Name: _____

Parabolas

Exercise 1: Find the vertex point, axis of symmetry, x and y intercepts and graph.

1) $y = x^2 + 2x - 3$

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

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

4) $y = 5(x + 2)^2 - 7$

Exercise 2: Write the equation of the parabola in standard form, then find all its elements.

1) $y = 3x^2 + 6x + 8$

2) $y = x^2 + 2x + 1$

3) $y = x^2 + 6x + 9$

4) $y = 2x^2 + 4x + 5$

5) $y = 2x^2 + 4x + 6$

6) $y = x^2 - 20x + 95$

7) $y = x^2 + 18x + 95$

8) $y = x^2 - 16x + 71$

9) $y = x^2 + 18x + 71$

10) $y = x^2 + 14x + 40$

Exercise 3: Write the equation of the graph.

1)

2)

3)

4)