

$$P = 3 + 3 + 1 + 2 + 2 + 1$$

$$P = 12 \text{ m}$$

$$A = lw$$

$$A = lw$$

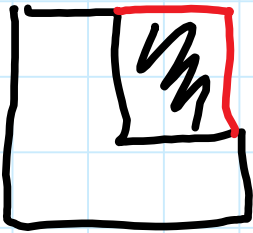
$$A = 3 \times 1$$

$$A = 2 \times 2$$

$$A = 3 \text{ m}^2$$

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

$$A_T = 5 \text{ m}^2$$



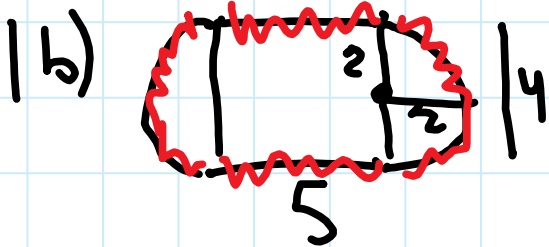
$$A = 3 \times 3$$

$$A = 2 \times 2$$

$$A = 9 \text{ m}^2$$

$$A = 4 \text{ m}^2$$

$$A_T = 5 \text{ m}^2$$



$$A = 5 \times 4$$

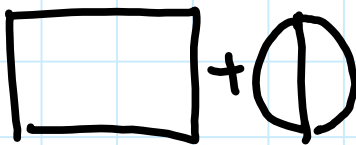
$$A = 20 \text{ cm}^2$$

$$A = \pi r^2$$

$$A = \pi (2)^2$$

$$A = 12.56 \text{ cm}^2$$

$$A_T = 32.56 \text{ cm}^2$$



$$C = 2\pi r$$

$$P = 5 + 5$$

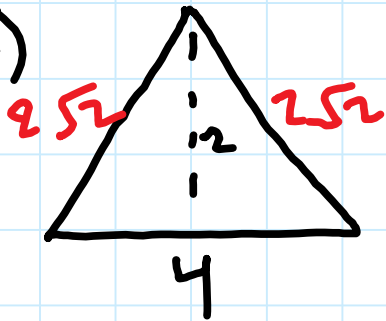
$$C = 2\pi(2)$$

$$P = 10 \text{ cm}$$

$$C = 12.56 \text{ cm}$$

$$P_T = 22.56 \text{ cm}$$

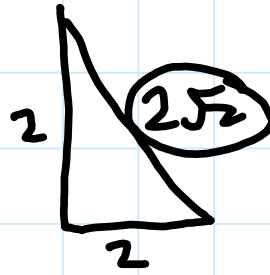
1c)



$$A = \frac{bh}{2}$$

$$A = \frac{4 \cdot 2}{2}$$

$$A = 4 \text{ in}^2$$



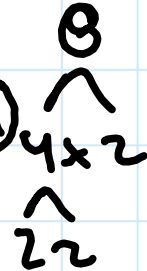
$$a^2 + b^2 = c^2$$

$$2^2 + 2^2 = c^2$$

$$\sqrt{8} = c$$

$$c = \sqrt{8}$$

$$c = 2\sqrt{2} \text{ in}$$

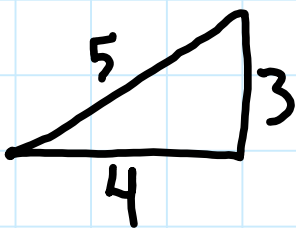


$$P_T = 4 + 2\sqrt{2} + 2\sqrt{2}$$

$$P_T = (4 + 4\sqrt{2}) \text{ in}$$

$$P_T = 9.66 \text{ in}$$

1d)



$$A = \frac{bh}{2}$$

$$A = \frac{4 \cdot 3}{2}$$

$$A = 6 \text{ m}^2$$

$$a^2 + b^2 = c^2$$

$$4^2 + b^2 = 5^2$$

$$16 + b^2 = 25$$

$$-16 \quad -16$$

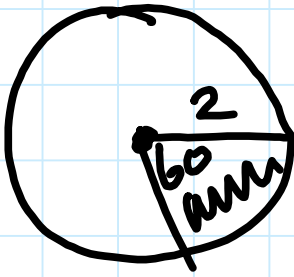
$$\sqrt{b^2} = \sqrt{9}$$

$$b = 3$$

$$P_T = 3 + 4 + 5$$

$$P_T = 12 \text{ m}$$

1e)



$$A = \pi r^2$$

$$A = \pi(2)^2$$

$$A = 12.56 \text{ cm}^2$$

$$\frac{360}{60} = 6$$

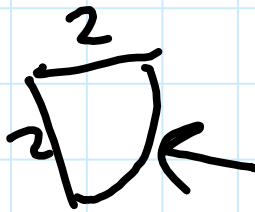
$$A_s = \frac{12.56}{6}$$

$$A_s = 2.09 \text{ cm}^2$$

$$C = 2\pi r$$

$$C = 2\pi(2)$$

$$C = 12.56 \text{ cm}^2$$



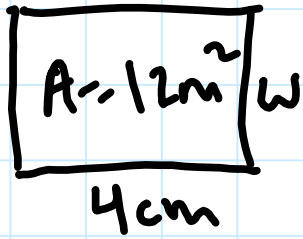
$$P_s = \frac{12.56}{6}$$

$$P_s = 2.09 \text{ cm}$$

$$P_s = 2.09 + 2 + 2$$

$$P_s = 6.09 \text{ cm}$$

2 a)

