

So I can factor. Now what?

$$x^2 + 7x + 10 = 0$$

$$\frac{1(10) = 10}{5, 2 = 7}$$

$$x^2 + 2x + 5x + 10 = 0$$

$$x(x+2) + 5(x+2) = 0$$

$$(x+2)(x+5) = 0$$

$$x+2=0$$

$$x = -2$$

$$x+5=0$$

$$x = -5$$

$$x^2 - 6x + 12 = 4$$

$$x^2 - 6x + 8 = 0$$

$$x^2 - 2x - 4x + 8 = 0$$

$$x(x-2) - 4(x-2) = 0$$

$$(x-2)(x-4) = 0$$

$$x-2=0$$

$$x=2$$

$$x-4=0$$

$$x=4$$

TO SOLVE A  
QUADRATIC EQUATION:

1. MAKE EQUATION EQUAL ZERO  
(PUT EVERYTHING ON ONE  
SIDE)

2. FACTOR

3. SET EACH FACTOR EQUAL  
TO ZERO

$$2x^2 + 5x + 2 = x^2 + 2x + 20$$

$$-x^2 - 2x - 20 \quad -x^2 - 2x - 20$$

$$x^2 + 3x - 18 = 0$$

$$1(-18) = -18$$

$$-3 + 6 = 3$$

$$x^2 - 3x + 6x - 18 = 0$$

$$3 - 6$$

$$x(x-3) + 6(x-3) = 0$$

$$(x-3)(x+6) = 0$$

$$\swarrow$$

$$x-3=0$$

$$\begin{array}{cc} +3 & +3 \end{array}$$

$$x=3$$


---

$$\searrow$$

$$x+6=0$$

$$\begin{array}{cc} -6 & -6 \end{array}$$

$$x=-6$$


---