Complete each problem.

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

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

   $\boldsymbol{x = \frac{3}{4}}$ **or** $\boldsymbol{x = -\frac{3}{2}}$

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

$x = 5$ or $x = -6$	$x = \frac{3}{4}$ or $x = -\frac{4}{3}$	$x = -5$ or $x = 6$	$x = -\frac{3}{4}$ or $x = \frac{4}{3}$

$(x + 5)(x - 6) = 0$ **$x = -5$ or $x = 6$**	$(4x + 3)(3x - 4) = 0$ **$x = -\frac{3}{4}$ or $x = \frac{4}{3}$**
$(4x - 3)(3x + 4) = 0$ **$x = \frac{3}{4}$ or $x = -\frac{4}{3}$**	$(x - 5)(x + 6) = 0$ **$x = 5$ or $x = -6$**

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 $4x^2 - 36x = 0$?

   ○ $x = 4$ or $x = 9$

   ◉ **$x = 0$ or $x = 9$**

   ○ $x = 0$ or $x = -9$

   ○ $x = 3$ or $x = -3$

Solve each quadratic equation by factoring.

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

$x = -9$ or $x = 2$

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

$x = -\frac{1}{6}$ or $x = 2$

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

$x = \frac{3}{4}$ or $x = -\frac{3}{2}$

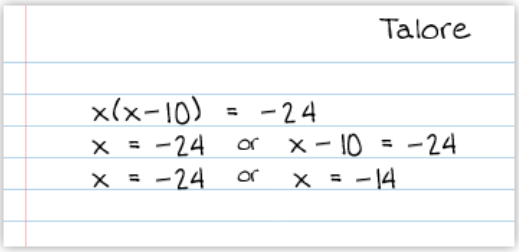
8. $5x^2 = 45$

$x = -3$ or $x = 3$

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

$x = -\frac{3}{2}$

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



Sample answer:

The Zero Product Property only applies when the product of two factors equals zero. So Talore cannot set each factor equal to –24.

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

$x = 4$ or $x = 6$

11. Solve the quadratic equation by factoring.

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

$x = 3$ or $x = 2$