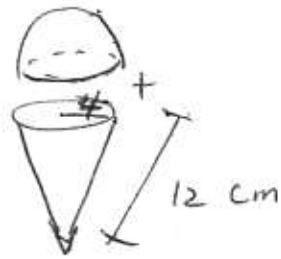




42 a) Cone and half of a sphere



b) SA of ice cream cone =  + 
 |
 area that you can paint $\frac{1}{2} SA_{\text{sphere}}$ LA cone

$$= \frac{1}{2}(4\pi r^2) + \pi r l$$

$$= \frac{1}{2}(4 \times \pi)(4 \text{ cm})^2 + \pi(4 \text{ cm})(12 \text{ cm})$$

$$SA = 251.3 \text{ cm}^2$$

c) $V = \frac{1}{2} \text{Vol sphere} + \text{vol cone}$

$$= \frac{1}{2} \left(\frac{4\pi r^3}{3} \right) + \frac{1}{3} B \cdot h \text{ — vertical height}$$

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

$$= \frac{2\pi(4 \text{ cm})^3}{3} + \frac{1}{3} \pi(4 \text{ cm})^2(8)(\sqrt{2})$$

$$V = 323.6 \text{ cm}^3$$