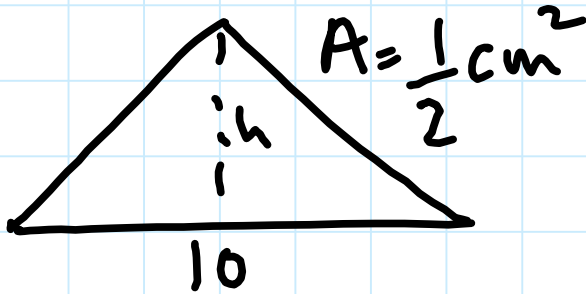


$$A = lw$$

$$\frac{12}{4} = \frac{4w}{4}$$

$$w = 3 \text{ m}$$

b)



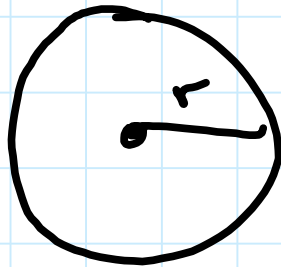
$$A = \frac{bh}{2}$$

~~$$\frac{1}{2} = \frac{10 \cdot h}{2}$$~~

$$1 = \frac{10h}{10}$$

$$h = 0.1 \text{ cm}$$

c)



$$A = 25\pi \text{ cm}^2$$

$$A = \pi r^2$$

$$\frac{25\pi}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{r^2} = \sqrt{25}$$

$$r = 5 \text{ cm}$$

d)

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

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

$$\frac{A}{\pi} = \frac{\pi r^2}{\pi}$$

$$\sqrt{r^2} = \sqrt{\frac{A}{\pi}}$$

$$r = \sqrt{\frac{A}{\pi}}$$

3a)



$$V = lwh$$

$$V = 3 \cdot 3 \cdot 3$$

$$V = 27 \text{ cm}^3$$

~~65~~

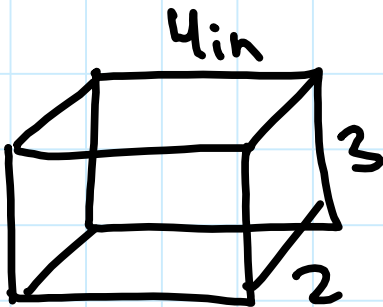
$$A = l \cdot w$$

$$A = 3 \cdot 3$$

$$A = 9 \text{ cm}^2 \times 5$$

$$A_T = 45 \text{ cm}^2$$

b)



$$V = lwh$$

$$V = 2 \cdot 3 \cdot 4$$

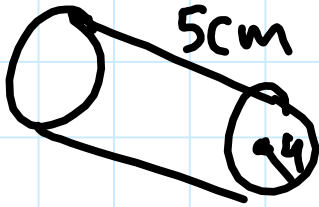
$$V = 24 \text{ in}^3$$

$$SA = (2 \times 4 + 2 \times 3 + 3 \times 4) \times 2$$

$$SA = (8 + 6 + 12) \times 2$$

$$SA = 52 \text{ in}^2$$

3c)

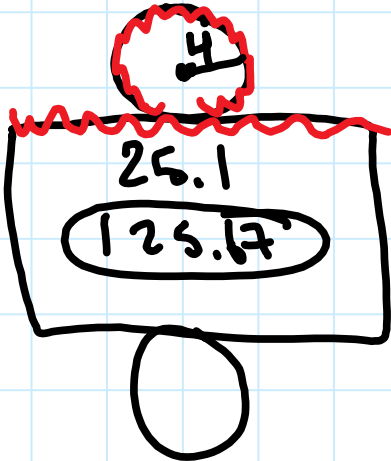


$$V = A_b \cdot h$$

$$V = \pi r^2 \cdot h$$

$$V = \pi (4)^2 \cdot 5$$

$$V = 251.3 \text{ cm}^3$$



$$C = 2\pi r$$

$$C = 2\pi(4)$$

$$C = 25.1 \text{ cm}$$

$$A = l \cdot w$$

$$A = 25.1 \cdot 5$$

$$A = 125.67 \text{ cm}^2$$

$$A = \pi r^2$$

$$A = \pi(4)^2$$

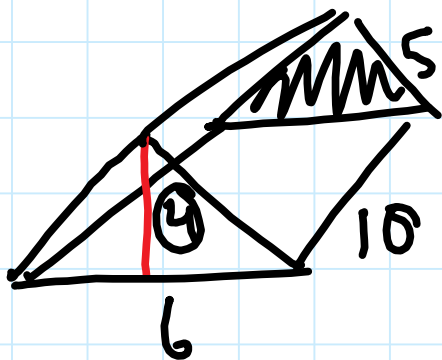
$$A = 50.27 \text{ cm}^2 \times 2$$

$$A = 100.53 \text{ cm}^2$$

$$A_T = 100.53 + 125.67$$

$$A_T = 226.19 \text{ cm}^2$$

3d)



