Number Relationships

Fill in the guided notes as you watch the video in the Digital Toolbox.

- A _____ is a number that multiplies with another number to form a product.
- The greatest common factor, or _____ , is the largest factor that two or more numbers share.
- The GCF is used to _____ fractions completely.
- To find the GCF:
  - **1)** List the factors of given numbers, starting with _____ and the _____ .
  - **2)** Identify the _____ factor that the given numbers have in common.
  - **3)** It is possible for the GCF to be _____ .
- A _____ is the product of a given number and another number.
- The least common multiple, or _____ , is the smallest number that is a multiple of two or more numbers excluding zero.
- The LCM is called the LCD (least common denominator) and is needed to _____ _____ fractions.
- To find the least common multiple:
  - **1)** List the multiples of the given numbers starting with the _____ .
  - **2)** Identify the _____ multiple that the given numbers have in common.
- When possible, use _____ to determine the GCF or LCM.

Example 1

Complete the example as you watch the video in the Digital Toolbox.

Determine the GCF and LCM of 56 and 32.

Implement	Explain
GFC (56, 32)	List the factors of 56 and 32
LCM (56, 32)	List the multiples of 56 and 32

Example 2

Complete the example as you watch the video in the Digital Toolbox.

Simplify.

$$\frac{25}{12} \cdot \frac{3}{10}$$

$\text{GCF}(25, 10) = 5$

$\text{GCF}(12, 3) = 3$

Example 3

Complete the example as you watch the video in the Digital Toolbox.

Rewrite the fractions with the least common denominator (LCD). Do not simplify.

$$\frac{3}{10} + \frac{5}{12}$$

$\text{LCM} = \text{LCD}$ for fractions

$\text{LCD}(10, 12) = 60$

Practice

Show your work.

1) Find the GCF of 72 and 48

2) Find the LCM of 24 and 18

3) Find the LCM of 15 and 25

4) Find the GCF of 18 and 30

5) Find the GCF of 64 and 24

6) Find the LCM of 26 and 39

7) Find the LCM of 60 and 50

8) Find the GCF of 65 and 52

Simplify.

9) $\frac{10}{3} \cdot \frac{8}{15}$

10) $\frac{18}{25} \cdot \frac{7}{30}$

11) $\frac{4}{5} \cdot \frac{5}{6}$

12) $\frac{7}{60} \cdot \frac{50}{21}$

Rewrite the fractions with the LCD. Do not simplify.

13) $\frac{1}{3} + \frac{1}{15}$

14) $\frac{9}{8} + \frac{1}{2}$

15) $\frac{5}{6} + \frac{3}{4}$

16) $\frac{7}{24} + \frac{5}{18}$