

Name \_\_\_\_\_

Date \_\_\_\_\_

Mr. Tallman

**Do Now**

**Translate the following sentences into an expression or an equation. Use “n” as your variable.**

1) Three times a number.	2) 4 less than a number is 16	3) Eight subtracted from five times a number.
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**Use the distributive property to simplify the following.**

4) $3(x + 5)$	5) $-7(y + 12)$	6) $-5(-3x - 8)$
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**Lesson #55 – Factoring with GCF**

**Prior Knowledge Vocab:**

- A \_\_\_\_\_ is a number that is multiplied by another number to get a product.
- \_\_\_\_\_ is the largest factor two numbers have in common.

How can we write 6 as the product of two factors? \_\_\_\_\_

Example 1) Rewrite  $5x + 10$  as the product of two factors.

Example 2) Factor the expression  $8n - 12$  to its simplest form.

Example 3) Factor the expression  $12 + 20y$  to its simplest form.

**Now, You Try! Factor the following to their simplest forms.**

4) $2x + 2$	5) $5x - 15$
6) $9 + 3x$	7) $16 - 4x$

**On Your Own. Factor the following to their simplest forms.**

8) $4x - 16$	9) $3x + 18$
10) $16x + 12$	11) $20x - 15$
12) $8x - 10 + 2y$	13) $5x - 10y + 25$
14) $12x^2 + 8x - 16$	15) $9xy + 6x - 18y + 12$

**A GCF can also have a variable in it.**

Example 16) Factor the following expression:  $5x^2 + 10x$

Example 17) Factor the following expression:  $16x^3 + 12x^2 - 8x$

**Now, You Try!** Factor the following using a GCF.

18) $20x^6 + 15x^2$	19) $36y^7 - 12y^3 - 6y$
20) $100z^9 + 50z^6 - 75z^5$	21) $70x^5 - 49x^2 + 35$