$$V = A_B \times h$$

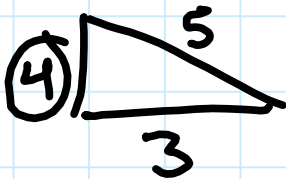
$$V = 12 \cdot 10$$

$$V = 120 \text{ cm}^3$$

$$A_B = \frac{bh}{2}$$

$$A_B = \frac{6 \cdot 4}{2}$$

$$A_B = 12 \text{ cm}^2$$



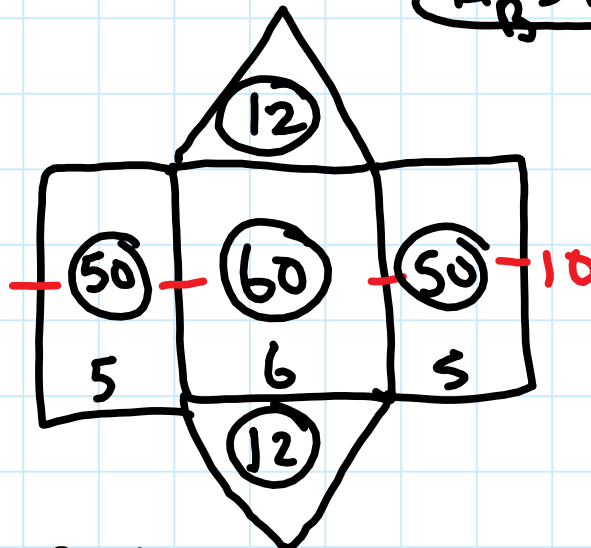
$$a^2 + b^2 = c^2$$

$$3^2 + b^2 = 5^2$$

$$9 + b^2 = 25$$

$$b^2 = 16$$

$$b = 4$$

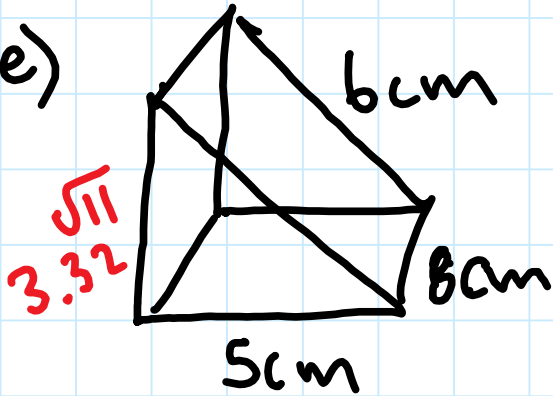


$$A = l \cdot w$$

$$SA = 12 + 12 + 50 + 60 + 50$$

$$SA = 184 \text{ cm}^2$$

3e)



$$V = A_B \cdot h$$

$$V = 8 \cdot 29 \cdot 8$$

$$V = 66.33 \text{ cm}^3$$

$$A_B = \frac{bh}{2}$$

$$A_B = \frac{5 \cdot 3 \cdot 32}{2}$$

$$A_B = 8.29 \text{ cm}^2$$

$$a^2 + b^2 = c^2$$

$$5^2 + b^2 = 6^2$$

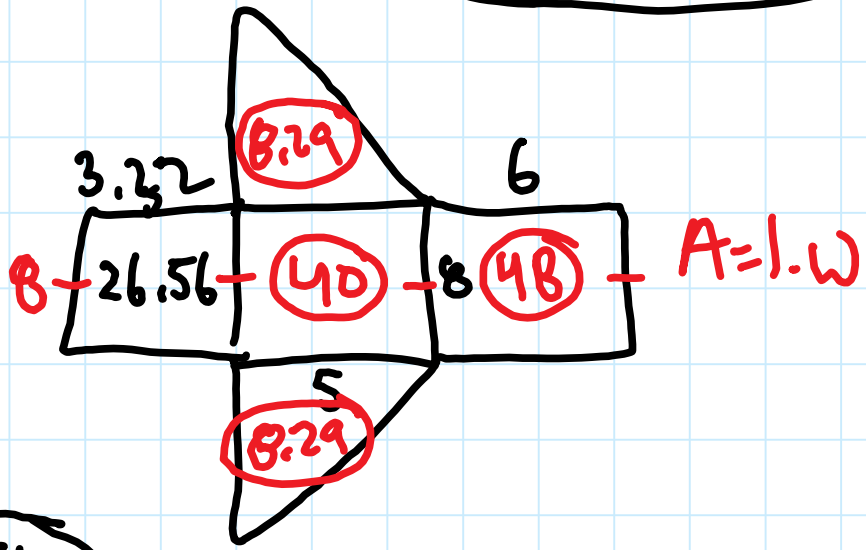
$$25 + b^2 = 36$$

$$-25 \quad -25$$

$$\sqrt{b^2} = \sqrt{11}$$

$$b = \sqrt{11}$$

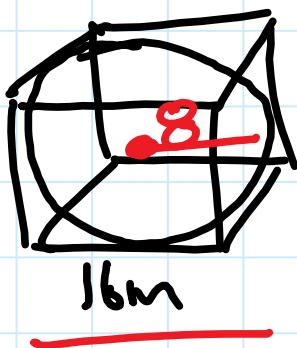
$$b = 3.32 \text{ cm}$$



$$SA = 26.56 + 48 + 48 + 8.29 + 8.29$$

$$SA = 131.14 \text{ cm}^2$$

3f)



$$V = \frac{4}{3} \pi r^3$$

$$SA = 4\pi r^2$$

$$V = \frac{4}{3} \pi (8)^3$$

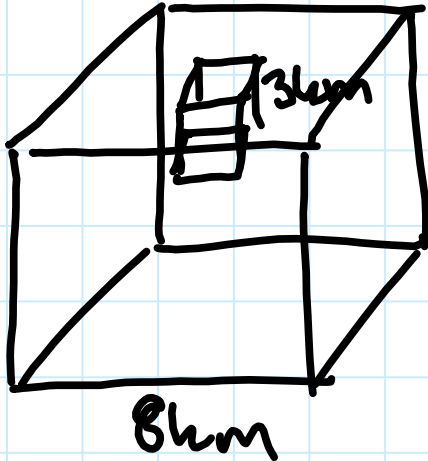
$$SA = 4\pi (8)^2$$

$$SA = 804.25m^2$$

$$V = \frac{4}{3} \pi (512)$$

$$V = 2144.66m^3$$

3a)



