

Name: _____

Date: _____

AIM: How can we factor linear algebraic expressions?

Find the *GCF* of the two terms in the expression.

1.) $8x - 16$	2.) $9x^2y^5 + 12x^3y^4$	3.) $10a^2b^3 - 18a$
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Linear Algebraic Expression:

Simplify the following expression.

4.) $7(2x + 3)$	5.) $5(x - 4)$	6.) $8(y + 2)$
7.) What property was used to simplify the expressions above?		

What if we wanted to do the distributive property backwards?

$14x + 21$ _____ (_____)	$5x - 20$ _____ (_____)	$8y + 16$ _____ (_____)
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Factoring an expression:

Steps for Factoring Out the GCF ("undoing" the distributive property)

1.)

2.)

3.)

Practice: Factor out the GCF from each expression.

8.) $4x + 8$ <u> </u> (<u> </u>)	9.) $18x + 27$ <u> </u> (<u> </u>)	10.) $3m - 6$ <u> </u> (<u> </u>)
11.) $9x - 3y$ <u> </u> (<u> </u>)	12.) $50x + 25y + 5$ <u> </u> (<u> </u>)	13.) $16y - 12$ <u> </u> (<u> </u>)
14.) $30y + 20z$ <u> </u> (<u> </u>)	15.) $30z + 10$ <u> </u> (<u> </u>)	16.) $5c - 2a$ <u> </u> (<u> </u>)

STOP AND JOT

Write one sentence explaining if the following expression was factored correctly using the GCF.

Student's work:

$$18x - 24$$

1st factor: $\text{GCF} = 2$

2nd factor: $\frac{18x - 24}{2} = \frac{18x}{2} - \frac{24}{2}$

$$= 9x - 12$$

$$2(9x - 12)$$



1.) $3x + 9 = \underline{\hspace{1cm}}(x + 3)$

2.) $7x + 21 = 7(\underline{\hspace{1cm}})$

3.) $10x + 50 = \underline{\hspace{1cm}}(\underline{\hspace{1cm}})$