

# EXTRA PRACTICE — Exercises

Copyright © 2003 by Videotext *Interactive*

## Unit IX – The Conic Sections

### Part A – Parabolas - The Quadratic Function

#### **Lesson 4 – Parabolas, $y = x^2 + k$**

---

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.  $y = x^2 + 1$

2.  $y = x^2 - 3$

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

4.  $y = x^2 - 8$

5.  $y = x^2 + 4$

# EXTRA PRACTICE — Answer Key

Copyright © 2003 by Videotext Interactive

## Unit IX – The Conic Sections

### Part A – Parabolas - The Quadratic Function

#### Lesson 4 – Parabolas, $y = x^2 + k$

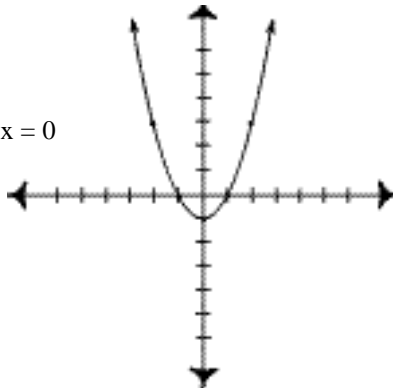
---

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:  $(0, -1)$

Axis of Symmetry:  $x = 0$

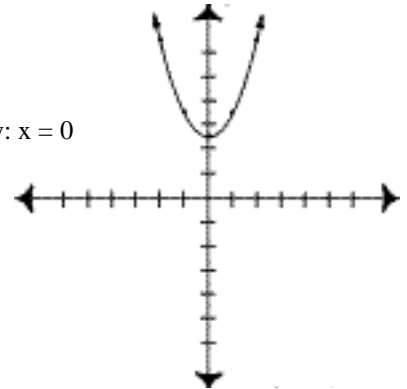
Opens Up



2. vertex:  $0, \frac{5}{2}$

Axis of Symmetry:  $x = 0$

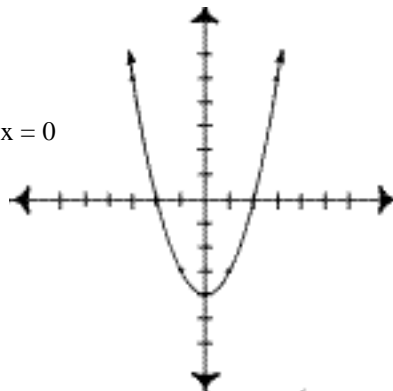
Opens Up



3. vertex:  $(0, -4)$

Axis of Symmetry:  $x = 0$

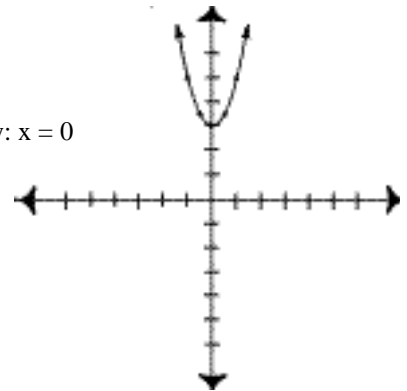
Opens Up



4. vertex:  $(0, 6)$

Axis of Symmetry:  $x = 0$

Opens Up



5. vertex:  $0, \frac{-7}{2}$

Axis of Symmetry:  $x = 0$

Opens Up