$$V = l \cdot w \cdot h$$

$$V = 8 \cdot 8 \cdot 8$$

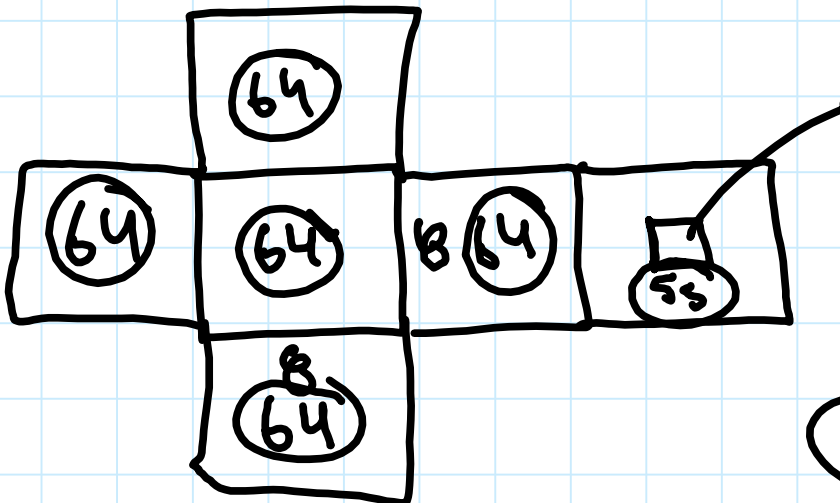
$$V = 512 \text{ km}^3$$

$$V = 3 \cdot 3 \cdot 3$$

$$V = 27 \text{ km}^3$$

$$V_T = 512 - 27$$

$$V_T = 485 \text{ km}^3$$



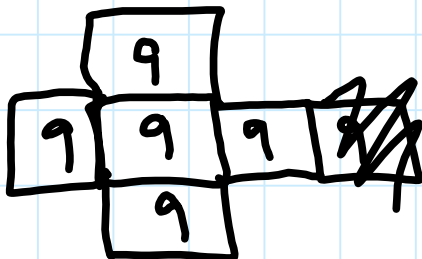
$$A = l \cdot w$$

$$A = 3 \cdot 3$$

$$A = 9$$

$$A = 64 - 9$$

$$A = 55$$

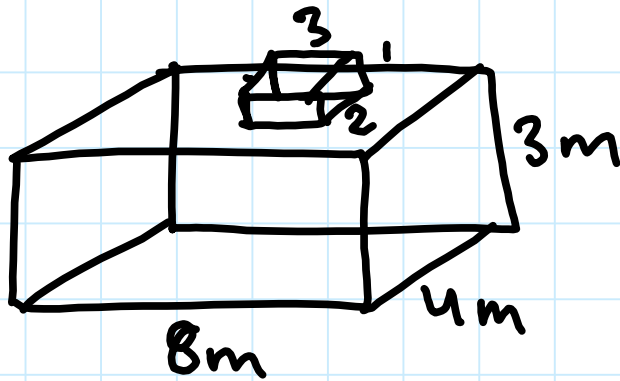


$$SA = 5 \times 64 + 55 + 5 \times 9$$

$$SA = 420 \text{ km}^2$$

M10 - 2.0 - Q3h Surface Area/Volume Review

3h)



$$V = lwh$$

$$V = 8 \cdot 4 \cdot 3$$

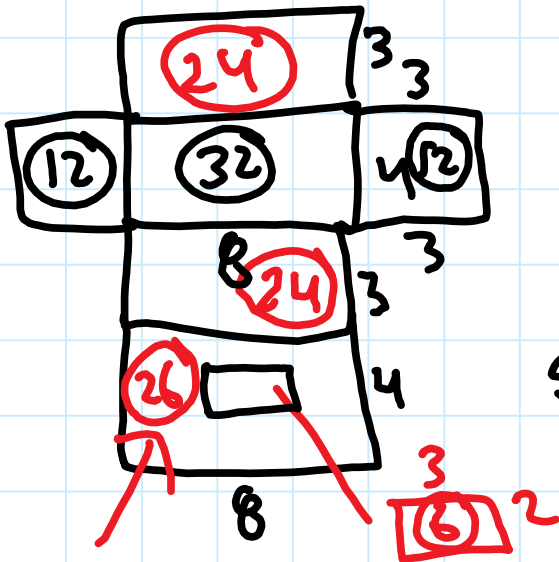
$$V = 96 \text{ m}^3$$

$$V = 3 \cdot 2 \cdot 1$$

$$V = 6 \text{ m}^3$$

$$V_T = 96 + 6$$

$$V_T = 102 \text{ m}^3$$



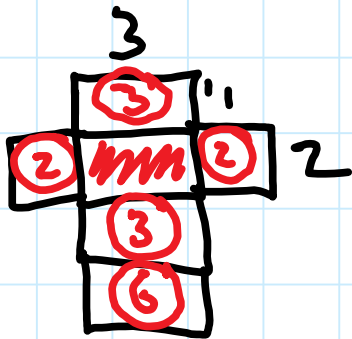
$$A = l \cdot w$$

$$SA = 24 + 24 + 12 + 32$$

$$+ 12 + 26 + 3 + 2$$

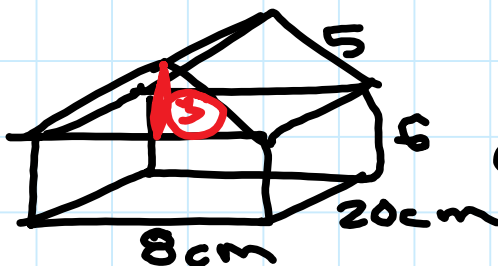
$$+ 2 + 3 + 6$$

$$SA = 146 \text{ m}^2$$



M10 - 2.0 - Q3i Surface Area/Volume Review

3i)



