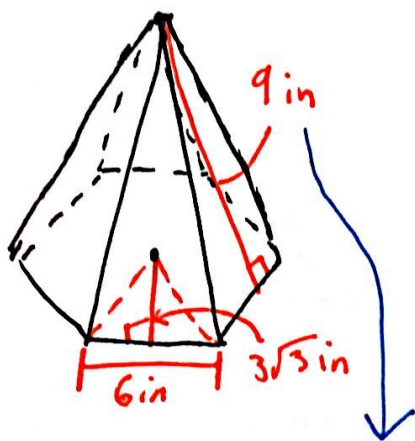


11-3 Notebook Questions.

1)



$$L.A. = \frac{1}{2} P l$$

$$S.A. = L.A. + B$$

P = Perimeter of Base.

l = Slant height

B = Area of the Base

The Slant height is given as 9 in, the Perimeter of the Base I will first find the area of the Base (B)

$$B = \frac{1}{2} a p \quad a = \text{apothem} \rightarrow \text{Given as } 3\sqrt{3} \text{ in}$$

$$P = 36 \text{ in}$$

$$B = \left(\frac{1}{2} (3\sqrt{3}) (36) \right)$$

$$= (18) (3\sqrt{3})$$

$$= 54\sqrt{3} \text{ in}$$

$$L.A. = \frac{1}{2} (36) (9)$$

$$= (18) (9)$$

$$= 162 \text{ in}$$

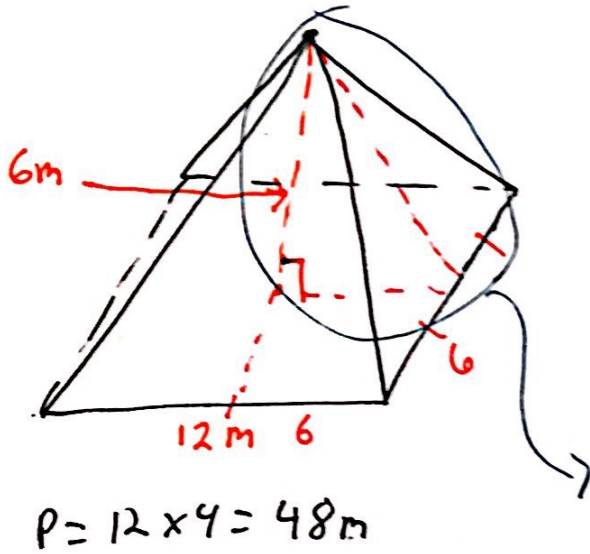
$$S.A. = L.A. + B$$

$$= 162 + 54\sqrt{3}$$

use calculator

$$\approx 256 \text{ in}^2$$

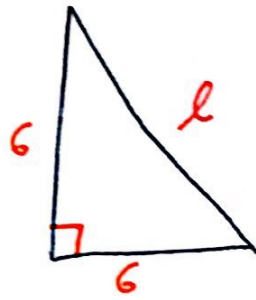
2)



First, Find B

$$B = (12)(12) \\ = 144\text{m}^2$$

Next, Find l .

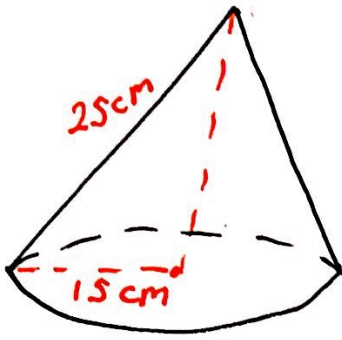


$$6^2 + 6^2 = l^2 \\ 36 + 36 = l^2 \\ \sqrt{(2)(36)} = \sqrt{l^2} \\ 6\sqrt{2} = l$$

$$\text{So } \underline{L.A.} = \frac{1}{2} l P \\ = \left[\frac{1}{2} (6\sqrt{2}) (48) \right] \\ = (3)(48)(\sqrt{2}) \\ = 144\sqrt{2} \\ \approx 204\text{m}^2$$

$$\text{Now, } \underline{S.A} = L.A + B \\ = 204 + 144 \\ = 348\text{m}^2$$

3)



$$l = 25 \text{ cm}$$

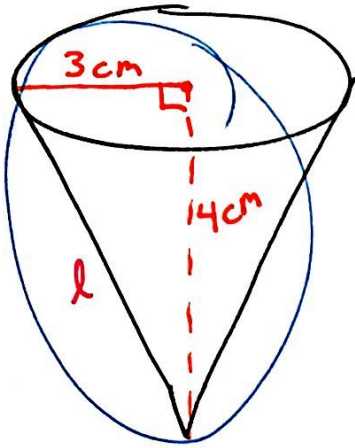
$$r = 15 \text{ cm}$$

$$\begin{aligned} B &= \pi r^2 \\ &= \pi (15)^2 \\ &= 225 \pi \end{aligned}$$

$$\begin{aligned} \underline{L.A.} &= \pi r l \\ &= (15)(25)(\pi) \\ &= \boxed{375 \pi} \end{aligned}$$

$$\begin{aligned} \underline{S.A.} &= L.A. + B \\ &= 375 \pi + 225 \pi \\ &= \boxed{600 \pi} \end{aligned}$$

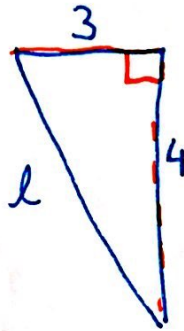
4)



$$r = 3$$

$$\begin{aligned} B &= \pi r^2 \\ &= \pi (3)^2 \\ &= 9\pi \end{aligned}$$

Now, we need to find l .



$$\begin{aligned} 3^2 + 4^2 &= l^2 \\ 9 + 16 &= l^2 \\ 25 &= l^2 \\ 5 &= l \end{aligned}$$

Square Root Both Sides ($\sqrt{\quad}$)

$$\begin{aligned} \underline{L.A.} &= \pi r l \\ &= (3)(5)\pi \\ &= \boxed{15\pi} \end{aligned}$$

$$\begin{aligned} \underline{S.A.} &= L.A. + B \\ &= 15\pi + 9\pi \\ &= \boxed{24\pi} \end{aligned}$$