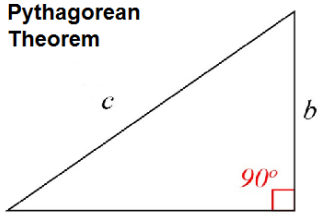
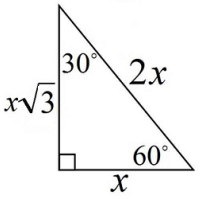
Right Triangles

Pythagorean Theorem



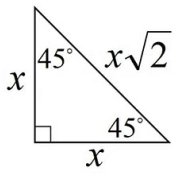
$$a^2 + b^2 = c^2$$

$30^\circ - 60^\circ - 90^\circ$ Triangle



30	60	90
x	x√3	2x

$45^\circ - 45^\circ - 90^\circ$ Triangle



45	45	90
x	x	x√2

Trig Functions
SOHCAHTOA

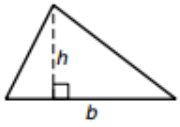
$$\text{Sin } x^\circ = \frac{\text{Opposite leg}}{\text{Hypotenuse}}$$

$$\text{Cos } x^\circ = \frac{\text{Adjacent leg}}{\text{Hypotenuse}}$$

$$\text{Tan } x^\circ = \frac{\text{Opposite leg}}{\text{Adjacent leg}}$$

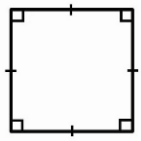
Area Formulas

Triangle



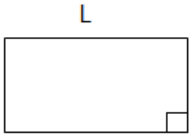
$A = \frac{1}{2}bh$ **or** $\frac{bh}{2}$

Square



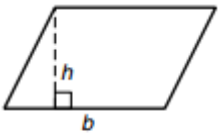
$A = s^2$

Rectangle



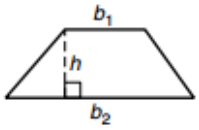
A = LW or bh

Parallelogram



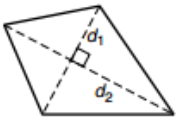
$A = bh$

Trapezoid



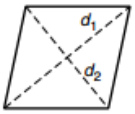
$A = \frac{1}{2}(b_1 + b_2)h$

Kite



$A = \frac{1}{2}d_1d_2$ ***diagonals ⊥**

Rhombus

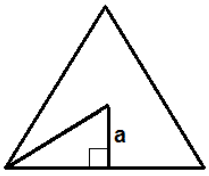


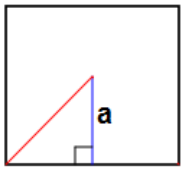
$A = \frac{1}{2}d_1d_2$

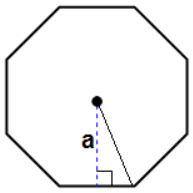
***4≅ sides**
***** diagonals ⊥ and bisect**

Area Regular Polygon

$A = \frac{1}{2}aP$







Circles

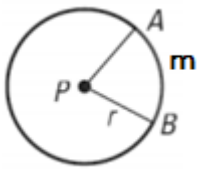
Circumference:

πd or $2\pi r$

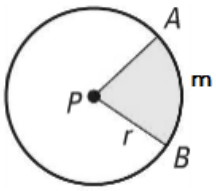
Area:

πr^2

Arc length $= 2\pi r\left(\frac{m^\circ}{360^\circ}\right)$



Area of Sector $= \pi r^2\left(\frac{m^\circ}{360^\circ}\right)$



Segment of a Circle

area of segment = area of sector – area of triangle

Converting:

Radians to Degrees $\frac{180}{\pi}$

Degrees to Radians $\frac{\pi}{180}$