$$V = l \cdot w \cdot h$$

$$V = 8 \cdot 20 \cdot 6$$

$$V = 960 \text{ cm}^3$$

$$V = A_B \cdot h$$

$$V = 12 \cdot 20$$

$$V = 240 \text{ cm}^3$$

$$A_B = \frac{bh}{2}$$

$$A_B = \frac{8 \cdot 6}{2}$$

$$A_B = \frac{24}{2}$$

$$A_B = 12 \text{ cm}^2$$



$$a^2 + b^2 = c^2$$

$$4^2 + b^2 = 5^2$$

$$16 + b^2 = 25$$

$$-16 \quad -16$$

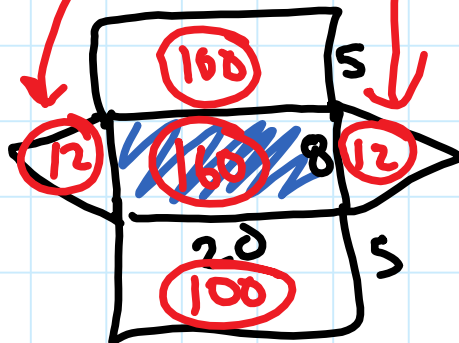
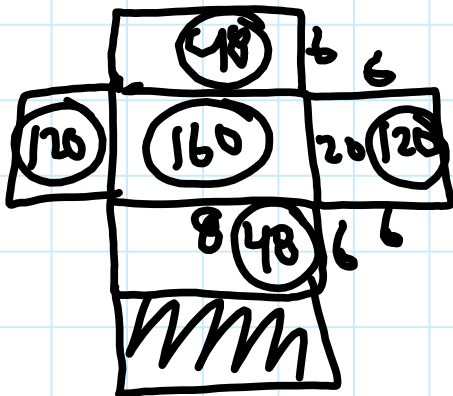
$$b^2 = 9$$

$$b = 3$$

$$A = l \cdot w$$

$$V_T = 960 + 240$$

$$V_T = 1200 \text{ cm}^3$$

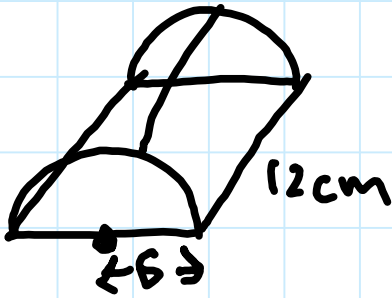


$$SA = 120 + 160 + 48 + 48 + 120 + 12 + 100 + 160 + 100 + 12$$

$$SA = 880 \text{ cm}^2$$

$$SA = 720 \text{ cm}^2$$

3j)



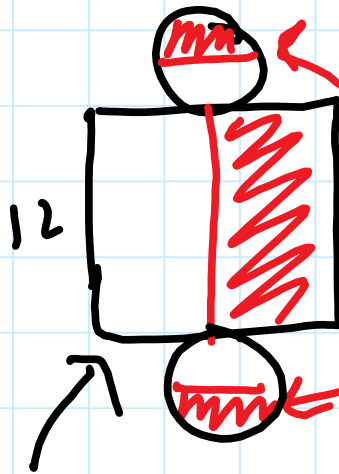
$$V = Agh$$

$$V = \pi r^2 h$$

$$V = \pi (6)^2 \cdot 12$$

$$V = \underline{1357.168}$$

$$V_T = 678.58 \text{ cm}^3$$



$$A = \pi r^2$$

$$A = \pi (6)^2$$

$$A = 113.1 \text{ cm}^2 \quad \div 2 \times 2$$

$$C = 2\pi r$$

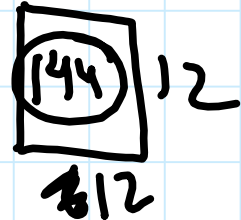
$$C = 2\pi (6)$$

$$C = \underline{37.7 \text{ cm}}$$

$$A = l \cdot w$$

$$A = 18.85 \cdot 12$$

$$A = \underline{226.19 \text{ cm}^2}$$

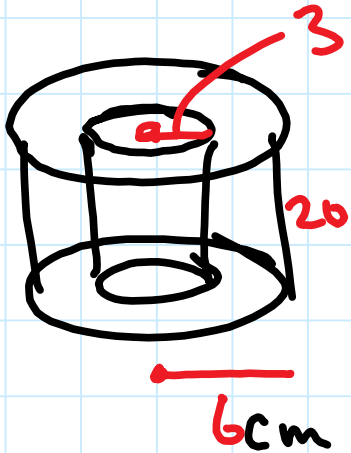


$$C = 18.85 \text{ cm}$$

$$SA = 113.1 + 226.19 + 144$$

$$SA = \underline{483.29 \text{ cm}^2}$$

3k)



$$V = \pi r^2 h$$

$$V = \pi (6)^2 (20)$$

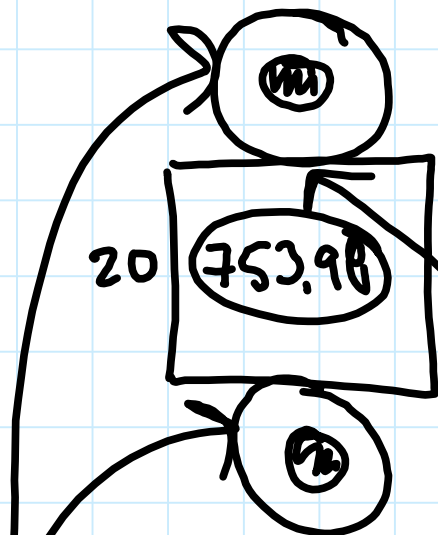
$$V = \pi r^2 h$$

$$V = \pi (3)^2 \cdot 20$$

$$V = 2261.95 \text{ cm}^3$$

$$V = 565.49 \text{ cm}^3$$

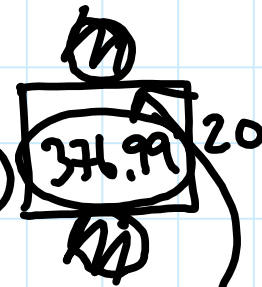
$$V_T = 2827.43 \text{ cm}^3$$



$$C = 2\pi r$$

$$C = 2\pi (6)$$

$$C = 37.7 \text{ cm}$$



$$A = lw$$

$$C = 2\pi r$$

$$C = 2\pi (3)$$

$$C = 18.84$$

$$A = \pi r^2$$

$$A = \pi (6)^2$$

$$A = 113.1 \text{ cm}^2$$

$$A = \pi r^2$$

$$A = \pi (3)^2$$

$$A = 28.27 \text{ cm}^2$$

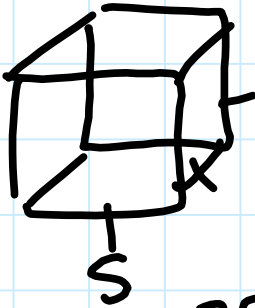
$$A = 113.1 - 28.27$$

$$A = 84.82 \text{ cm}^2$$

$$SA = 84.82 + 84.82 + 753.98 + 376.99$$

$$SA = 1306.61 \text{ cm}^2$$

4a)



