Online ebook Notes

3.4   Using the Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$
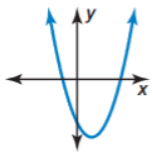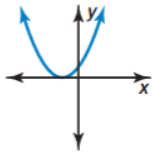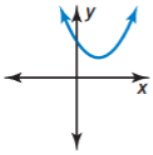
Monitoring Progress

Solve the equation using the Quadratic Formula.

1. $x^2 - 6x + 4 = 0$

2. $2x^2 + 4 = -7x$

4. $x^2 + 41 = -8x$

Analyzing the Discriminant of $ax^2 + bx + c = 0$

Value of discriminant	$b^2 - 4ac > 0$	$b^2 - 4ac = 0$	$b^2 - 4ac < 0$
Number and type of solutions	Two real solutions	One real solution	Two imaginary solutions
Graph of $y = ax^2 + bx + c$	Two x-intercepts	One x-intercept	No x-intercept

Monitoring Progress

Find the discriminant of the quadratic equation and describe the number and type of solutions of the equation.

7. $4x^2 + 8x + 4 = 0$

9. $5x^2 = 8x - 13$

10. $7x^2 - 3x = 6$