Bell Work

1. What is the quadratic formula?

2. What is the range in set notation of the domain of the linear parent function?

3. Divide and show all work. $\dfrac{3-5i}{-2+3i}$

4. Find the roots of this quadratic function. Show all work.

$$f(x) = 6x^2 - 13x - 5$$
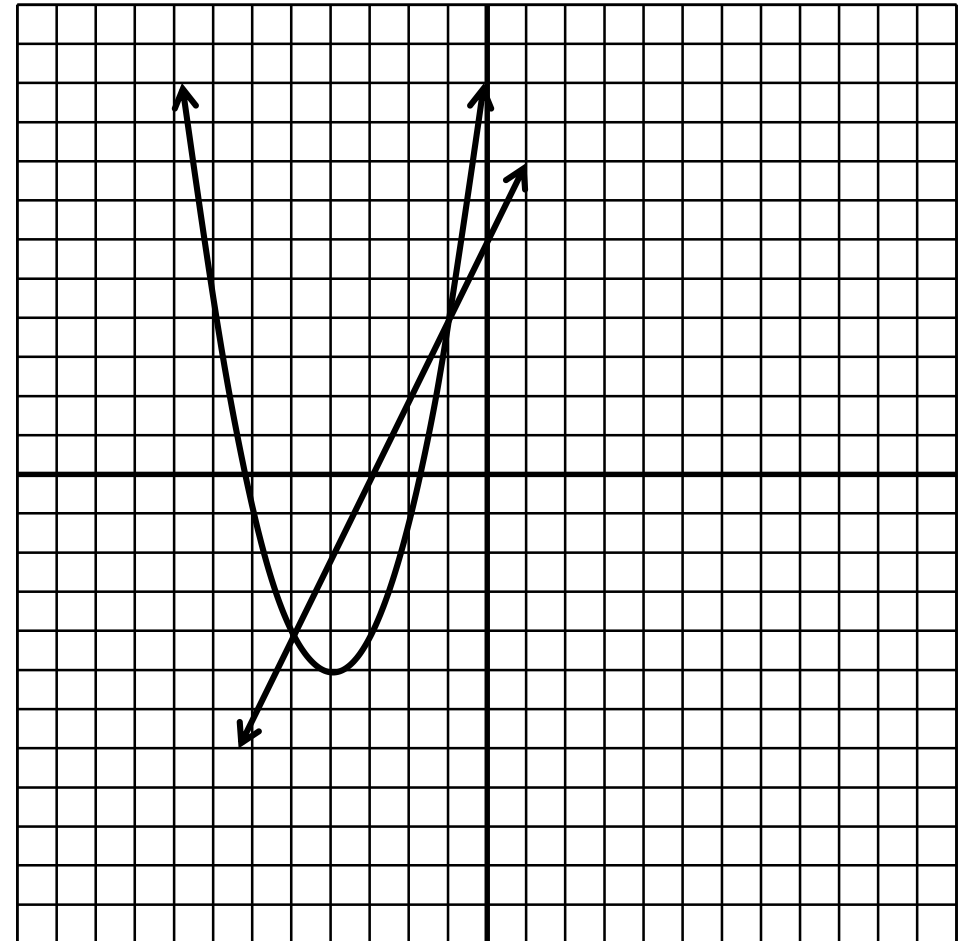
Graph both functions to find the intersection.

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

Graph both
functions.

$$g(x) = 2x + 6$$

Find both intersections.

