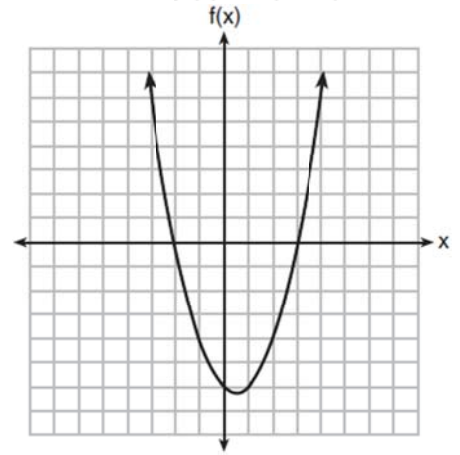**DO NOW:** The graph of the function $f(x) = ax^2 + bx + c$ is given below. Could the factors of $f(x)$ be $(x + 2)$ and $(x - 3)$? Based on the graph, explain why or why *not*.

AIM: COMPLETING THE SQUARE (a = 1) (Day 2)

1. Find the exact roots of $x^2 + 10x - 8 = 0$ by completing the square.

Simplest radical form: _____

To the nearest hundredth: _____

2. Solve the equation $x^2 - 6x = 15$ by completing the square.

Simplest radical form: _____

To the nearest tenth: _____

3. Which step can be used when solving $x^2 - 6x - 25 = 0$ by completing the square?

1) $x^2 - 6x + 9 = 25 + 9$

2) $x^2 - 6x - 9 = 25 - 9$

3) $x^2 - 6x + 36 = 25 + 36$

4) $x^2 - 6x - 36 = 25 - 36$

4. When solving the equation $x^2 - 8x - 7 = 0$ by completing the square, which equation is a step in the process?

1) $(x-4)^2 = 9$

2) $(x-4)^2 = 23$

3) $(x-8)^2 = 9$

4) $(x-8)^2 = 23$

5. If $x^2 + 2 = 6x$ is solved by completing the square, an intermediate step would be

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

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

3) $(x-3)^2 = 11$

4) $(x-6)^2 = 34$

6. If $x^2 = 12x - 7$ is solved by completing the square, one of the steps in the process is

1) $(x-6)^2 = -43$

2) $(x+6)^2 = -43$

3) $(x-6)^2 = 29$

4) $(x+6)^2 = 29$

7. Find the exact roots of $x^2 - 4x - 9 = 0$ by completing the square.

Simplest radical form: _____

To the nearest hundredth: _____

Name:_____   Date:_____

UNIT 8   **LESSON 7**

HW#_____

1) Solve for the zeros by completing the square in *simplest radical form* and round decimals to the nearest tenth.

         Completing the Square   *Completing the Square*

    a) $x^2 + 4x - 1 = 0$ b) $x^2 - 6x - 25 = 0$

Simplest radical form: _____ | Simplest radical form: _____

To the nearest tenth: _____ | To the nearest tenth: _____

Don't forget Textbook Homework!