LESSON 8-1 Practice B

Identifying Quadratic Functions

Tell whether each function is quadratic. Explain.
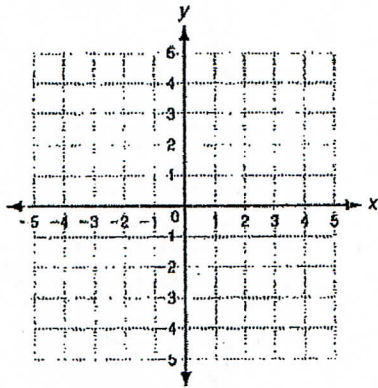
1. (0, 6), (1, 12), (2, 20), (3, 30)

2. $3x + 2y = 8$

_____   _____

_____   _____

Use a table of values to graph each quadratic function.

3. $y = -\dfrac{1}{2}x^2$

x	y

4. $y = 2x^2 - 3$

x	y

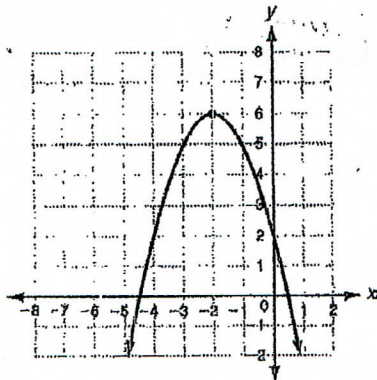**Tell whether the graph of each quadratic function opens upward or downward. Explain.**

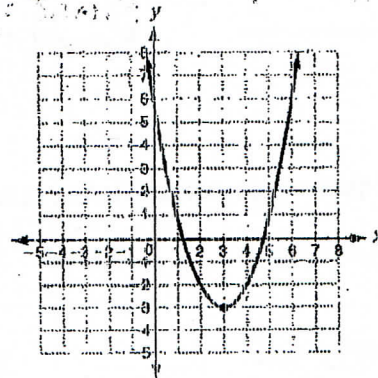5. $y = -3x^2 + 5$

6. $-x^2 + y = 8$

_____   _____

_____   _____

For each parabola, a) identify the vertex; b) give the minimum or maximum value of the function; c) find the domain and range.

7.

8.
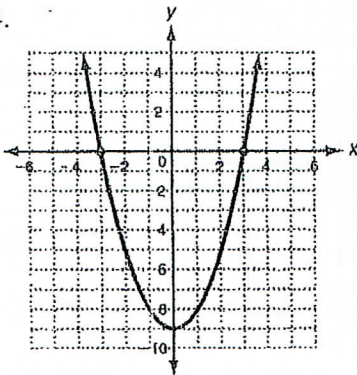

a. _____   a. _____

b. _____   b. _____

c. _____   c. _____

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 _____

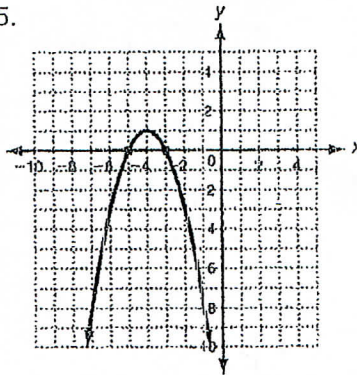Find the axis of symmetry , vertex , and the domain and range in interval notation.

4.

5.

6.

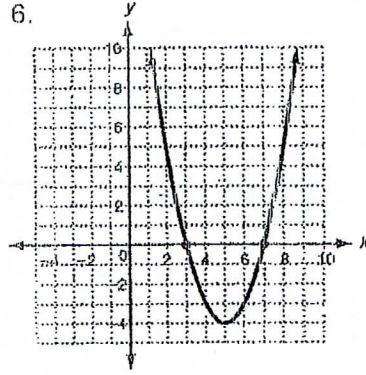AOS: _____   AOS: _____   AOS: _____

Vertex: _____   Vertex: _____   Vertex: _____

Domain: _____   Domain: _____   Domain: _____

Range: _____   Range: _____   Range: _____

Order each group of quadratic functions from widest to narrowest graph.

22. $y = x^2, y = 5x^2, y = 3x^2$

23. $y = -8x^2, y = \frac{1}{2}x^2, y = -x^2$

24. $y = 5x^2, y = -4x^2, y = 2x^2$

25. $y = -\frac{1}{2}x^2, y = \frac{1}{3}x^2, y = -3x^2$

26. $y = 6x^2, y = -7x^2, y = 4x^2$

27. $y = \frac{3}{4}x^2, y = 2x^2, y = \frac{1}{5}x^2$