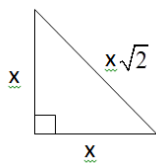
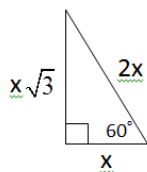


# GEOMETRY FINAL EXAM 2<sup>ND</sup> SEMESTER FORMULAS



## Unit 6/ Chapter 8 (Right Triangles)

- Pythagorean Theorem  $a^2 + b^2 = c^2$
- Classify Triangles
  - 1<sup>st</sup>: Triangle Test ( $a + b > c$ )
  - 2<sup>nd</sup>: Classify Triangle
    - $a^2 + b^2 > c^2$  (acute)
    - $a^2 + b^2 < c^2$  (obtuse)
    - $a^2 + b^2 = c^2$
- 30/60/90 Triangle
- 45/45/90 Triangle
- SOH-CAH-TOA
  - Looking for sides? Use proportion
  - Looking for an angle? Inverse



## Unit 8/ Chapter 10 (Area)

- Triangle:  $\frac{b \times h}{2}$
- Equilateral Triangle:  $\frac{s^2 \sqrt{3}}{4}$
- Rectangle:  $bh$
- Parallelogram:  $bh$
- Rhombus:  $\frac{d_1 \times d_2}{2}$  or  $bh$
- Kite:  $\frac{d_1 \times d_2}{2}$
- Trapezoid:  $\frac{b_1 + b_2}{2} \times h$  or  $Mh$
- Area of Regular Polygon:  $\frac{a \cdot p}{2}$
- Area of Circle:  $\pi r^2$
- Circumference of Circle:  $2\pi r$

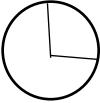

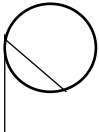
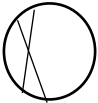
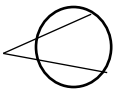
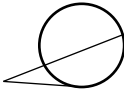
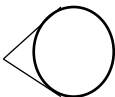
## Unit 8/ Chapter 11: Surface Area and Volume

	Prism	Cylinder	Pyramid	Cone	Sphere
LSA	$ph$	$\pi d \cdot h$	$\frac{pl}{2}$ (Reg. Only) $l =$ slant height	$\frac{\pi d \cdot l}{2}$	N/A
TSA	$LSA + 2B$ $B =$ area of base	$LSA + 2B$ $B = \pi r^2$	$LSA + B$ $B =$ area of base	$LSA + B$ $B = \pi r^2$	$4\pi r^2$
Volume	$Bh$ $B =$ area of base	$Bh$ $B = \pi r^2$	$\frac{B \cdot h}{3}$ $B =$ area of base	$\frac{B \cdot h}{3}$ $B = \pi r^2$	$\frac{4\pi r^3}{3}$

## Unit 7/ Chapter 12: Circles

Area of Sector:  $\pi r^2 \times \frac{m}{360}$

Arc Length:  $2\pi r \times \frac{m}{360}$

Name	Central Angle	Inscribed Angle	Inscribed Angle	Chord-Chord Angle	Secant-Secant Angle	Tangent-Secant Angle	Tangent-Tangent Angle
Where is the vertex located?	Center	On	On	In	Out	Out	Out
How is it formed?	2 Radii	Chord-Chord	Chord-Tangent	Chord-Chord	Secant-Secant	Tangent-Secant	Tangent-Tangent
Picture							
Formula	Angle = Arc	Angle = $\frac{1}{2}$ arc	Angle = $\frac{1}{2}$ arc	Angle = $\frac{\text{arc} + \text{arc}}{2}$	Angle = $\frac{\text{arc} - \text{arc}}{2}$	Angle = $\frac{\text{arc} - \text{arc}}{2}$	Angle = $\frac{\text{arc} - \text{arc}}{2}$

Equation of a Circle:  $(x - h)^2 + (y - k)^2 = r^2$

