Date:			

Learning Goal

We have factored a few types of standard form equations so far.

Simple Trinomials

$$y = x^2 + 2x - 15$$

To factor these, find two numbers

to -15

and _____ to +2.

We have factored a few types of standard form equations so far.

Difference of Squares

$$y = x^2 - 16$$

To factor these, find two numbers

that multiply to _____

and add to _____.

We have factored a few types of standard form equations so far.

Common Factor

$$y = 3x^2 + 6x$$

To factor these, first _____

each term by the greatest common

factor. In this case _____.

We have factored a few types of standard form equations so far.

Common Factor

$$y = -4x^2 + 20$$

To factor these, first _____

each term by the greatest common

factor. In this case _____.

Factor

$$y = 4x^2 + 8x + 4$$

Uhoh! Our a-value is not 1!

When this happens, our first step is

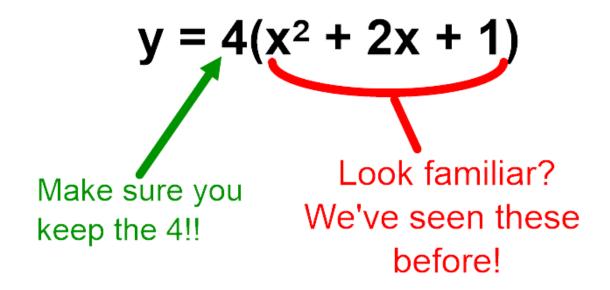
from each term.

So... we just need to _____

each term by _____.

Factor

$$y = \frac{4x^2}{4} + \frac{8x}{4} + \frac{4}{4}$$



Now, all that's left is to factor the part inside the brackets just like before!

Factor

$$4x^{2} + 8x + 4$$

$$= 4(x^{2} + 2x + 1)$$
Find two numbers that multiply to +1 and add to +2!
$$= 4(x + 1)(x + 1)$$

Just like yesterday, this is a perfect square trinomial!

We can factor it once more!

Factor

$$4x^{2} + 8x + 4$$

$$= 4(x^{2} + 2x + 1)$$

$$= 4(x + 1)(x + 1)$$

$$= 4(x + 1)^{2}$$

Steps to Factoring

$$y = 5x^2 - 5x - 30$$

- "Factor Out" the
 a-value if possible.
- 2. Factor the new trinomial in brackets.

1.
$$2x^2 + 16x + 30$$

$$2.4x^2 + 20x - 24$$

$$3.3x^2 - 12x + 12$$

 $4. -3x^2 - 30x - 72$

$$5. -2x^2 + 4x + 96$$

$$6.5x^2 + 20x$$

$$7. -7x^2 + 49x$$

 $8.3x^2 - 27$

 $9.6x^2 - 96$

10. $-3x^2 + 48$