

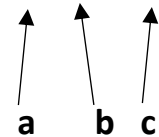
Solve $X^2 - 4X - 12 = 0$

In the previous lesson, I solved this equation using the factoring approach. However, you can also solve this equation using the quadratic formula below.

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2(a)}$$

Step 1

Determine the values of the letters in the equation (a,b,c) Solve $X^2 - 4X - 12 = 0$



a is 1 since 1X is simply X

b is -4

c is -12

Step 2

Plug the values of the letters to the quadratic formula.

$$\frac{-(-4) \pm \sqrt{(-4)^2 - (4)(1)(-12)}}{2(1)} = \frac{4 \pm \sqrt{16 - (-48)}}{2} = \frac{4 \pm \sqrt{64}}{2}$$

$$\frac{= 4 + 8}{2} \quad \frac{12}{2} = 6 \quad \text{or} \quad \frac{-4}{2} = -2 \quad X = 6 \text{ or } -2$$