$$V = 27 \text{ m}^3$$

$$SA = s^2 \cdot 6$$

$$SA = 3^2 \cdot 6$$

$$SA = 54 \text{ m}^2$$

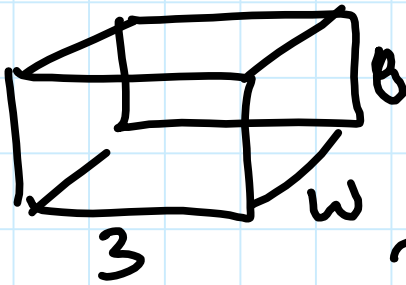
$$V = l \cdot w \cdot h$$

$$V = s^3$$

$$\sqrt[3]{27} = \sqrt[3]{s^3}$$

$$s = 3 \text{ m}$$

b)



$$V = 240 \text{ cm}^3$$

$$V = lwh$$

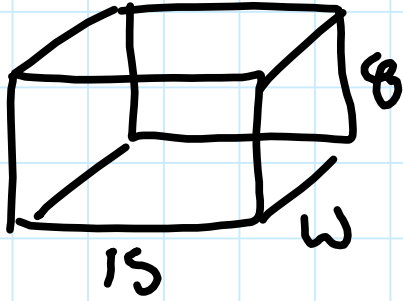
$$240 = 3 \cdot w \cdot 8$$

$$240 = 24w$$

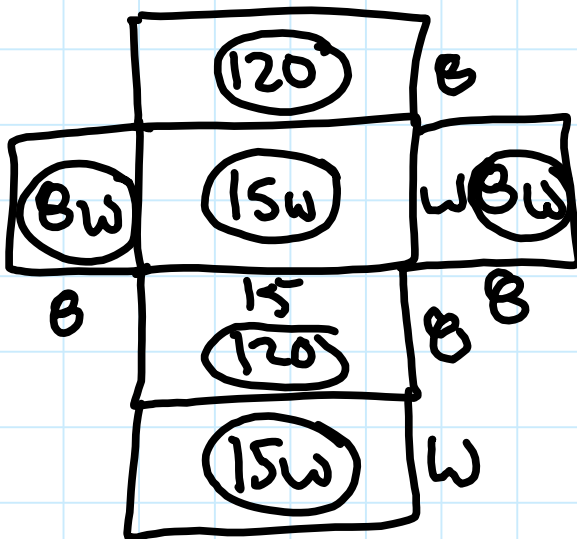
$$\frac{240}{24} = \frac{24w}{24}$$

$$w = 10 \text{ cm}$$

4c)



$$SA = 792 \text{ cm}^2$$



$$A = lw$$

$$SA = 792 \text{ cm}^2$$

$$\begin{aligned}
 SA &= 120 + 8w + 15w + 8w + 120 + 15w \\
 792 &= 240 + 46w \\
 -240 \quad -240 \\
 \hline
 552 &= 46w \\
 \frac{552}{46} &= \frac{46w}{46} \\
 \hline
 w &= 12 \text{ cm}
 \end{aligned}$$

4d)



$$SA = 300 \pi \text{ m}^2$$

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

$$300\pi = 2\pi(4)^2 + 2\pi(4)h$$

$$\frac{300\pi}{\pi} = \frac{32\pi}{\pi} + \frac{8\pi h}{\pi}$$

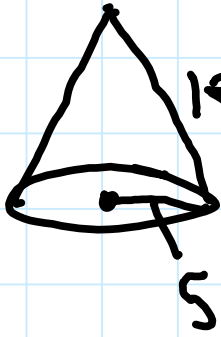
$$300 = 32 + 8h$$

$$-32 \quad -32$$

$$\frac{268}{8} = \frac{8h}{8}$$

$$h = 33.5 \text{ m}$$

5a)

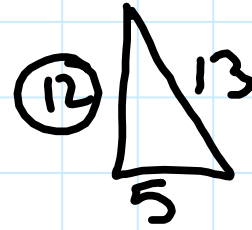


$$V = \frac{1}{3} A_B h$$

$$V = \frac{1}{3} \pi r^2 h$$

$$V = \frac{1}{3} \pi (5)^2 (12)$$

$$V = 50.27 \text{ cm}^3$$



$$a^2 + b^2 = c^2$$

$$5^2 + b^2 = 13^2$$

$$25 + b^2 = 169$$

$$-25 \quad -25$$

$$\sqrt{b^2} = \sqrt{144}$$

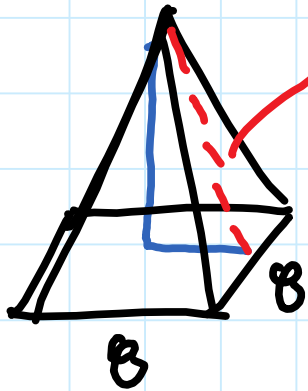
$$b = 12$$

$$SA = \pi r^2 + \pi r s$$

$$SA = \pi (5)^2 + \pi (5)(13)$$

$$SA = 282.74 \text{ cm}^2$$

5b)

