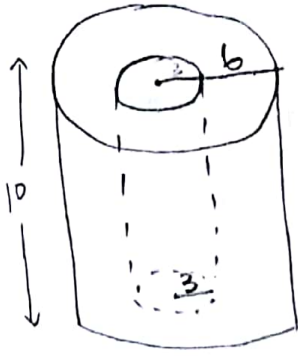


8b.

SA of outer cylinder

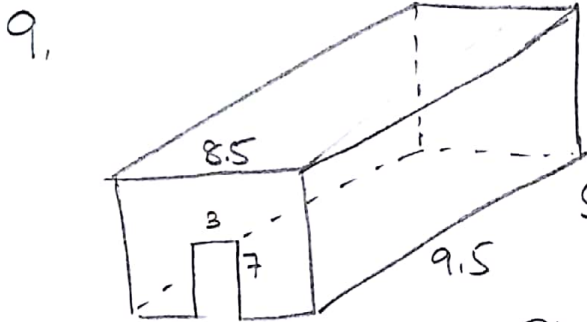
$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi rh \\
 &= 2\pi(6)^2 + 2\pi(6)(10) - 2A_{\text{inner}} \\
 &= 72\pi + 120\pi - 2\pi(3)^2 \\
 &= 192\pi - 18\pi \\
 &= 174\pi
 \end{aligned}$$

* INCLUDE THE RECTANGLE PORTION OF INNER CYLINDER.

$$\begin{aligned}
 SA_{\text{total}} &= 174\pi + A_{\text{rectangle}} \\
 &= 174\pi + 10(2\pi(3)) \\
 &= 174\pi + 60\pi
 \end{aligned}$$

$$SA_{\text{total}} = 234\pi$$

(not to scale...)

10. Find SA of walls + ceiling only DOOR

$$SA = 2A_{\text{wall 1}} + 2A_{\text{wall 2}} + A_{\text{ceiling}} - A_{\text{door}}$$

$$SA = 2(8.5 \times 10) + 2(9.5 \times 10) + 9.5 \times 8.5 - 7 \times 3$$

$$= 170 + 190 + 80.75 - 21$$

$$SA = 419.75 \text{ ft}^2$$

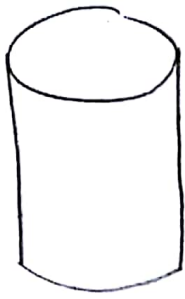
1 can covers 175 ft^2 . Need 2 coats so, need to cover

$$419.75 \times 2 = 839.5 \text{ ft}^2$$

$$\# \text{ of cans} = \frac{839.5}{175} = 4.797$$

So, need 5 cans.

10



$$C = 8\pi$$

label only covers rectangular part of can. so 1 can needs

$$A = \frac{2\pi r h}{C}$$

$$= 8\pi(10)$$

$$= 80\pi \text{ cm}^2 \text{ - needs to be covered.}$$

20 cans,

$$80\pi(20) = 1600\pi \text{ cm}^2$$

Need 5026.5 cm² paper.