Name _____

# 9-2 Reteach to Build Understanding

## Solve Quadratic Equations by Factoring

**1.** Match each equation with its factored form. Then match each factored form with its solution.

| | | |
|---|---|---|
| $x^2 + 2x - 3 = 0$ | $(x - 5)(x - 2) = 0$ | Solutions: $-6$ and $-4$ |
| $x^2 + 10x + 3 = -21$ | $(x - 1)(x + 3) = 0$ | Solutions: $-3$ and $1$ |
| $x^2 - 7x - 3 = -13$ | $(x + 4)(x + 6) = 0$ | Solutions: $2$ and $5$ |

**2.** Nora made an incorrect statement when using factoring to solve the equation $x^2 + 2x - 12 = 3$. Put an X next to the incorrect statement. Correct her error.

The standard form of the equation is $x^2 + 2x - 15 = 0$.

The factored form of the equation is $(x - 3)(x + 5) = 0$.

Because $(x - 3)(x + 5) = 0$, you can use the Zero-Product Property to write $(x - 3) = 0$ or $(x + 5) = 0$.

The solutions of the equation are $-3$ and $5$.

The $x$-coordinate of the vertex of the related function is $-1$.

**3.** Write the factored form of the equation $x^2 - 4x + 3 = 15$. Then find the solutions.

Write the equation in standard form. $x^2 - 4x$ _____ $= 0$

Factor the quadratic equation. $(x$ _____$)(x$ _____$) = 0$

Determine the solutions. $(x$ _____$) = 0$ or $(x$ _____$) = 0$

$x =$ _____ $x =$ _____

The solutions of the equation $x^2 - 4x + 3 = 15$ are _____ and _____.