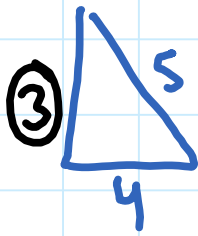


5 cm

$$V = \frac{1}{3} A_b h$$

$$V = \frac{1}{3} B \cdot B \cdot h$$

$$V = 64 \text{ cm}^3$$

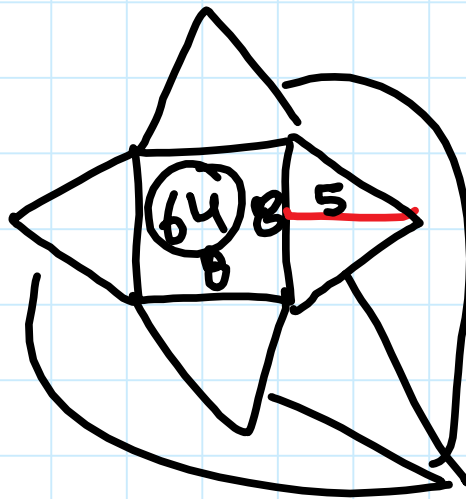


$$a^2 + b^2 = c^2$$

$$4^2 + b^2 = 5^2$$

$$16 + b^2 = 25$$

$$\begin{array}{r} -16 \\ \hline \sqrt{b^2} = \sqrt{9} \\ b = 3 \end{array}$$



$$A = lw$$

$$A = \frac{bh}{2}$$

$$A = \frac{8 \cdot 5}{2}$$

$$A = 20 \text{ cm}^2$$

$$SA = 64 + 20 \times 4$$

$$SA = 144 \text{ cm}^2$$

6a)



$$SA = 25\pi \text{ in}^2$$

$$SA = 4\pi r^2$$

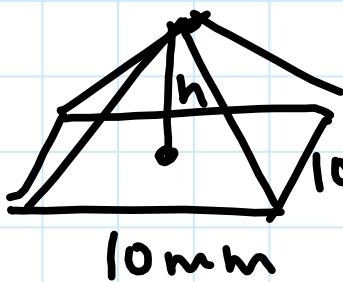
$$\frac{25\pi}{\pi} = \frac{4\pi r^2}{\pi}$$

$$\frac{25}{4} = \frac{4r^2}{4}$$

$$\sqrt{r^2} = \sqrt{6.25}$$

$$r = 2.5 \text{ in}$$

6b)



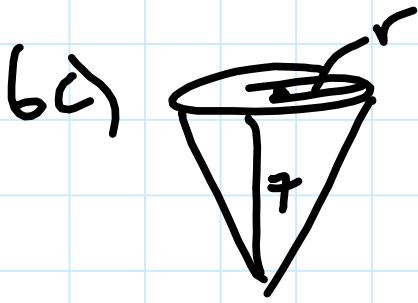
$$V = 1000 \text{ mm}^3$$

$$V = \frac{1}{3} A_b h$$

$$3 \cdot 1000 = \frac{1}{3} (10 \cdot 10) h \quad \times 3$$

$$\frac{3000}{100} = \frac{100h}{100}$$

$$h = 30 \text{ mm}$$



$$V = 183.26 \text{ ft}^3$$

$$V = \frac{1}{3} A_b h$$

$$V = \frac{1}{3} \pi r^2 h$$

$$3 \cdot 183.26 = \frac{1}{3} \pi (r)^2 (7) \cancel{3}$$

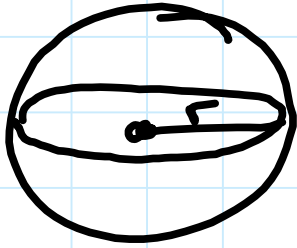
$$\frac{549.78}{7} = \frac{\pi r^2}{7}$$

$$78.54 = \frac{\pi r^2}{\pi}$$

$$\sqrt{25} = \sqrt{r^2}$$

$$r = 5 \text{ ft}$$

6d)



$$V = 1.0878 \times 10^{21} \text{ m}^3$$

$$V = \frac{4}{3} \pi r^3$$

$$3 \cdot \frac{1.0878 \times 10^{21}}{4\pi} = \frac{4\pi r^3}{4\pi}$$

$$r^3 = \sqrt[3]{2.5969 \times 10^{20}}$$

$$r = 6379992.2 \text{ m}$$

7a)



$$V = A_b h$$

$$V = \pi r^2 h$$

$$V = \pi (3)^2 (6)$$

$$V = 169.65 \text{ cm}^3$$

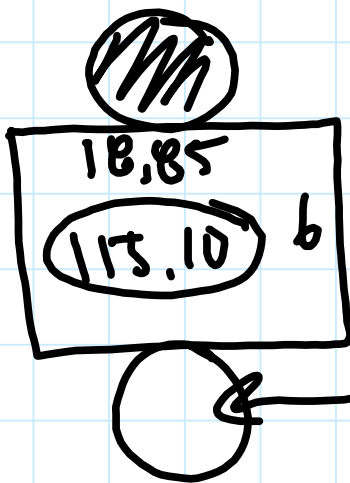
$$V = \frac{1}{3} \pi r^2 h$$

$$V = \frac{1}{3} \pi (3)^2 (4)$$

$$V = 39.70 \text{ cm}^3$$

$$V_T = 169.65 + 39.7$$

$$V_T = 209.35 \text{ cm}^3$$



$$A = \pi r^2$$

$$A = \pi (3)^2$$

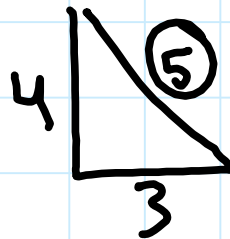
$$A = 28.27 \text{ cm}^2$$

$$C = 2\pi r$$

$$C = 2\pi (3)$$

$$C = 18.85 \text{ cm}$$

$$A = lw$$



$$a^2 + b^2 = c^2$$

$$3^2 + 4^2 = 5^2$$

$$c = 5$$

$$SA = \pi r^2 + \pi r s$$

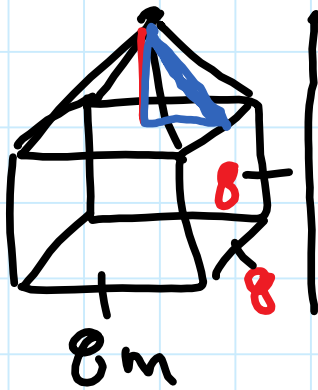
$$SA = \pi (3)(5)$$

$$SA = 47.12 \text{ cm}^2$$

$$SA = 47.12 + 113.1 + 28.27$$

$$SA = 188.49 \text{ cm}^2$$

7b)



