Name: _____ Period: _____ Date: _____

Math Unit 1: Numerical Expressions and Factors

Lesson 1.5- Greatest Common Factor

SWBAT:	**Paraphrase:**

Essential Question: How can you find the greatest common factor of two numbers?

Example 1

Find the GCF of 24 and 40.

List the factors of each number.

Factors of 24: ①,②, 3,④, 6,⑧, 12, 24

Factors of 40: ①,②,④, 5,⑧, 10, 20, 40

Circle the common factors.

The common factors of 24 and 40 are 1, 2, 4, and 8. The greatest of these common factors is 8.

∴ So, the GCF of 24 and 40 is 8.

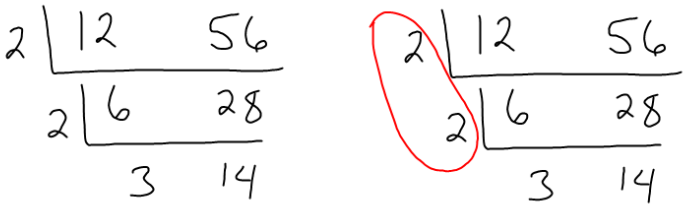
Your Turn

Find the GCF of the numbers using lists of factors.

1. 8, 36 **2.** 18, 72 **3.** 14, 28, 49

Example 2

Ladder Method: Find the GCF of 12 and 56.



$2 \cdot 2 = 4$

GCF = 4

Your Turn	Use the Ladder Method to find the GCF of: **4.** 20, 45 **5.** 32, 90
Example 3	 * 18 bottles of nail polish * 24 pairs of earrings * 42 lollipops **You are filling piñatas for your sister's birthday party. The list shows the gifts you are putting into the piñatas. You want identical groups of gifts in each piñata with no gifts left over. What is the greatest number of piñatas you can make?** The GCF of the numbers of gifts represents the greatest number of identical groups of gifts you can make with no gifts left over. So, to find the number of piñatas, find the GCF. 18 = 1, 2, 3, (6), 9, 18 24 = 1, 2, 3, 4, (6), 8, 12, 24 42 = 1, 2, 3, (6), 7, 14, 21, 42 The GCF of 18, 24, and 42 is 6. So, you can make at most 6 piñatas.
Your Turn	You are arranging your collection of DVDs into stacks. You have 16 drama, 32 action, and 40 comedy DVDs. You want all of the stacks to be the same height. What is the greatest number of DVDs you can have in a stack to make them the same height, without any leftover?
Notes / Questions	