

Quadratic Project

Part 1

1. Choose one of the following quadratic functions in standard form:

$$y = x^2 - 6x, y = x^2 - 6x + 5, y = x^2 + 4x + 3$$

2. Calculate the Zeros using Factoring, Completing the Square, and the Quadratic Formula.
3. Make a table and neatly graph the quadratic function on graph paper (Label the vertex, axis of symmetry, y-intercept, and zeros).

Part 2

1. Choose one of the following quadratic functions in vertex form:

$$y = 2(x-1)^2 + 2, y = -\frac{1}{2}(x+2)^2 + 4, y = -3(x+1)^2 - 2$$

2. What is the axis of symmetry, vertex, and y-intercept? Is the vertex a maximum or minimum and why? Is the parabola narrow or wide and why?
3. Make a table and neatly graph the quadratic function on graph paper (Label the vertex, axis of symmetry, and y-intercept).

The project is worth 30 points. There will be 10 points for neatness, and 20 points for the correct mathematics. You may earn up to 10 points extra credit by making a poster of your project. It is due on _____.

Quadratic Project

Part 1

1. Choose one of the following quadratic functions in standard form:

$$y = x^2 - 6x, y = x^2 - 6x + 5, y = x^2 + 4x + 3$$

2. Calculate the Zeros using Factoring, Completing the Square, and the Quadratic Formula.
3. Make a table and neatly graph the quadratic function on graph paper (Label the vertex, axis of symmetry, y-intercept, and zeros).

Part 2

1. Choose one of the following quadratic functions in vertex form:

$$y = 2(x-1)^2 + 2, y = -\frac{1}{2}(x+2)^2 + 4, y = -3(x+1)^2 - 2$$

2. What is the axis of symmetry, vertex, and y-intercept? Is the vertex a maximum or minimum and why? Is the parabola narrow or wide and why?
3. Make a table and neatly graph the quadratic function on graph paper (Label the vertex, axis of symmetry, and y-intercept).

The project is worth 30 points. There will be 10 points for neatness, and 20 points for the correct mathematics. You may earn up to 10 points extra credit by making a poster of your project. It is due on _____.