$$V = l \cdot w \cdot h$$

$$V = \frac{1}{3} l \cdot w \cdot h$$

$$V = 8 \cdot 8 \cdot 11$$

$$V = 512 \text{ m}^3$$

$$V = \frac{1}{3} \cdot 8 \cdot 8 \cdot 3$$

$$V = 64 \text{ m}^3$$

$$V_T = 512 + 64$$

$$V_T = 576 \text{ m}^3$$

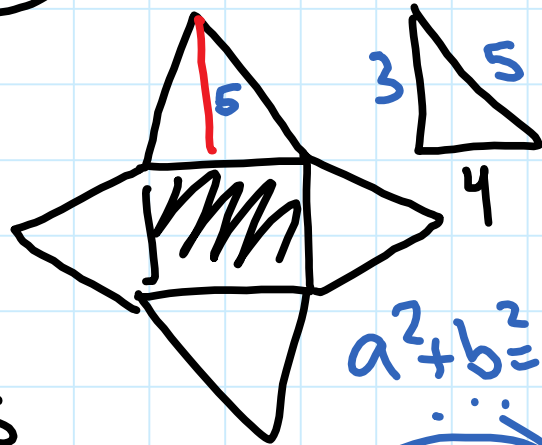


$$A = l \cdot w$$

$$A = \frac{bh}{2}$$

$$A = \frac{8 \cdot 5}{2}$$

$$A = 20 \text{ m}^2 \times 4$$



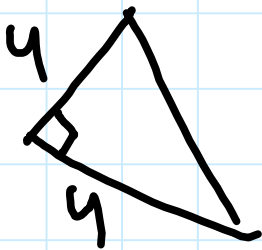
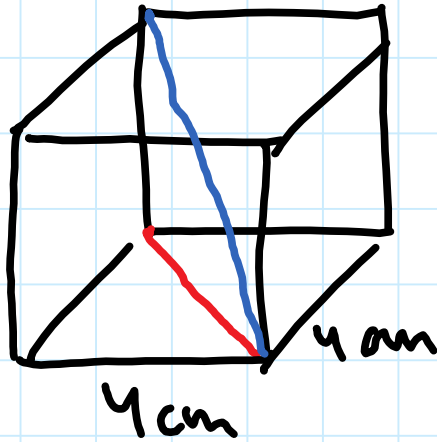
$$a^2 + b^2 = c^2$$

$$c = 5$$

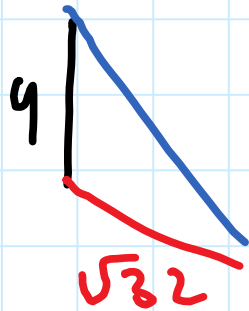
$$SA = 64 \times 4 + 20 \times 4$$

$$SA = 400 \text{ m}^2$$

Ba)



$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 4^2 + 4^2 &= c^2 \\
 \sqrt{32} &= \sqrt{c^2} \\
 \underline{c = \sqrt{32}}
 \end{aligned}$$

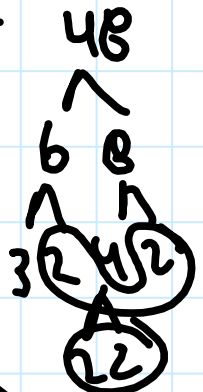


$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 4^2 + (\sqrt{32})^2 &= c^2 \\
 16 + 32 &= c^2 \\
 \sqrt{48} &= \sqrt{c^2}
 \end{aligned}$$

$$c = \sqrt{48}$$

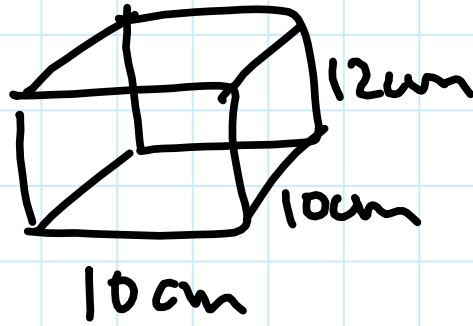
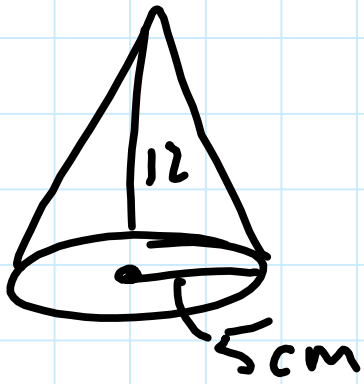
$$C = 4\sqrt{3} \text{ cm}$$

$$C = 6.93 \text{ cm}$$



M10 - 2.0 - Q9 Surface Area/Volume Review

a)



$$V = \frac{1}{3} \pi r^2 h$$

$$V = \frac{1}{3} \pi (5)^2 (12)$$

$$V = 314.16 \text{ cm}^3$$

$$V = l \cdot w \cdot h$$

$$V = 10 \cdot 10 \cdot 12$$

$$V = 1200 \text{ cm}^3$$

$$\frac{1200}{314.16} = 3.81$$