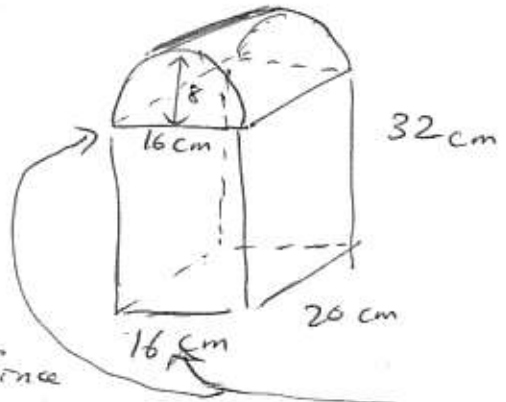


39

SA = ?
V = ?



Since the radius is 8 cm, the diameter is 16 cm

SA = half SA cylinder + LA of rectangular prism + B (rectangle area of base)

$$= \frac{1}{2} [LA + 2B]_{cyl} + [Ph]_{rectang. prism} + 16 \cdot 20 \text{ cm}^2$$

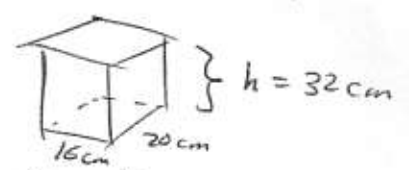
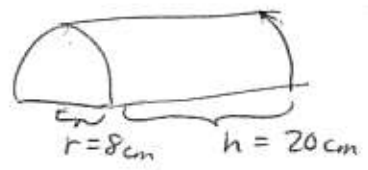
$$= \frac{1}{2} [2\pi r \cdot (20 \text{ cm}) + 2(\pi r^2)] + [(16 + 20 + 16 + 20)(32 \text{ cm})] + 320 \text{ cm}^2$$

$$= \pi r (20 \text{ cm}) + \pi r^2 + 2304 \text{ cm}^2 + 320 \text{ cm}^2$$

Plug in $r = 8 \text{ cm}$

SA = 3327.7 cm²

V = Vol half-cylinder + Vol rectangular prism



$$V = \frac{1}{2} \left[\frac{B \cdot h}{\pi r^2} \right]_{cylind.} + (B \cdot h)_{rect. prism}$$

$$= \frac{1}{2} [\pi (8 \text{ cm})^2 \cdot 20 \text{ cm}] + (16 \text{ cm} \cdot 20 \text{ cm})(32 \text{ cm})$$

$$V = 12250.6 \text{ cm}^3$$