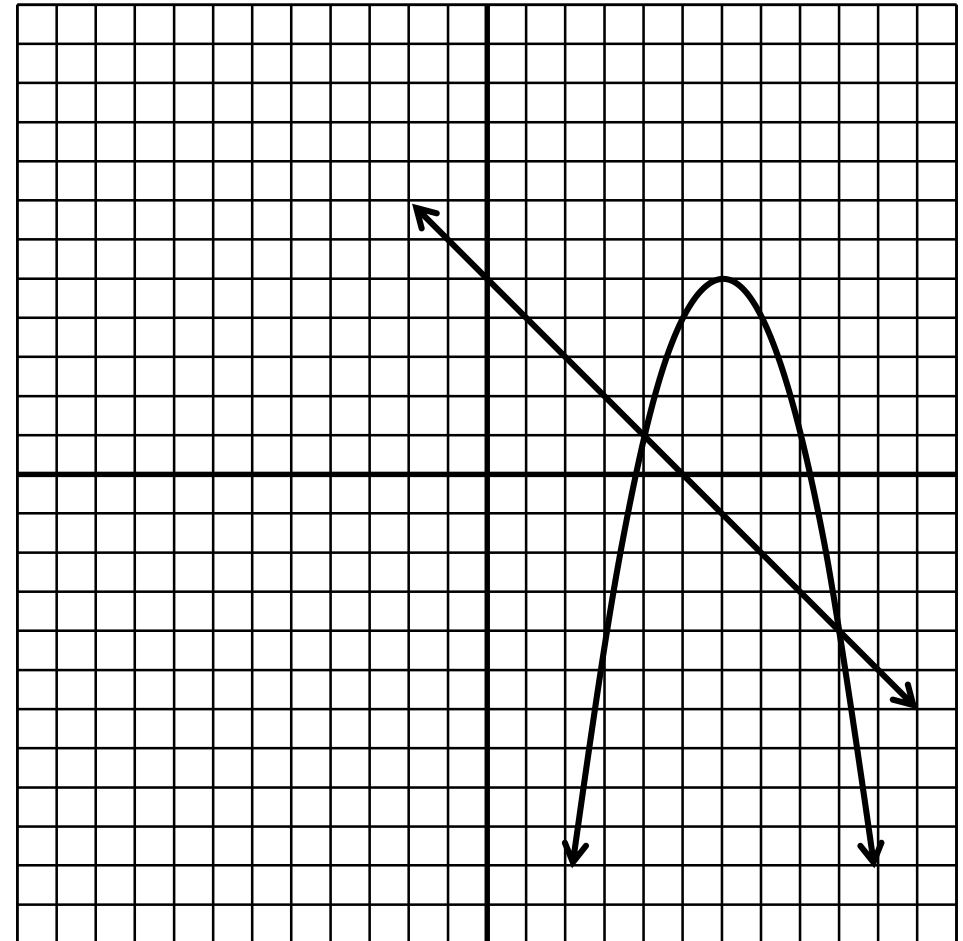(-1, 4) & (-5, -4)

Graph both functions to find the intersection.

$$f(x) = -(x-6)^2 + 5$$

Graph both functions.

$$g(x) = -x + 5$$

Find both intersections.

(4, 1) & (9, -4)

Graph both functions to find the intersection.

