

## Warm Up- Factor the following Trinomials

$$1. x^2 - x - 2$$

$$\begin{array}{r} \cancel{-2x^2} \\ \cancel{1x} \quad \cancel{-2x} \\ \quad \quad \cancel{-x} \end{array}$$

$$(x+1)(x-2)$$

$$2. x^2 + 6x + 9$$

$$\begin{array}{r} \cancel{9x^2} \\ \cancel{3x} \quad \cancel{3x} \\ \quad \quad \cancel{6x} \end{array}$$

$$(3+x)(x+3)$$

$$3. p^2 - 7p + 12$$

$$\begin{array}{r} \cancel{12p^2} \\ \cancel{-3} \quad \cancel{-4} \\ \quad \quad \cancel{-7p} \end{array}$$

$$(p-3)(p-4)$$

$$\textcircled{22} \quad q^2 - 2q - 8$$

$$\begin{array}{r} \cancel{-8q^2} \\ \cancel{2q} \quad \cancel{-4q} \\ \quad \quad \cancel{-2q} \end{array}$$

$$(q+2)(q-4)$$

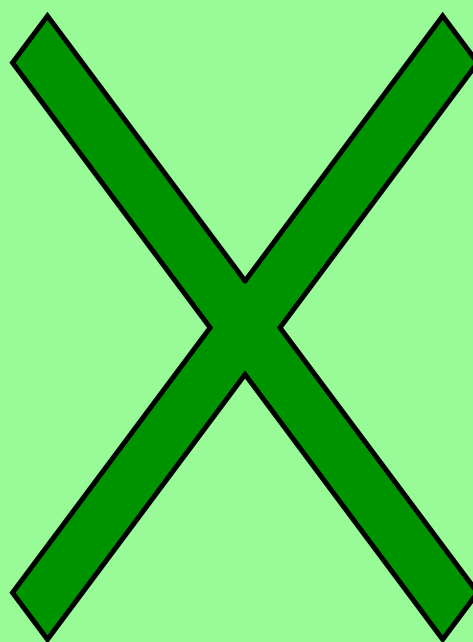
We are now going to be adding one more step to factoring...

Steps:

1. Always Check to see if there is a GCF

(If yes, Factor it out)

