Name: _____ **Unit 8:** Quadratic Equations

Date: _____ **Bell:** _____ **Homework 1:** Intro to Quadratics

**** This is a 2-page document! ****

Complete the following statements.

1. The **standard form** of a quadratic equation is _____.

2. The **curve** formed by a quadratic equation is called a _____.

3. The formula for the **axis of symmetry** is _____.

4. If the **vertex** is the **highest point** on the graph, it is called a _____.

5. If a **vertex** is the **lowest point** on a graph, it is called a _____.

Find the axis of symmetry and vertex for the following quadratic equations. Then, sketch the parabola and label all parts.

6. $y = x^2 + 6x + 4$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

7. $y = -2x^2 + 8x - 5$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

8. $y = x^2 - 2x$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

9. $y = -x^2 - 8x - 9$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

10. $y = -5x^2 - 20x - 26$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

11. $y = x^2 - 4$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

12. $y = -x^2 + 2x - 4$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

13. $y = -3x^2$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

14. $y = 2x^2 - 12x + 10$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch:

15. $y = x^2 + 10x + 24$ **Axis of Symmetry:** _____ **Vertex:** _____

Sketch: