

# Honors Physics Week 1 notes

## Area of 2D shapes

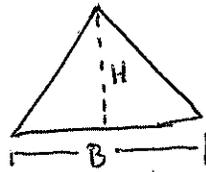
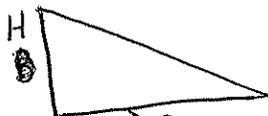
Rectangle/Square



$$\begin{aligned} \text{Area} &= \text{Length} \times \text{Width} \\ \text{Area} &= \text{Base} \times \text{Height} \end{aligned}$$

Triangle

"It's half a rectangle"



$$\text{so Area} = \frac{1}{2} (\text{Base} \times \text{Height})$$

$$A = \frac{1}{2} B \times H$$

Circle

$$\text{Area} = \pi r^2$$

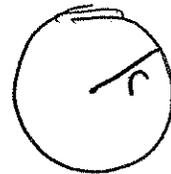
$$\text{Circumference} = 2\pi r \text{ or } \pi d$$

(Distance around a circle)

d = diameter

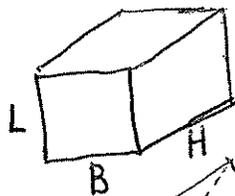
r = radius

since  
 $d = 2r$

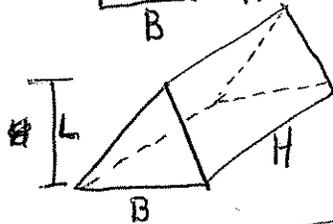


## 3D prisms/shapes

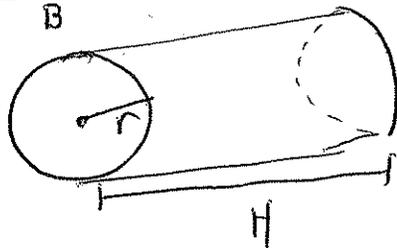
Volume = area of base  $\times$  height



$$V = (\text{Base}) \times H$$



$$V = \left(\frac{1}{2} B \times L\right) \times H$$



$$V = (\pi r^2) H$$

