

Equation	$b^2 - 4ac$	Sketch of graph	Number of x-intercepts (# of real zeros)
$y = x^2 + 6x + 9$ $a = 1 \quad b = 6 \quad c = 9$	$(6)^2 - 4(1)(9)$ $36 - 36$ $\boxed{0}$		1 Real
$y = x^2 - 2x - 3$ $a = 1 \quad b = -2 \quad c = -3$	$(-2)^2 - 4(1)(-3)$ $4 + 12$ $\boxed{16}$		2 Real
$y = -x^2 - 3x - 5$ $a = -1 \quad b = -3 \quad c = 5$	$(-3)^2 - 4(-1)(5)$ $9 - 20$ $\boxed{-11}$		0 Real 2 Imaginary
$y = -4x^2 - 8x - 4$ $a = -4 \quad b = -8 \quad c = 4$	$(-8)^2 - 4(-4)(4)$ $64 - 64$ $\boxed{0}$		1 Real
$y = x^2 - 6x + 8$ $a = 1 \quad b = -6 \quad c = 8$	$(-6)^2 - 4(1)(8)$ $36 - 32$ $\boxed{4}$		2 Real
$y = 2x^2 + 5x + 6$ $a = 2 \quad b = 5 \quad c = 6$	$(5)^2 - 4(2)(6)$ $25 - 48$ $\boxed{-23}$		0 Real 2 Imaginary