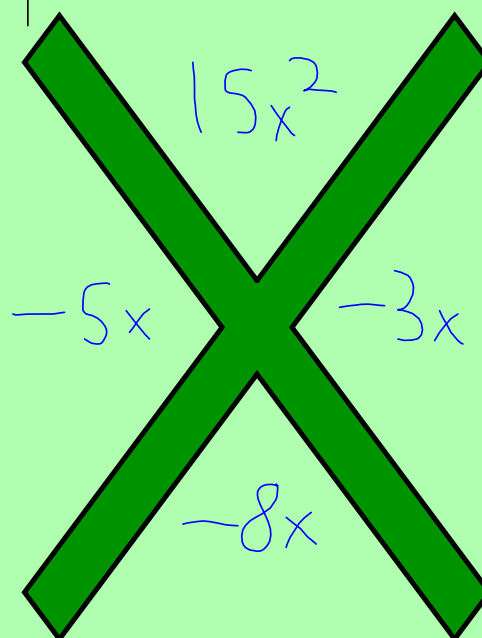
2. Factor just like normal



Examples:  $\frac{4x^2}{4} - \frac{32x}{4} + \frac{60}{4}$

$$4(x^2 - 8x + 15)$$

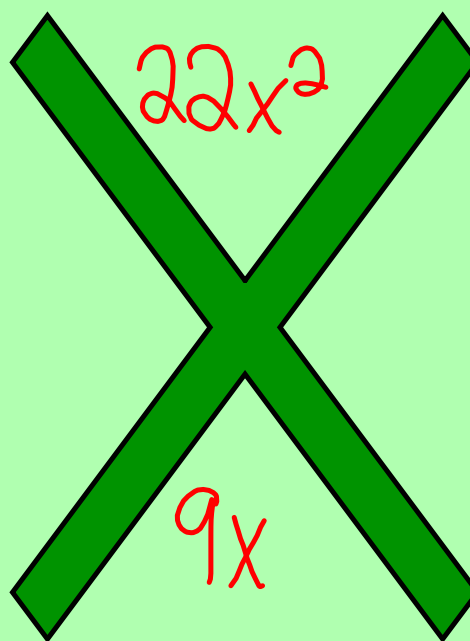
$$4(x-5)(x-3)$$



Examples:  $2x^2 + 18x + 44$

$$2(x^2 + 9x + 22)$$

N.S.



$$\frac{2x^3}{2x} + \frac{18x^2}{2x} - \frac{44x}{2x}$$

$$2x(x^2 + 9x - 22)$$

$$2x(x+11)(x-2)$$

~~$$\begin{array}{r} -22x^2 \\ 11x \quad -2x \\ 9x \\ + \end{array}$$~~

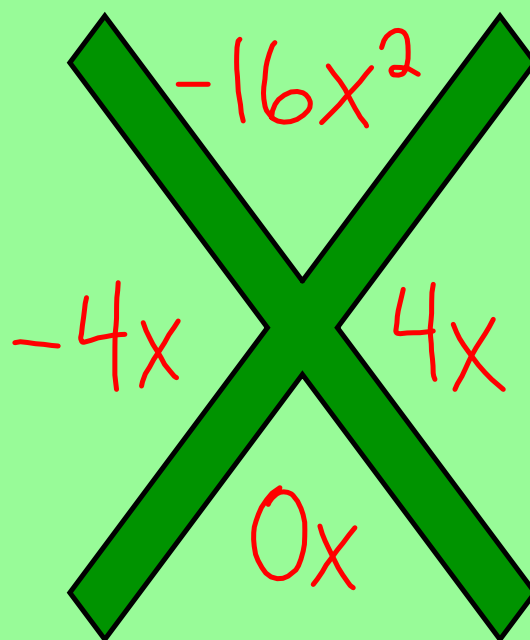
## Factoring Special Binomials

$$ax^2 + bx + c$$

$$x^2 - 16$$

$$x^2 + 0x - 16$$

$$(x - 4)(x + 4)$$

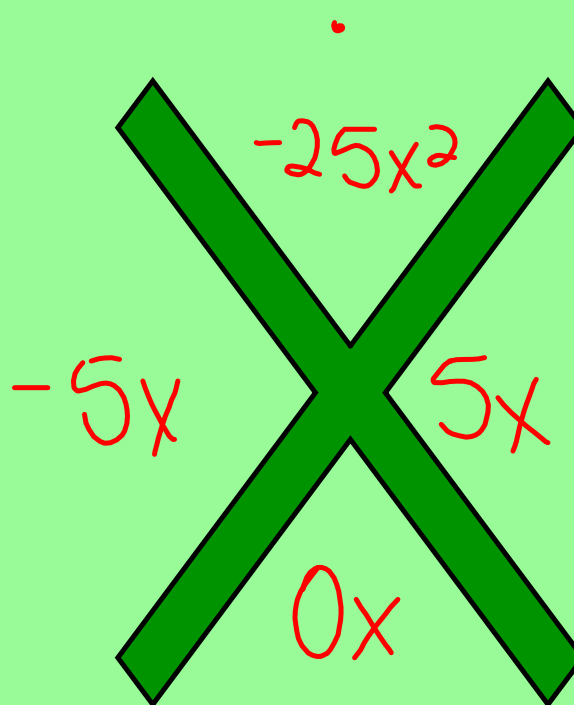


## Factoring Special Binomials

$$3x^2 - 75$$

$$3(x^2 - 25)$$

$$3(x-5)(x+5)$$



## Homework is Factoring Worksheet (Matching)

- You must show your work for each problem or you will get zero credit
- Your work must be stapled to the back of the worksheet
- If you only have the worksheet, I don't want it!