pi rh$

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

$= \dfrac{396}{100}$

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

Area covered in 100 revolutions = Area of the grounnd $= \dfrac{396}{100} \times 100$

$= 396 \ m^2$

Cost of leveling for 1 m^2 = 0.50

Cost of leveling for 396 m^2 = 396×.50

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

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