5-3   Least Common Multiples

Objective: You've learned about divisibility and about the numbers that divide a given number. Now's let's learn to find the least common multiple of two numbers.

♦ **Multiple:** the product of two whole numbers.

Example:
Multiples of 6:   6   12   18   <u>24</u>   30   36   42   48
Multiples of 8:   8   16   <u>24</u>   32   40   48

Numbers which appear in both lists are common multiples.

♦ **Least Common Multiple:** the *smallest* common multiple of the numbers.

To find the LCM of 2 numbers we used to make long, long lists like this:

Let's Use the Ladder for LCM, GCF and Simplifying Fractions!

❶ **WRITE** the two numbers on one line.

❷ **DRAW THE L SHAPE**

❸ **DIVIDE** out common prime numbers starting with the smallest

2	24	36
2	12	18
3	6	9
	(2)	(3)
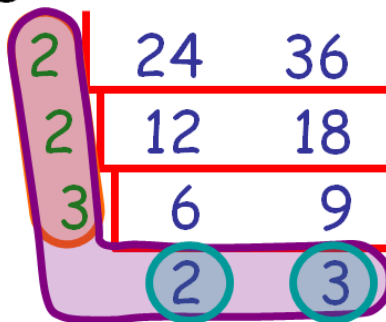
❹ **LCM** makes an L: LCM = 2 • 2 • 3 • 2 • 3 = 72

GCF is down the left side: GCF = 2 • 2 • 3 = 12

Simplified fraction is on the bottom $\dfrac{24}{36} = \dfrac{2}{3}$

Let's try together: Find the LCM of 6 and 8.

1. **WRITE** the two numbers on one line:

2. **DRAW THE L SHAPE**

3. **DIVIDE** out common prime numbers starting with the smallest

4. **LCM** makes an L: LCM =

YOU GOT THIS:

a)   FIND THE LCM of 6 and 15:

1. WRITE the two
 numbers on one line:

2. DRAW THE L SHAPE

3.   DIVIDE out common
 prime numbers
 starting with the
 smallest

4.   LCM makes an L: LCM =

b)   FIND THE LCM of 8 and 18:

1. WRITE the two
 numbers on one line:

2. DRAW THE L SHAPE

3.   DIVIDE out common
 prime numbers
 starting with the
 smallest

4.   LCM makes an L: LCM =