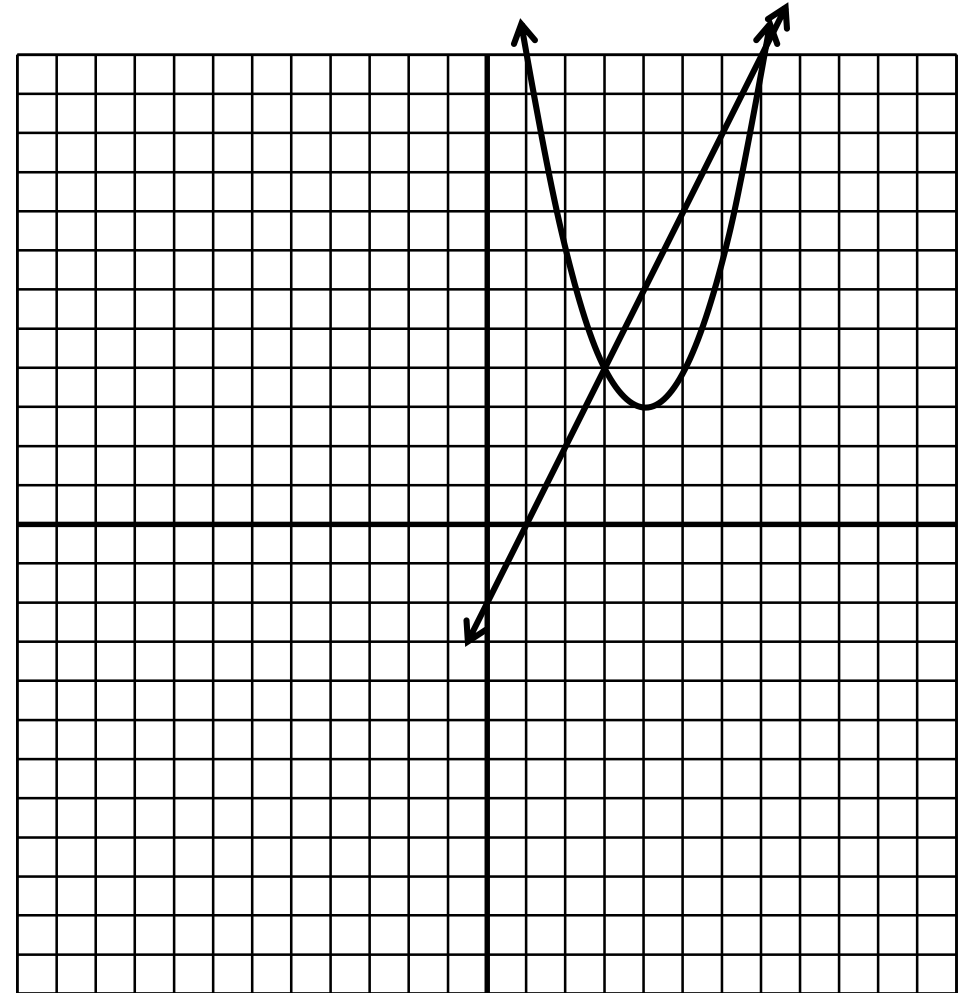$$f(x) = (x-4)^2 + 3$$

Graph both functions.

$$g(x) = 2x - 2$$

Find both intersections.

(3, 4) & (7, 12)

Graph both functions to find the intersection.

$$f(x) = x^2 + 10x + 18$$

Graph both functions.

$$g(x) = 3x + 8$$

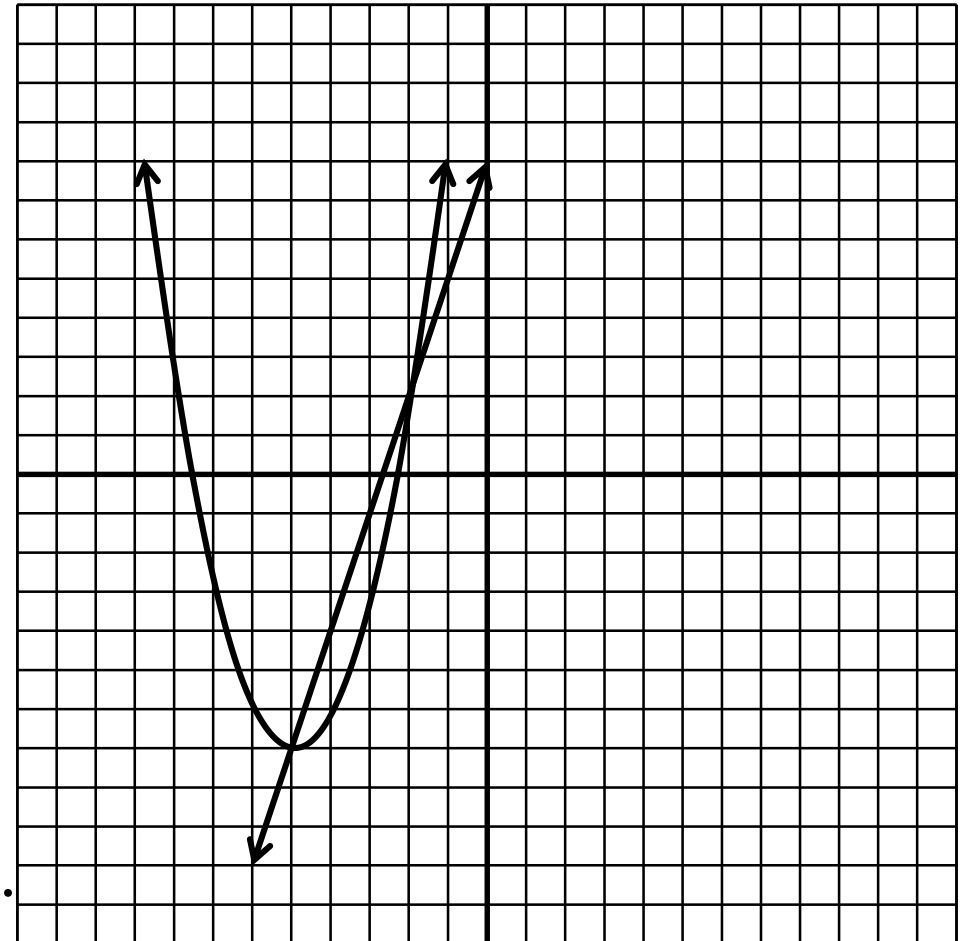**Complete the square to find the vertex.**

