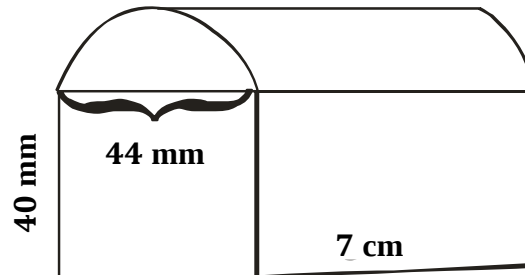


Calculate the total surface area and volume of the following:
(Round off correct to one decimal.)



$$7 \text{ cm} = 70 \text{ mm}$$

$$\text{radius} = \frac{1}{2} \text{ van } 44 \text{ mm} = 22 \text{ mm}$$

$$\begin{aligned} \text{Volume} &= \text{Rectangular prism} + \frac{1}{2} \text{ cylinder} \\ &= (L \times B \times H) + \frac{1}{2} (\pi r^2 H) \\ &= [70 \times 44 \times 40] + \frac{1}{2} \left[\frac{22}{7} \times (22)^2 \times 70 \right] \\ &= 123\,200 \text{ mm}^3 + 53\,240 \text{ cm}^3 \\ &= 176\,440 \text{ mm}^3 \end{aligned}$$

Surface area

$$\begin{aligned} &= \text{Open rectangular prism} + \frac{1}{2} \text{ Cylinder} \\ &= [2(LB + BH + HL) - (L \times B)] + \frac{1}{2} [2\pi r(r + H)] \\ &= [2(70 \times 44 + 44 \times 40 + 40 \times 70) - (70 \times 44)] + \frac{1}{2} \left[2 \times \frac{22}{7} \times 22(22 + 70) \right] \\ &= [2(3\,080 + 1\,760 + 2\,800) - (3\,080)] + \frac{1}{2} \left[\frac{968}{7} (92) \right] \\ &= [2(7\,640) - (3\,080)] + \frac{1}{2} [12\,722,28571] \\ &= 12\,200 \text{ mm}^2 + 6\,361,142857 \text{ mm}^2 \\ &= 18\,561,14286 \text{ mm}^2 \\ &\approx 18\,561,1 \text{ mm}^2 \end{aligned}$$