

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

$$s^2 = 3^2 + 4^2$$

$$s^2 = 25$$

$$s = 5$$

$$\begin{aligned} \text{a) } S.A_{\text{sphere}} &= \frac{4\pi r^2}{2} \\ &= 2\pi r^2 \\ &= 2\pi(3\text{ cm})^2 \\ &= 18\pi \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} S.A_{\text{cone}} &= \pi r s \\ &= \pi(3)(5) \\ &= 15\pi \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Total area} &= 18\pi \text{ cm}^2 + 15\pi \text{ cm}^2 \\ &= 33\pi \text{ cm}^2 \\ &\approx 103.6 \text{ cm}^2 \end{aligned}$$

$$\text{b) Total volume} = V_s + V_c$$

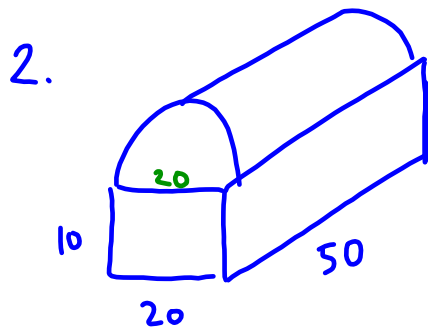
$$= \frac{4\pi r^3}{3} \div 2 + \frac{1}{3} \pi r^2 h$$

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

$$= 18\pi + 12\pi \text{ cm}^3$$

$$= 30\pi \text{ cm}^3$$

$$= 94.25 \text{ cm}^3$$



$$S.A._p = 20(50) + \underbrace{2(10)(20) + 2(10)(50)}_{P_b \cdot h}$$

$$= 2400 \text{ cm}^2$$

$$S.A._c = A_b + A_l \div 2$$

$$= \pi r^2 + 2\pi r h \div 2$$

$$= \pi(10 \text{ cm})^2 + \pi(10)(50 \text{ cm})$$

$$= 100\pi + 500\pi \text{ cm}^2$$

$$= 600\pi \text{ cm}^2 \approx 1885 \text{ cm}^2$$

$$\text{Total area} = 2400 + 1885 \text{ cm}^2$$

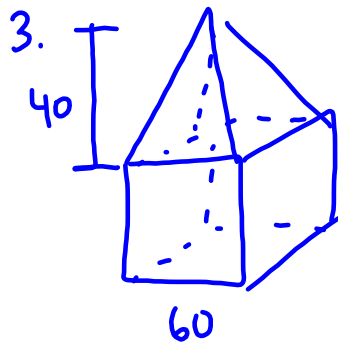
$$= 4285 \text{ cm}^2$$

b) Volume = $V_p + V_c$ ↙ $\frac{1}{2}$ cylinder

$$= 10(20)(50) + \pi(10)^2(50) \div 2$$

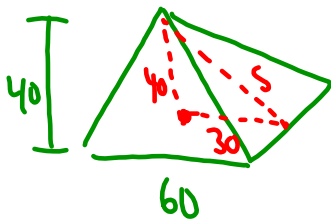
$$= 10000 + 2500\pi \text{ cm}^3$$

$$\approx 17854 \text{ cm}^3$$



$$\begin{aligned} \text{a) } SA_{\text{cube}} &= 5(60)(60) \\ &= 18\,000 \text{ dm}^2 \end{aligned}$$

$$\begin{aligned} SA_{\text{pyr.}} &= P_b \cdot s \div 2 \\ &= 4(60)(50) \div 2 \\ &= 6\,000 \text{ dm}^2 \end{aligned}$$



$$S^2 = 30^2 + 40^2$$

$$S = 50$$

$$\begin{aligned} \text{Total area} &= 18\,000 + 6\,000 \\ &= 24\,000 \text{ dm}^2 \end{aligned}$$

$$\text{b) Volume} = V_p + V_c$$

$$= \frac{A_b \cdot h}{3} + A_b h$$

$$= \frac{(60 \text{ cm})(60 \text{ cm})(40 \text{ cm}) + (60 \text{ cm})(60 \text{ cm})(60 \text{ cm})}{3}$$

$$= 264\,000 \text{ dm}^3$$