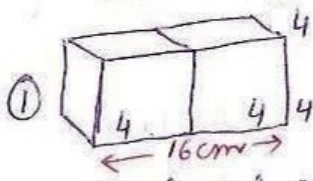


ex 13.1



vol. of each cube = 64 cm^3

$$e^3 = 64$$

$$\Rightarrow e = \sqrt[3]{64} = 4 \text{ cm}$$

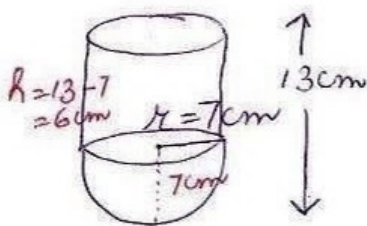
S.A. of resulting cuboid = $2(lb + bh + lh)$

$$= 2(8 \times 4 + 4 \times 4 + 8 \times 4)$$

$$= 2 \times 4 \times 4 (2 + 1 + 2)$$

$$= 32 \times 5 = 160 \text{ cm}^2$$

②



Inner Surface area

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

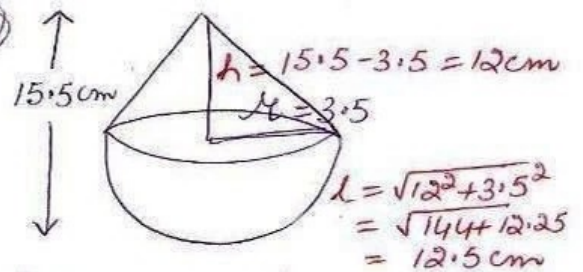
[CSA of cylinder and hemi sphere]

$$= 2\pi r (r + h)$$

$$= 2 \times \frac{22}{7} \times 7 (7 + 6)$$

$$= 44 \times 13 = 572 \text{ cm}^2$$

③



Total surface area of toy = CSA of cone + CSA of h.s.

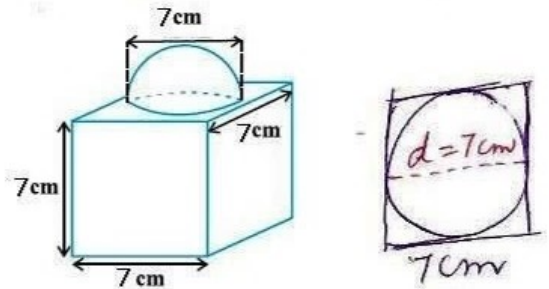
$$= \pi r l + 2\pi r^2$$

$$= \pi r (l + 2r)$$

$$= \frac{22}{7} \times 3.5 (12.5 + 2 \times 3.5)$$

$$= 11 \times 19.5 = 214.5 \text{ cm}^2$$

④



greatest diam. hemi-sphere can have = 7 cm

SA of solid

$$= \text{S.A. of cuboid} + \text{CSA of h.s.} - \text{area of h.s. base}$$

$$= 6e^2 + 2\pi r^2 - \pi r^2$$

$$= 6e^2 + \pi r^2$$

$$= 6 \times 7 \times 7 + \frac{22}{7} \times 3.5 \times 3.5$$

$$= 294 + 38.5 = 332.5 \text{ cm}^2$$