$$f(x) - 18 = x^2 + 10x$$

$$f(x) - 18 + 25 = x^2 + 10x + 25$$

$$f(x) + 7 = (x + 5)^2$$

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

Find both intersections.

(-2, 2) & (-5, -7)

Graph both functions to find the intersection.

$$f(x) = x^2 - 14x + 43$$

Graph both functions.

$$g(x) = -2x + 11$$

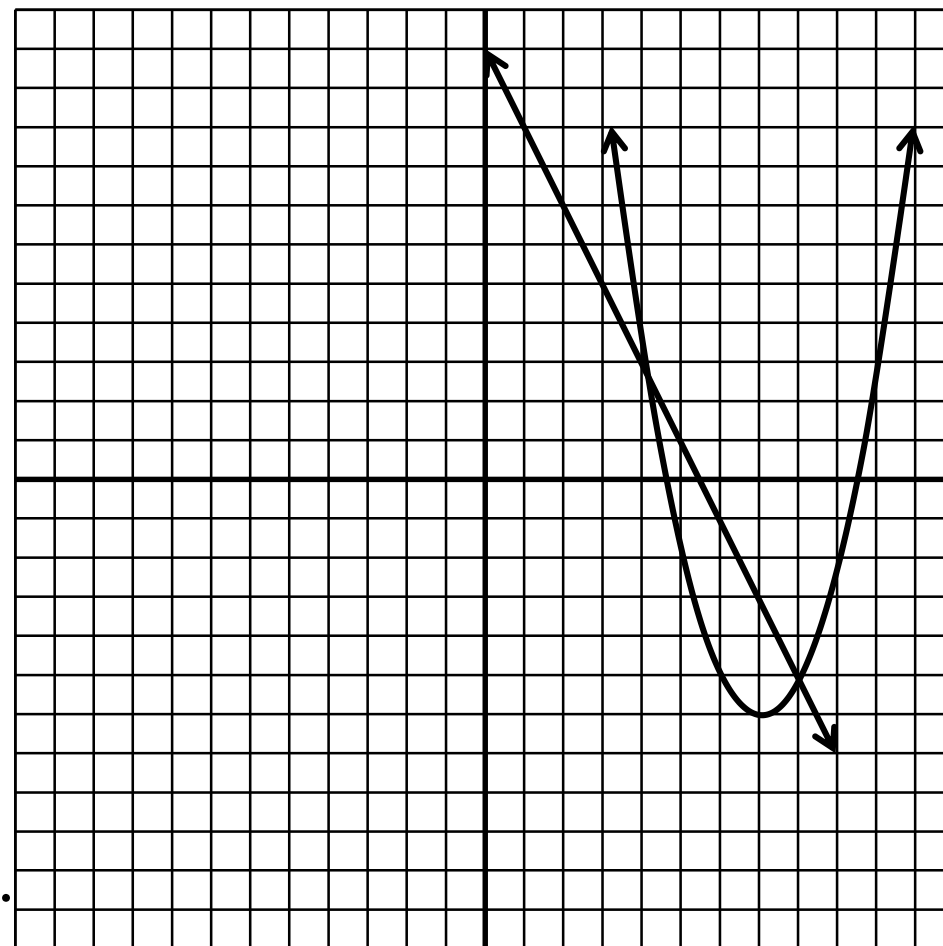Complete the square to find the vertex.

$$f(x) - 43 = x^2 - 14x$$

$$f(x) - 43 + 49 = x^2 - 14x + 49$$

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

Find both intersections.

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

(-2, 2) & (-5, -7)

Assignment:

Graphing Quadratic and Linear Functions Worksheet