

Revisiting: Solving Quadratic Equations

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The difference is that the last one was written as two numbers multiplied together, then use the ▶ **Zero-Product Property**

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Can we write $x^2 - 5x - 6$ as two factors multiplied together?

If we can, then we can use the same method to solve: $x^2 - 5x - 6 = 0$

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If we want these two sides to be the **same** we need

$$-5 = s + t$$

$$-6 = st$$

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$$-5 = s + t \qquad -6 = st$$

Can we pick s and t that make these true?

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So that $s + t = -5$ and $s \cdot t = -6$

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$$0 = x^2 - 5x - 6 = (x + 1) \cdot (x - 6)$$

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Using [The Zero Product Property](#) we get $x + 1 = 0$ or $x - 6 = 0$

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Using [The Zero Product Property](#) we get $x + 1 = 0$ or $x - 6 = 0$

The solutions to $0 = x^2 - 5x - 6$ are $x = -1, 6$