

Quadratic Functions

Lesson 1 and 2 Homework – MUST SHOW ALL WORK!!!!

A. For each problem from 1 - 4, (a) graph the quadratic function using a table – at least 5 points, (b) name the axis of symmetry, (c) name the vertex, (d) name the y-intercept, and (e) tell the domain and range. **You must show all work!**

1. $f(x) = -x^2 - 8x - 13$

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

3. $f(X) = x^2 - 4X - 3$

4. $Y = \frac{1}{2}x^2 + 3X - 5$

B. Write the equation in vertex form given the vertex and a point.

5. Vertex (0, -3) Point (2, -2)

6. Vertex (0, 2) Point (1, -4)

7. Vertex (2, 3) point (4, 7)

8. Vertex (-3, -5) point (1, 5)

C. Convert between vertex and standard form.

9. $y = (x + 3)^2 - 6$ change to standard form.

10. $y = (x - 2)^2 + 5$ change to standard form.

11. $y = x^2 - 16x + 14$ change to vertex form

12. $y = x^2 - 12x + 46$ change to vertex form