

# 5.25

## Roots of a Quadratic Equation with Leading Coefficient Greater than 1

### • Example 1

Solve

$$2x^2 + 5x = 3$$

We rewrite this quadratic equation in the form

$$2x^2 + 5x - 3 = 0$$

and obtain the factorization

$$2x^2 + 5x - 3 = (x + 3)(2x - 1) = 0$$

The roots are thus  $x = -3$  and  $x = \frac{1}{2}$ . These are the solutions for the original equation.

### • • • CHECK YOURSELF 1

Solve.

**a.**  $3x^2 - 5x = 2$

**b.**  $2x^2 + 3 = 7x$

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### • • • CHECK YOURSELF ANSWER

**1.** (a)  $2, -\frac{1}{3}$ ; (b)  $3, \frac{1}{2}$ .

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# 5.25 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

Solve each of the following quadratic equations.

1.  $2x^2 + 5x - 3 = 0$

2.  $3x^2 + 7x + 2 = 0$

3.  $4x^2 - 24x + 35 = 0$

4.  $6x^2 + 11x - 10 = 0$

5.  $3x^2 - 5x - 2 = 0$

6.  $4x^2 - 13x + 10 = 0$

7.  $3x^2 + x - 2 = 0$