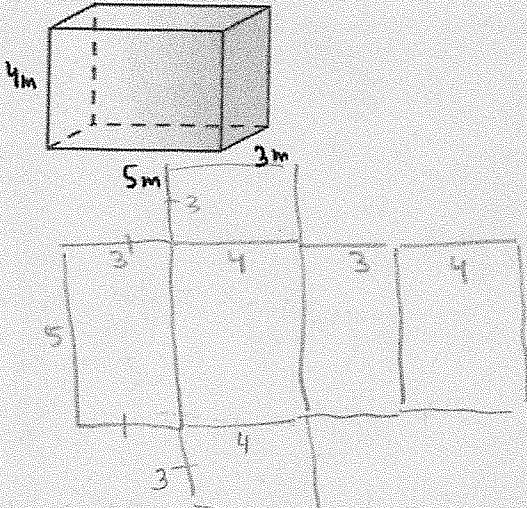


# DAY 4 More Surface Area & Volume

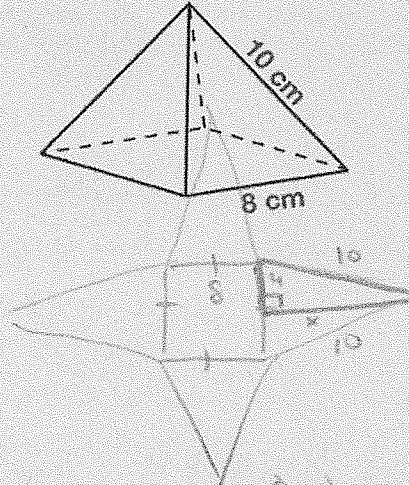
Draw the nets for each object then use it to find the surface area of each object

1.



$$\begin{aligned}
 SA &= 2\left(\frac{4}{3}\right) + 2\left(\frac{5}{3}\right) + 2\left(\frac{5}{4}\right) \\
 &= 2(3)(4) + 2(3)(5) + 2(4)(5) \\
 &= 24 + 30 + 40 \\
 &= 94 \text{ m}^2
 \end{aligned}$$

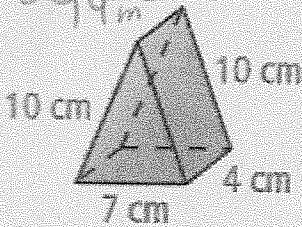
2.



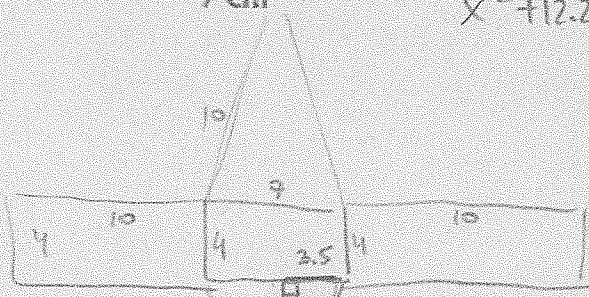
$$\begin{aligned}
 x^2 + 4^2 &= 10^2 \\
 x^2 + 16 &= 100 \\
 x^2 &= 84 \\
 x &= 9.2
 \end{aligned}$$

$$\begin{aligned}
 SA &= 4\left(\frac{\triangle}{8}\right) + \square \\
 &= 4(8)(9.2) + 8(8) \\
 &= 147.2 + 64 = 211.2 \text{ cm}^2
 \end{aligned}$$

3.

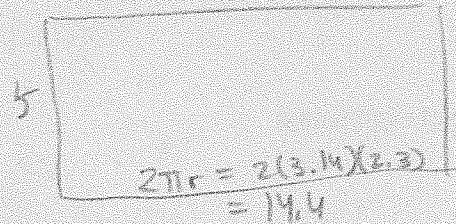
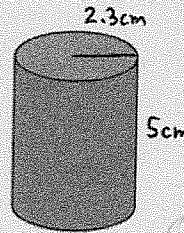


$$\begin{aligned}
 x^2 + 3.5^2 &= 10^2 \\
 x^2 + 12.25 &= 100 \\
 x^2 &= 87.75 \\
 x &= 9.4
 \end{aligned}$$



