

Remember, the quadratic formula states that:

$$\text{If } ax^2 + bx + c = 0, \text{ then } x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

	$2x^2 - 7x - 15 = 0$
Identify a , b , and c	$a = 2$ $b = -7$ $c = -15$
Substitute into the quadratic formula	$\frac{7 \pm \sqrt{(-7)^2 - (4)(2)(-15)}}{(2)(2)}$
Evaluate.	$\frac{7 \pm \sqrt{49 + 120}}{4}$ $\frac{7 \pm \sqrt{169}}{4}$ $\frac{7 \pm 13}{4}$ <div style="display: flex; align-items: center; justify-content: center;"><div style="text-align: center; margin-right: 20px;">$\frac{7 \pm 13}{4}$</div><div style="font-size: 2em; margin-right: 20px;">⎵</div><div style="text-align: center;">$\oplus \quad \frac{20}{4} = 5$ $\ominus \quad \frac{-6}{4} = -\frac{3}{2}$</div></div>
Two solutions!	$x = 5 \quad \text{OR} \quad x = -\frac{3}{2}$

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$$\text{If } ax^2 + bx + c = 0, \text{ then } x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

	$-4x^2 - 5x + 6 = 0$
Identify a , b , and c	$\begin{aligned} a &= -4 \\ b &= -5 \\ c &= 6 \end{aligned}$
Substitute into the quadratic formula	$\frac{5 \pm \sqrt{(-5)^2 - (4)(-4)(6)}}{(2)(-4)}$
Evaluate.	$\frac{5 \pm \sqrt{25 + 96}}{-8}$ $\frac{5 \pm \sqrt{121}}{-8}$ $\frac{5 \pm 11}{-8}$ $\begin{aligned} \oplus & \quad \frac{16}{-8} = -2 \\ \ominus & \quad \frac{-6}{-8} = \frac{3}{4} \end{aligned}$
Two solutions!	$x = -2 \quad \text{or} \quad x = \frac{3}{4}$

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	$10x^2 - 3x - 4 = 0$
Identify a , b , and c	$a = 10$ $b = -3$ $c = -4$
Substitute into the quadratic formula	$\frac{3 \pm \sqrt{(-3)^2 - (4)(10)(-4)}}{(2)(10)}$
Evaluate.	$\frac{3 \pm \sqrt{9 + 160}}{20}$ $\frac{3 \pm \sqrt{169}}{20}$ $\frac{3 \pm 13}{20}$ <div style="display: flex; align-items: center; justify-content: center;"><div style="margin-right: 20px;">$\frac{3 + 13}{20}$</div><div style="text-align: center;">$\begin{array}{l} \oplus \\ \ominus \end{array}$</div><div style="margin-left: 20px;">$\frac{16}{20} = \frac{4}{5}$ $-\frac{10}{20} = -\frac{1}{2}$</div></div>
Two solutions!	$x = \frac{4}{5}$ OR $x = -\frac{1}{2}$

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$$\text{If } ax^2 + bx + c = 0, \text{ then } x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

	$-5x^2 + 2x + 3 = 0$
Identify a , b , and c	$\begin{aligned} a &= -5 \\ b &= 2 \\ c &= 3 \end{aligned}$
Substitute into the quadratic formula	$\frac{-2 \pm \sqrt{2^2 - (4)(-5)(3)}}{(2)(-5)}$
Evaluate.	$\frac{-2 \pm \sqrt{4 + 60}}{-10}$ $\frac{-2 \pm \sqrt{64}}{-10}$ $\frac{-2 \pm 8}{-10}$ $\begin{aligned} &\begin{array}{l} \oplus \\ \ominus \end{array} \begin{array}{l} \frac{6}{-10} = -\frac{3}{5} \\ \frac{-10}{-10} = 1 \end{array} \end{aligned}$
Two solutions!	$x = -\frac{3}{5} \quad \text{OR} \quad x = 1$