

Solving quadratic equations using the factoring approach

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

Step 1

Find 2 numbers you can multiply to get the product of the third number on the equation, In this question (-12)

Step 2

Find 2 numbers you can add to get the sum of the second number in the equation. In this question (-4)

The numbers are -6 and 2

$$-6 \times 2 = -12$$

$$-6 + 2 = -4$$

Step 3

Now set the two numbers to zero and solve for X

$$X - 6 = 0$$

$$X + 2 = 0$$

$$X - 6 = 0$$

$$X = 0 + 6$$

$$X = 6$$

$$X + 2 = 0$$

$$X = 0 - 2$$

$$X = -2$$

So, X is 6 and -2