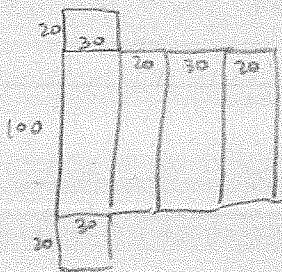
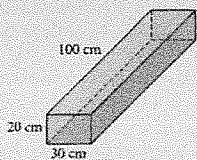
$$\begin{aligned}
 SA &= 2\left(\frac{\triangle}{7}\right) + 2\left(\frac{10}{4}\right) + \square \\
 &= \frac{2(7)(9.4)}{2} + 2(4)(10) + 4(7) \\
 &= 65.8 + 80 + 28 \\
 &= 173.8 \text{ cm}^2
 \end{aligned}$$

4.



$$\begin{aligned}
 SA &= \square + 2\left(\frac{\circ}{2.3}\right) \\
 &= 5(14.4) + 2(3.14)(2.3)^2 \\
 &= 5(14.4) + 2(3.14)(5.29) \\
 &= 72 + 33.2212 \\
 &= 105.2 \text{ cm}^2
 \end{aligned}$$

5. For each of the following draw a net (unwrapped, flat version) of the shape provided, then find the surface area of the object.

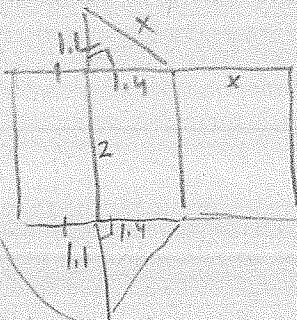
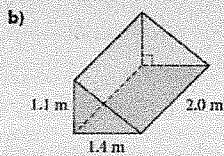


$$SA = 2\left(\frac{100}{2}\right) + 2\left(\frac{100}{2}\right) + 2\left(\frac{100}{2}\right)$$

$$= 2(30)(20) + 2(20)(100) + 2(30)(100)$$

$$= 1200 + 4000 + 6000$$

$$= 11200 \text{ cm}^2$$



$$x^2 = 1.1^2 + 1.4^2$$

$$x^2 = 1.21 + 1.96$$

$$x^2 = 3.17$$

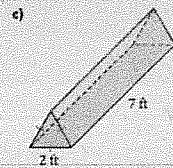
$$x = 1.78$$

$$SA = 2\left(\frac{1.1}{2}\right) + \frac{1.1}{2} + \frac{1.4}{2} + \frac{1.78}{2}$$

$$= \frac{2(1.4)(1.1)}{2} + 2(1.1) + 2(1.4) + 2(1.78)$$

$$= 1.54 + 2.2 + 2.8 + 3.56$$

$$= 10.1 \text{ m}^2$$



$$x^2 + 1^2 = 2^2$$

$$x^2 + 1 = 4$$

$$x^2 = 3$$

$$x = 1.7$$

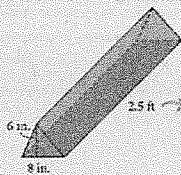
$$SA = 2\left(\frac{\Delta}{2}\right) + 3\left(\frac{\square}{7}\right)$$

$$= 2(2)(1.7) + 3(2)(7)$$

$$= 3.4 + 42$$

$$= 45.4 \text{ ft}^2$$

6. Find the volume of each shape

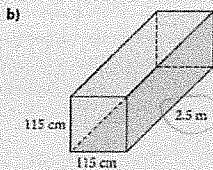


$2.5 \text{ ft} \rightarrow 2.5 \times 12 = 30 \text{ in}$

$$V = \left(\frac{b_{\text{tri}} \cdot h_{\text{tri}}}{2}\right) L_{\text{prism}}$$

$$V = \frac{(8)(6)}{2} (30)$$

$$= 720 \text{ in}^3$$

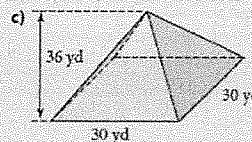


$250 \text{ cm} \rightarrow 250 \text{ cm}$

$$V = LWH$$

$$= (115)(115)(250)$$

$$= 3306250 \text{ cm}^3$$



$$V = \frac{LWH}{3}$$

$$= \frac{(30)(30)(36)}{3}$$

$$= 10800 \text{ yd}^3$$