

Complete each problem.

1. Solve the quadratic equation using the Zero Product Property.

$$(4x - 3)(2x + 3) = 0$$

2. Write each pair of solutions under the appropriate equation.

$$x = 5 \text{ or } x = -6$$

$$x = \frac{3}{4} \text{ or } x = -\frac{4}{3}$$

$$x = -5 \text{ or } x = 6$$

$$x = -\frac{3}{4} \text{ or } x = \frac{4}{3}$$

$$(x + 5)(x - 6) = 0$$

$$(4x + 3)(3x - 4) = 0$$

$$(4x - 3)(3x + 4) = 0$$

$$(x - 5)(x + 6) = 0$$

3. Which quadratic equations are written in standard form? Select all that apply.

$x^2 = 3x + 6$

$7x^2 + 2x = 0$

$4x^2 - 16 = 0$

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

4. Which are the solutions of the equation  $4x^2 - 36x = 0$ ?

$x = 4 \text{ or } x = 9$

$x = 0 \text{ or } x = 9$

$x = 0 \text{ or } x = -9$

$x = 3 \text{ or } x = -3$

Solve each quadratic equation by factoring.

5.  $x^2 + 7x - 18 = 0$

6.  $6x^2 - 11x - 2 = 0$

7.  $8x^2 + 6x - 9 = 0$

8.  $5x^2 = 45$

9.  $4x^2 + 9 = -12x$

10. Explain the error in Talore's work solving the quadratic equation.

Talore	
$x(x-10) = -24$	
$x = -24$	or $x - 10 = -24$
$x = -24$	or $x = -14$

Correctly solve  $x(x-10) = -24$  by factoring.

11. Solve the quadratic equation by factoring.

$$(x-1)(x-6) = -2x$$