Quiz 8: Math 40
Name (print) KEY

Determine the number and the type of the solution for the equation $3x^2 - 2x + 1 = 0$

$D = (-2)^2 - 4(3)(1)$

$= 4 - 12 = -8 < 0$

Two imaginary Solutions

Write a quadratic equation having the solutions $-2, 5$.

$(x+2)(x-5)$

Without graphing, determine the minimum or maximum of the function $y = 2x^2 + 4x + 6$

$y = 2(x^2 + 2x + 3)$

$= 2(x^2 + 2x + 1 - 1 + 3)$

$= 2[(x+1)^2 + 2]$

$= 2(x+1)^2 + 4$

$-1, 4$

Graph

$y = x^2 + 6x + 6$

$y = x^2 + 6x + 9 - 9 + 6$

$y = (x+3)^2 - 3$

x	y
1	1
2	-2
3	-3
4	-2
5	1