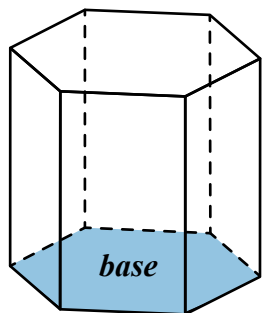


$$\text{Surface Area} = 2B + Ph$$

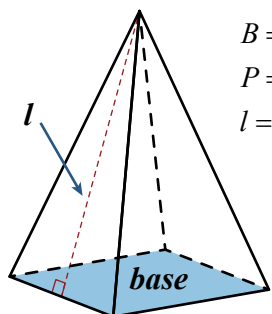


B = area of the base

P = perimeter of the base

h = height of prism

$$\text{Surface Area} = B + \frac{1}{2}Pl$$

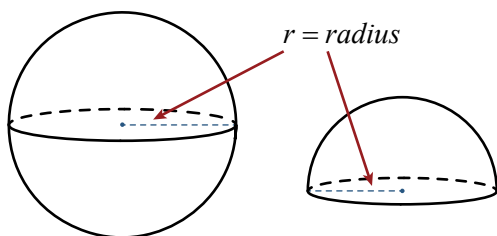


B = area of the base

P = perimeter of the base

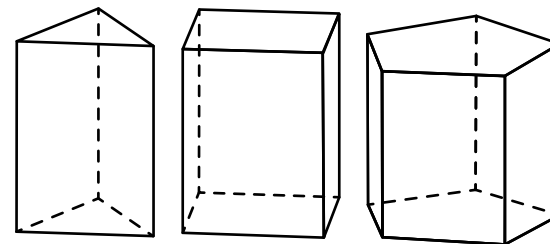
l = slant height

$$\text{Sphere: Surface Area} = 4\pi r^2$$

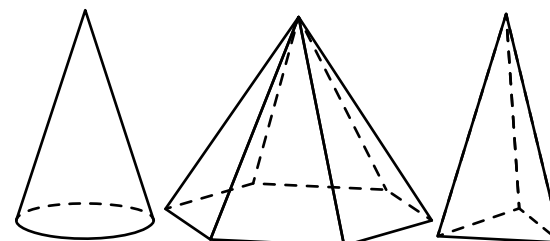


$$\text{Hemisphere: Surface Area} = 3\pi r^2$$

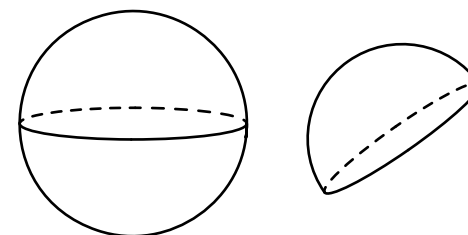
SURFACE AREA OF PRISMS



SURFACE AREA OF REGULAR PYRAMIDS



SURFACE AREA OF OTHER SOLIDS

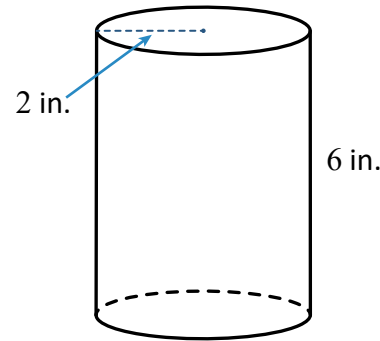


glue here

The surface area, S , of a **prism** is two times B , the area of the base, plus the area of the lateral faces.

The area of the lateral faces is P , the perimeter of the base, times the height of the prism, h .

Example:

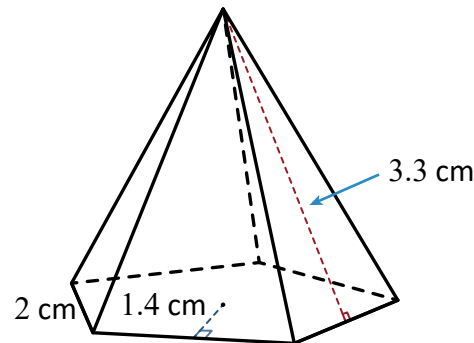


$$\begin{aligned} S &= 2B + Ph \\ S &= 2(\pi r^2) + (2\pi r)(6) \\ S &= 2(\pi(2)^2) + (2\pi(2))(6) \\ S &= 8\pi + 24\pi \\ S &= 32\pi \text{ in}^2 \\ S &\approx 100.5 \text{ in}^2 \end{aligned}$$

The surface area, S , of a **pyramid** is B , the area of the base, plus the area of the lateral faces.

The area of the lateral faces is one-half times P , the perimeter of the base, times the slant height of the pyramid, l .

Example:

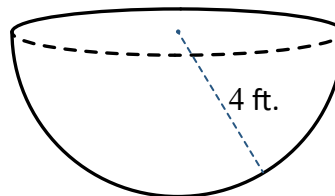


$$\begin{aligned} S &= B + \frac{1}{2}Pl \\ S &= \left(\frac{1}{2} \cdot a \cdot n \cdot s\right) + \frac{1}{2}(5 \cdot 2)(3.3) \\ S &= \left(\frac{1}{2} \cdot 1.4 \cdot 5 \cdot 2\right) + 5(3.3) \\ S &= 7 + 16.5 \\ S &= 23.5 \text{ cm}^2 \end{aligned}$$

The surface area, S , of a **sphere** is the radius squared, r^2 , times 4π .

The surface area, S , of a **hemisphere** is the radius squared, r^2 , times 3π .

Example:



$$\begin{aligned} S &= 3\pi r^2 \\ S &= 3\pi(4)^2 \\ S &= 48\pi \text{ ft}^2 \\ S &\approx 150.8 \text{ ft}^2 \end{aligned}$$