

Annual Compound Percentage:

$$A = P(1 + r)^t$$

$r > 0$: increase

$r < 0$: decrease

$A = \text{amount}$

$P = \text{principle}$

$r = \text{rate \% (as decimal)}$

$t = \text{time (years)}$

Linear Equation:

$$ax + by = c$$

$$\text{slope} = \frac{-b}{a}$$

Slope Intercept Form:

$$y = mx + b$$

$m = \text{slope}$

$b = y - \text{intercept}$

For TWO lines:

	<i>slope</i>	<i>y - intercept</i>	<i># solutions</i>
	<i>same</i>	<i>different</i>	0
	<i>different</i>	<i>different</i>	1
	<i>same</i>	<i>same</i>	<i>infinite</i>

Quadratic Equation:

$$ax^2 + bx + c = 0$$

Sum of Solutions: $\frac{-b}{a}$

Quadratic Formula:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

<i>discriminant</i>	<i># real solutions</i>
$b^2 - 4ac < 0$	0
$b^2 - 4ac = 0$	1
$b^2 - 4ac > 0$	2

Vertex Form:

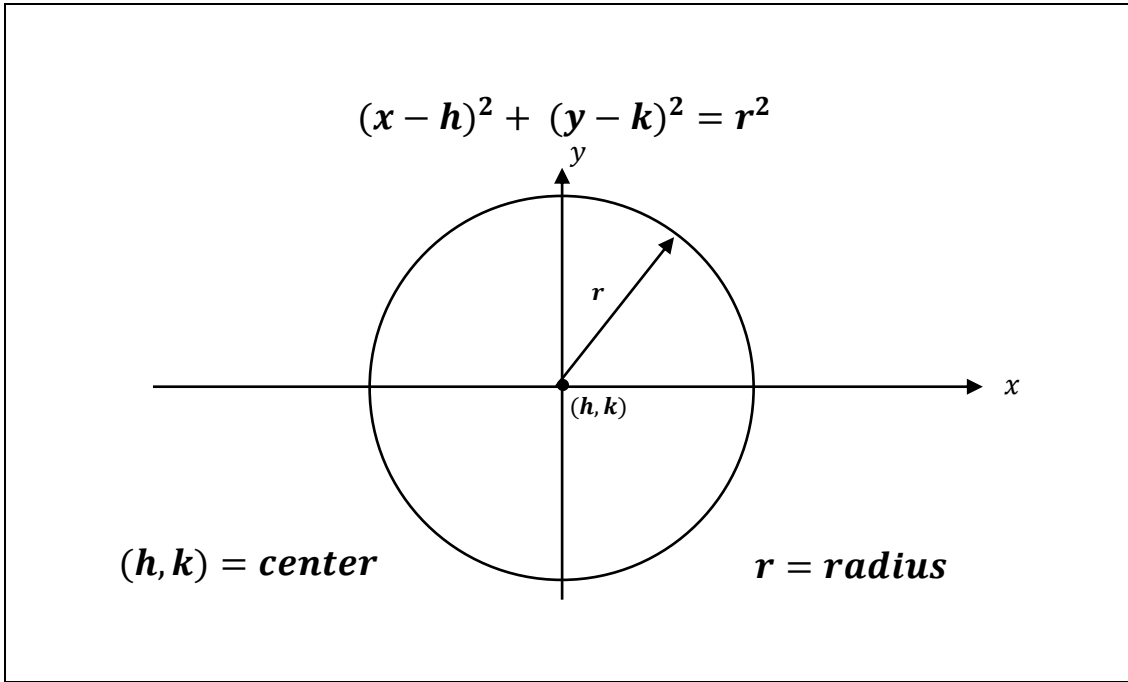
$$y = a(x - h)^2 + k$$

Vertex (*x value*): $\frac{-b}{2a}$

Vertex MINimum: $a > 0$ (*positive*)

Vertex MAXimum: $a < 0$ (*negative*)





SOH	$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$
CAH	$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$
TOA	$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$
$\sin A^\circ = \cos C^\circ = \sin(90^\circ - C^\circ) = \cos(90^\circ - A^\circ)$	

