

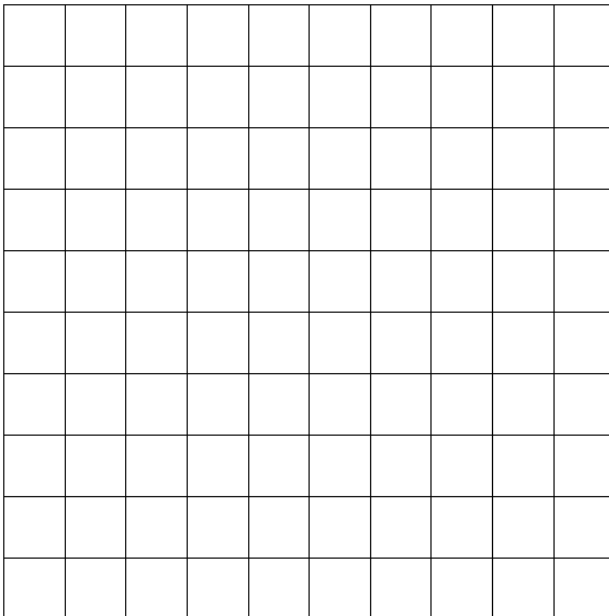
d. $f(x) = x^2 - 8$

e. $f(x) = 2x^2 + 16$

3. Find the solutions to the following equation and graph the function. Be sure to include the vertex and line of symmetry.

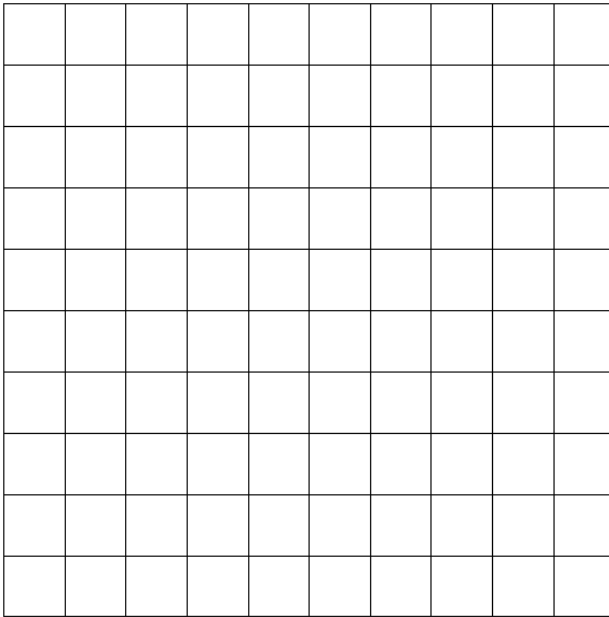
a. $f(x) = -8x^2 + 2x + 6$

10 x 10 Grid



b. $f(x) = x^2 + x - 6$

10 x 10 Grid



4. What is the relationship between the vertex and the x-intercepts of a quadratic?

5. Solve by completing the square:

a. $f(x) = x^2 - 6x + 12$

b. $f(x) = x^2 - 8x - 1$

6. Factor the following higher degree polynomials:

a. $f(x) = 5x^3 - 30x^2 - 2x - 12$

b. $f(x) = 3x^3 + 2x^2 + 3x$

7. Simplify:

a. $f(x) = -9(6m - 3) + 6(1 + 4m)$

b. $f(x) = (x - 3)^2 + 6(1 - 4x)$