

Example 1:

Solve the following quadratic equation using the Quadratic Formula.

$$4x^2 + 2 = x^2 - 7x:$$

Solution:

Step 1. Write the equation in general form.

$$4x^2 + 2 = x^2 - 7x$$

$$3x^2 + 7x + 2 = 0$$

$$a = +3, b = +7, c = +2$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-7 \pm \sqrt{(7)^2 - 4(3)(2)}}{2(3)}$$

$$x = \frac{-7 \pm \sqrt{49 - 24}}{6}$$