

# EXTRA PRACTICE — Exercises

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## Unit IX – The Conic Sections

### Part A – Parabolas - The Quadratic Function

#### Lesson 2 – Parabolas

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Graph the solution set for each of the following second degree equations. In addition, identify the vertex and the axis of symmetry, and note whether the graph opens up or down.

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

$$y = -4x^2$$

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

4.  $y = -\frac{1}{2}x^2$

5.  $y = \frac{2}{3}x^2$

6.  $y = -\frac{3}{2}x^2$

# EXTRA PRACTICE — Answer Key

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## Unit IX – The Conic Sections

### Part A – Parabolas - The Quadratic Function

#### Lesson 2 – Parabolas

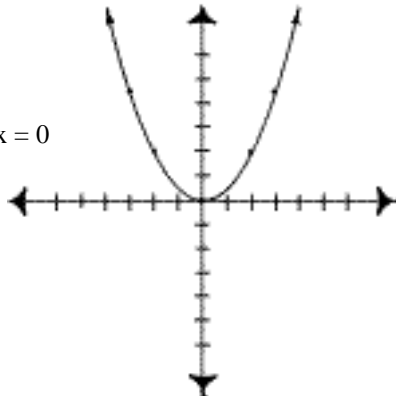
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Graph the solution set for each of the following second degree equations. In addition, identify the vertex and the axis of symmetry, and note whether the graph opens up or down.

1. vertex: (0,0)

Axis of Symmetry:  $x = 0$

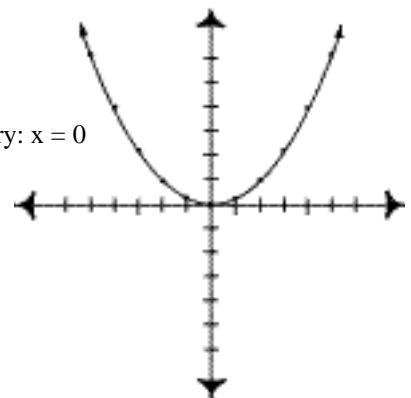
Opens Up



2. vertex: (0,0)

Axis of Symmetry:  $x = 0$

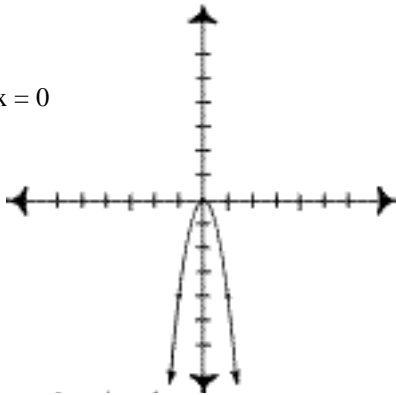
Opens Up



3. vertex: (0,0)

Axis of Symmetry:  $x = 0$

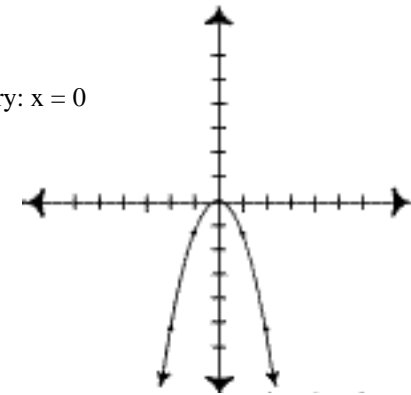
Opens Down



4. vertex: (0,0)

Axis of Symmetry:  $x = 0$

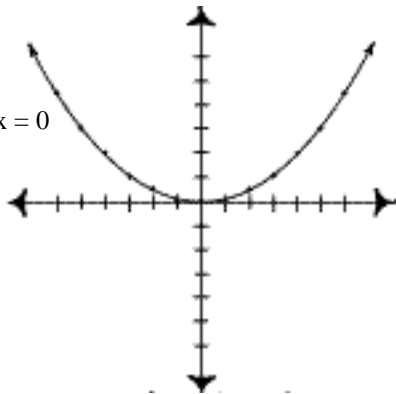
Opens Down



5. vertex: (0,0)

Axis of Symmetry:  $x = 0$

Opens Up



6. vertex: (0,0)

Axis of Symmetry:  $x = 0$

Opens Down

