Are there any Homework Questions you would like to see on the board?

p. 232 # 2def, 4 **AND**
p.194 # 6 **AND** 6a c
p. 214 # 4, 6a-e, 7a-e, 8 **AND** 6d 6 7a
READ p. 225 **AND**
Work ahead on Mid-chapter Review: p. 226 # 1 – 4

Today's Learning Goal(s):

By the end of the class, I will be able to:

a) Complete the square to obtain the vertex form of a quadratic function.
b) Complete the square with functions that involve fractional values.

Return: SWYK 4.1

p. 232 **2.** Determine the number of real solutions of each quadratic equation. Do not solve.

d) $3(x + 5)^2 + 7 = 0$ **e)** $-2(x - 5)^2 + 3 = 0$ **f)** $4(x + 1)^2 = 0$

p. 232 **4.** Determine whether each quadratic function intersects the x-axis at one point, two points, or not at all. Do not draw the graph.

K

a) $f(x) = 3x^2 + 6x - 1$

b) $g(x) = 4(x - 6)^2 + 2$

c) $f(x) = 9x^2 - 30x + 25$

d) $g(x) = -3(x - 5)^2 + 2$

e) $f(x) = 2x^2 + 3x + 5$

f) $g(x) = -3(x + 2)^2$

p. 194 **6.** What term will make each expression a perfect trinomial square?

a) $x^2 + 6x + \square$

x^2+6x+9

$(x+3)^2$

$\left(\frac{1}{2}(6)\right)^2$

$=(3)^2$

$=9$

$\left(\frac{1}{2}(12)\right)^2$

c) $4x^2 + \square + 49$

$28x$

$(2x+7)^2$

$2(2x)(7)$

$(a+b)^2$

$a^2+2ab+b^2$

p. 214 **6.** Write the function in vertex form.

b) $f(x) = x^2 - 12x + 35$

$=x^2-12x+36-36+35$

$=(x-6)^2-1$

$\therefore V(6,-1)$

d) $f(x) = -x^2 + 6x + 7$

$=-(x^2-6x)+7$

$=-(x^2-6x+9-9)+7$

$=-(x-3)^2-(-9)+7$

$=-(x-3)^2+9+7$

$=-(x-3)^2+16$

$V(3,16)$

p. 214 **7.** Complete the square to express each function in vertex form. Then graph each, and state the domain and range.

a) $f(x) = x^2 - 4x + 5$ d) $f(x) = -x^2 + 2x - 7$

$= x^2 - 4x + 4 - 4 + 5$

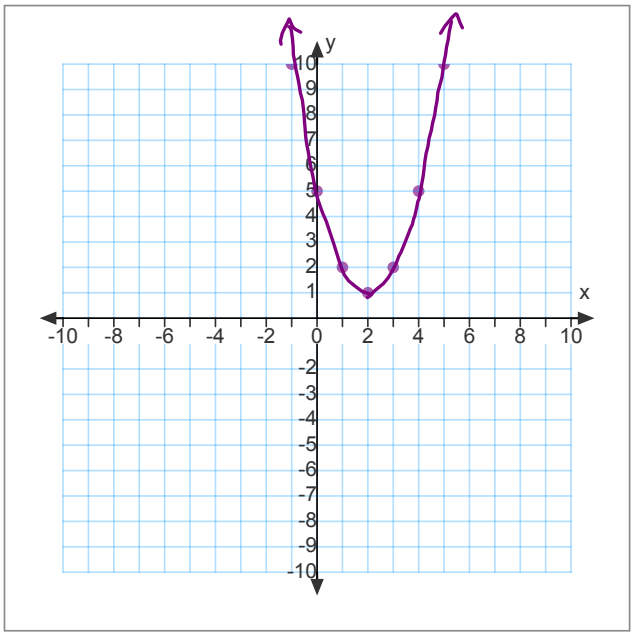
$= (x-2)^2 + 1$

$\therefore V(2, 1)$

MG	$a=1$
1	1
2	4
3	9

$D: \{x \in \mathbb{R}\}$

$R: \{y \in \mathbb{R} / y \geq 1\}$



MCF 3MI

4.2 Cont'd (More Completing the Square)

Date: Oct. 29/19

Ex. 1 Write $y = 2x^2 - 6x + 7$ in vertex form by completing the square.

$= 2(x^2 - 3x) + 7$

$= 2(x^2 - 3x + 1.5^2 - 1.5^2) + 7$

optimal * $= 2(x^2 - 3x + 2.25 - 2.25) + 7$

$= 2(x - 1.5)^2 + 2(-2.25) + 7$

$= 2(x - 1.5)^2 - 4.5 + 7$

$= 2(x - 1.5)^2 + 2.5$

Today's Assigned Practice:

pp. 214-215 # 6f, 7f, 10, 11 **AND**
READ p. 225 **AND**
p.226 # 1-11

Today's Assigned Practice:

pp. 214-215 # 6f, 7f, 10, 11 **AND**
READ p. 225 **AND**
p.226 # 1-11

p.214 6f) $y = 2x^2 + 3x + 1$

$= 2(x^2 + 1.5x) + 1$