Right Triangles

Properties of Triangles	(1) the sum of the angles equals 180° AND (2) the combined length of any two side exceeds that of the third side AND (3) larger angles are opposite larger sides
Area	(leg * leg) / 2
Pythagorean Theorem	$leg^2 + leg^2 = hypotenuse^2$
SOHCAHTOA	Sine Opposite Hypotenuse, Cosine Adjacent Hypotenuse, Tangent Opposite Adjecent
Special Triangles	angles = 45-45-90 OR 30-60-90
45-45-90 Triangle	(1) the two legs are equal AND (2) the hypotenuse is $\sqrt{2}$ times the length of either leg
30-60-90 Triangle	(1) the longer leg is $\sqrt{3}$ times the length of the shorter leg AND (2) the hypotenuse is 2 times the length of the shorter leg
Acute Triangle	contains three acute angles
Obtuse Triangle	contains exactly one obtuse angle
Equilateral Triangle	contains three side of equal length

Right Triangles (cont)

Isosceles Triangle	contains two sides of equal length
Scalene Triangle	Contains no two sides are of the same length
Similar Triangles	when corresponding angles are equal, then corresponding sides are proportional

Circles

Circumference	π * Diameter
Circumference	2π Radius
Area	πr^2
Radian	the length of the arc on the unit circle
	180° = π radians
	1° = π/180
	(degrees) π/180 = radians
Unit Circle	has a radius of 1 and centered on a coordinate plane

Square Roots √

Quotient Property of Square Roots	$\sqrt{a}/\sqrt{b} = \sqrt{a/b}$
$\sqrt{1/4} = 1/2$	
$\sqrt{-x}$	not a real number
$-\sqrt{x}$	real number