

3.31 Right Circular Cylinder with an Oblique Plane Face

Radius of base: R

The greatest height of a side: h_1

The shortest height of a side: h_2

Lateral surface area: S_L

Area of plane end faces: S_B

Total surface area: S

Volume: V

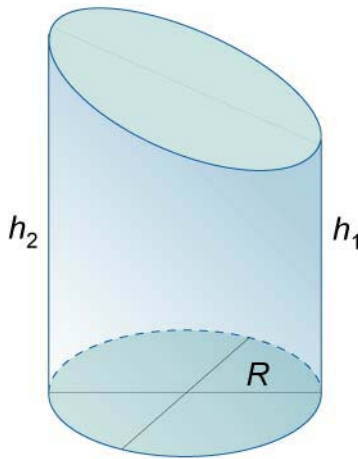


Figure 48.

324. $S_L = \pi R(h_1 + h_2)$

325. $S_B = \pi R^2 + \pi R \sqrt{R^2 + \left(\frac{h_1 - h_2}{2}\right)^2}$

$$\mathbf{326.} \quad S = S_L + S_B = \pi R \left[h_1 + h_2 + R + \sqrt{R^2 + \left(\frac{h_1 - h_2}{2} \right)^2} \right]$$

$$\mathbf{327.} \quad V = \frac{\pi R^2}{2} (h_1 + h_2)$$