

Lesson 1

Number Relationships

NAME:



Start by navigating to the Online Lesson for instructions.

Objectives

- ✓ Find the least common multiple (LCM) of a set of numbers
- ✓ Find the greatest common factor (GCF) of a set of numbers
- ✓ Name all factors of a number

Why?

Number relationships help us form fluency and build an understanding of number interactions rather than just memorizing rules. Understanding the relationship with multiples and factors can give you the skills needed to efficiently approach a variety of higher level math problems. In real life we use GCF and LCM when simplifying fractions, figuring out schedules, or grouping and sharing items evenly. These skills help us see patterns in numbers.

Explore

Number Relationships

 *Fill in the notes as you watch the video in the Online Lesson.*

- 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 Online Lesson.

Determine the GCF and LCM of 56 and 32.**Implement**

GCF(56, 32)

Explain

▶ 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 Online Lesson.

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 Online Lesson.

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



To continue, return to the Online Lesson.