

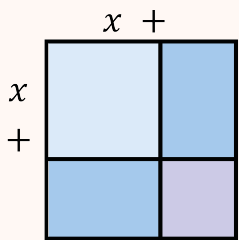
TOPIC: COMPLETING THE SQUARE

Complete the Square

◆ If a quadratic isn't in the form $(x + h)^2 = k$, you can _____ put it in that form by **completing the square**.

New

Completing the Square


$$x^2 + 6x + 12$$

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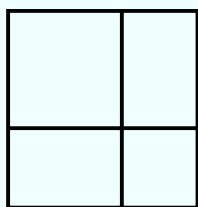
$$(\quad + \quad)^2 = x^2 + 2x + \underline{\quad}$$

◆ Once you complete the square you can use the _____ property to solve the quadratic.

EXAMPLE

Solve the quadratic equation by completing the square.

$$x^2 + 6x - 7 = 0$$



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PRACTICE

Determine the value we need to add to the equation to make it a perfect square trinomial, then factor it.

(A) $x^2 + 8x + \underline{\hspace{1cm}}$

(B) $y^2 - 10y + \underline{\hspace{1cm}}$

EXAMPLE

Solve the quadratic equation by completing the square.

(A) $2x^2 - 4x - 1 = 0$

(B) $z^2 - 3z = 4$

PRACTICE

Solve for x .

$$8x^2 - 20x + 12 = 4$$

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EXAMPLE

Solve each quadratic equation by completing the square.

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