LCM

Least Common Multiple
(Leap Count Man)

"The Cake Method"

Check it Out!

Multiples

– The result of multiplying a whole number

- Example: The **multiples of 5** are

  5, 10, 15, 20, 25, 30 because these numbers are the result of multiplying 5 and another whole number.

Turn to a partner and brainstorm what the first 9 multiples of 4 are

You have 30 seconds! Be ready to share!

Now Let's Learn Something NEW!

- LCM (**L**east **C**ommon **M**ultiple)

  – The SMALLEST multiple that two numbers have in COMMON.

Check It Out!

*Example of finding the LCM:

– Let's look at the numbers 6 and 2

The multiples of 6 are 6, 12, 18, 24…

The multiples of 2 are 2, 4, 6, 8, 10…

Let's circle the multiples that 6 and 2 have in common

The smallest multiple 6 and 2 have in common is 6 so

6 is the LCM

The Cake Method

- An easy way to find the GCF AND LCM of two numbers is to think of the layers in a yummy piece of cake!

Remember last week when we found the GCF using the Cake Method?

–Now we are going to use that same method to find the LCM!

- All you have to do is find the GCF and then make an L around **ALL** of the numbers…

CHECK IT OUT!

- # Let's refresh our brains and find the GCF of 14 and 28 using the cake method

Step 1- Draw a "cake layer" and place the two numbers inside

Step 2- Think of any factor that the two numbers have in common. Let's try 2! Now place the 2 outside of the cake layer

Step 3- Divide the inside numbers by the outside number, 2. Place the answer underneath each number and draw a new cake layer
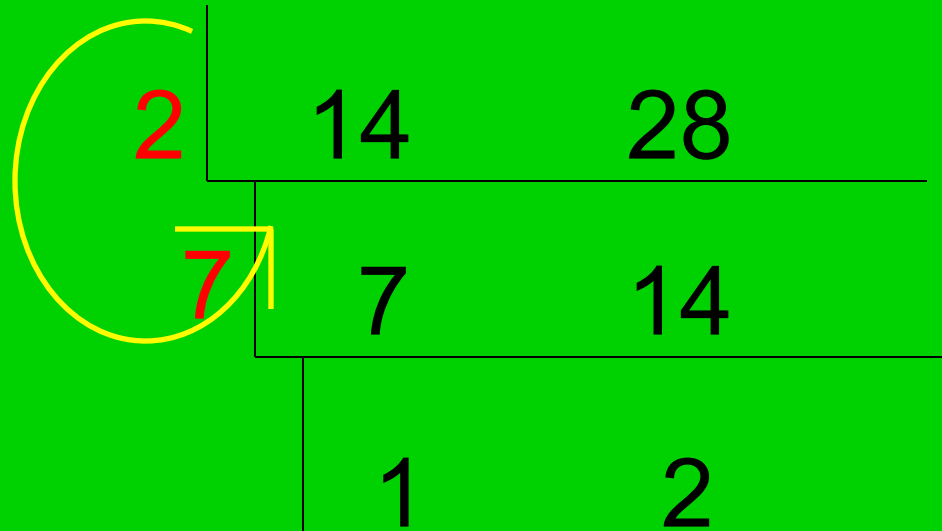
Step 4- Repeat Step 2 and 3 for the new set of numbers (7 and 14)

Step 5- Once the numbers in the cake layer are prime, or only have the factor one in common, you can stop! 1 is prime so we can now stop!
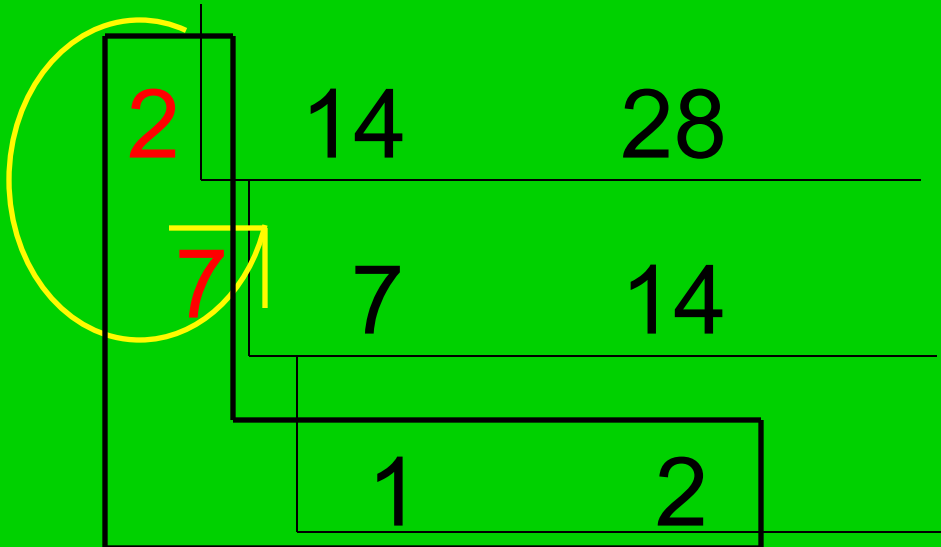
Step 6- Draw a G (for GCF) around the outside numbers. Multiply these numbers together to find the GCF!

2	14	28
7	7	14
	1	2

Step 7- 7 x 2 is 14.

The GCF is 14

- Now all you have to do is draw a big L around all of the outside numbers AND the prime numbers to find your LCM!

Watch!

2   14   28

7   7   14

1   2

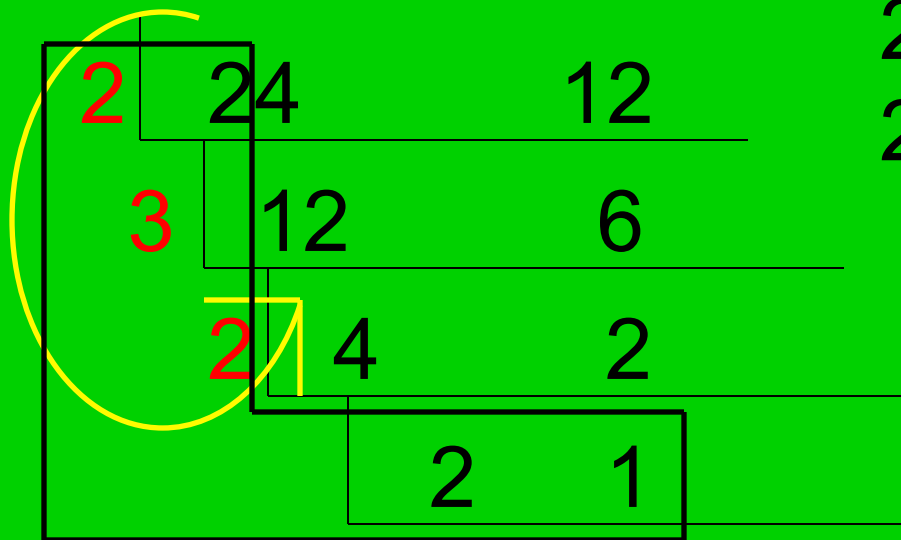Now that you have drawn the L around these numbers, just multiply them together to find your LCM!

2 x 7 x 1 x 2 = 28

28 is the LCM

Let's try some more together!

- Let's use the cake method to find the GCF of 24 and 12. After you have found the GCF try to find the LCM!
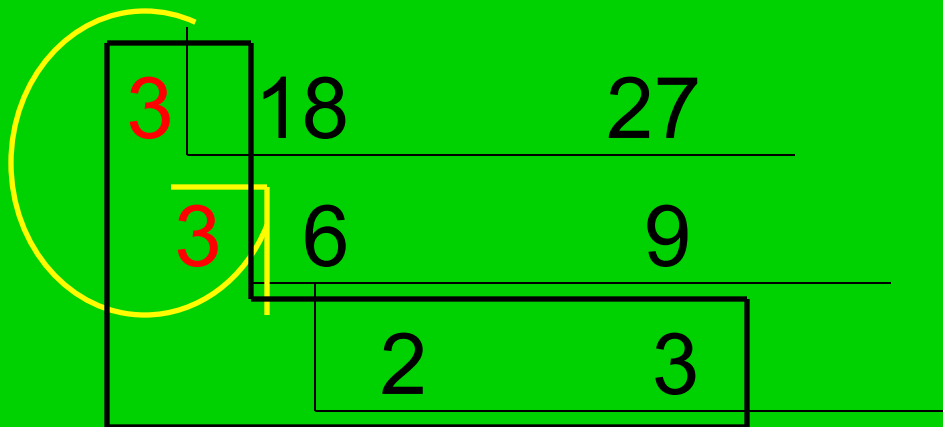
2 x 3 x 2 x 2 x 1= 24

2	24	12
3	12	6
2	4	2
	2	1

Let's look at another one together!

- Last week we found the GCF of 18 and 27. Now let's find the LCM

3 x 3 x 2 x 3= 54

3	18	27
3	6	9
	2	3

Let's look at another one together!

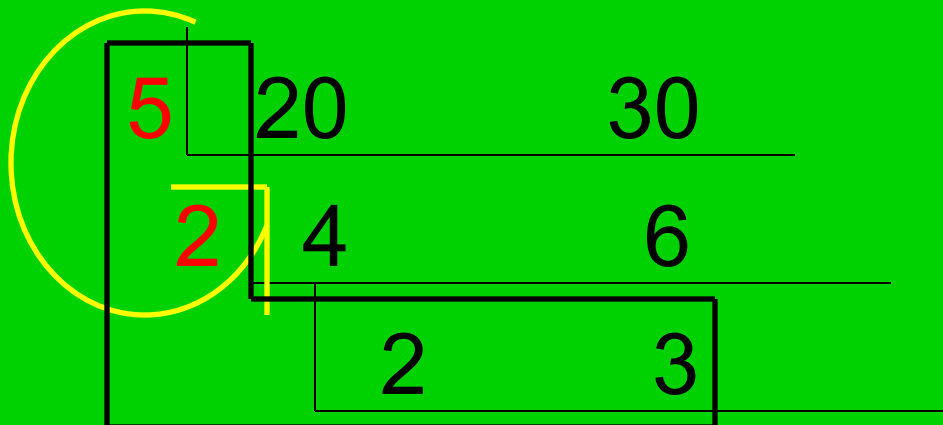- Last week we found the GCF of 3 and 11. Now let's find the LCM

1 ∟ 3   11

3   11
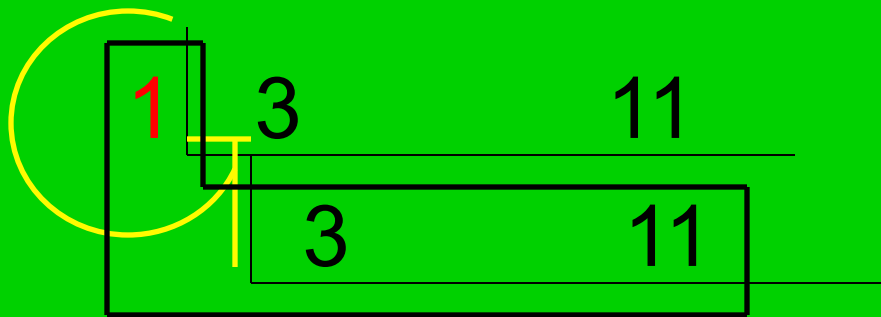
$1 \times 3 \times 11 = 33$

Don't let this one trick you! If the numbers in the cake layer are already prime, then your GCF is 1 and you are done! To find the LCM still draw you L around the GCF and bottom layer!!

Last One Together!

- Last week we found the GCF of 20 and 30. Now let's find the LCM!

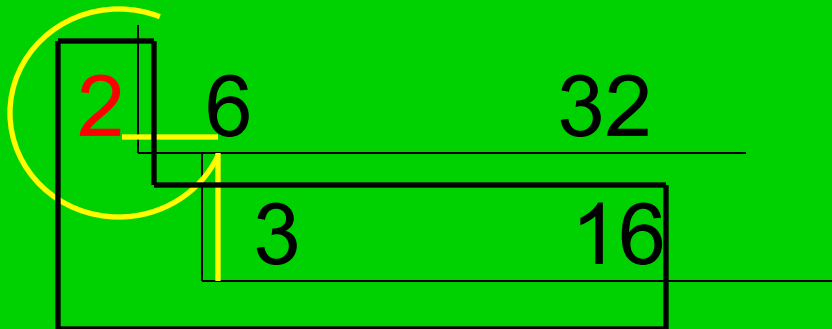$$5 \times 2 \times 2 \times 3 = 60$$

5	20	30
2	4	6
	2	3

Now try this one with a partner!

- Last week we found the GCF of 20 and 30. Now let's find the LCM!
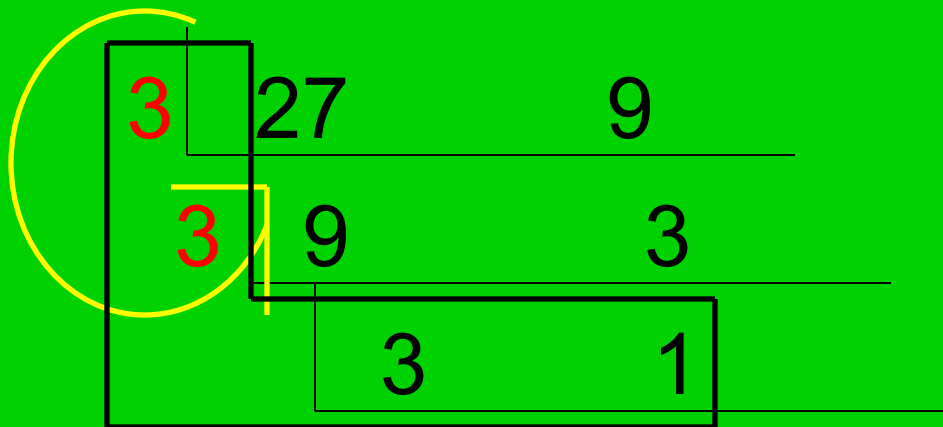
2   6   32

      3   16

$2 \times 3 \times 16 = 96$

Try this with another partner

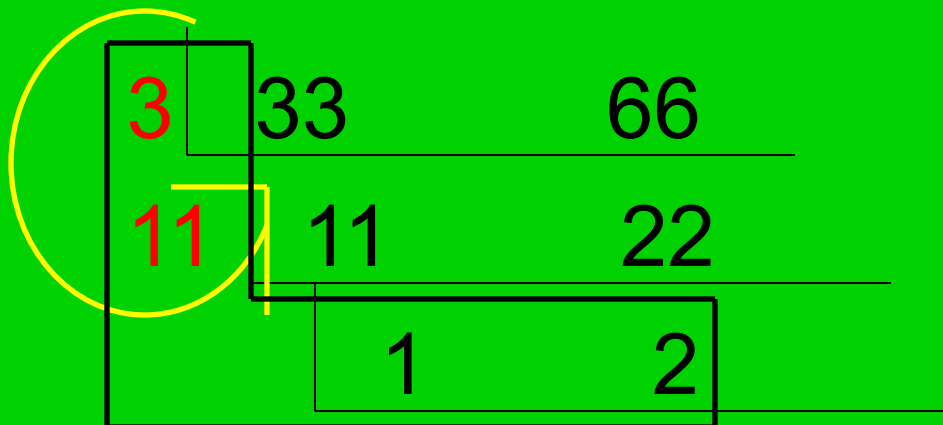- Last week we found the GCF of 20 and 30. Now let's find the LCM!

3 x 3 x 3 x 1= 27

3	27	9
3	9	3
	3	1

Last One…Try it on your OWN!

- Last week we found the GCF of 20 and 30. Now let's find the LCM!

3 x 11 x 1 x 2= 66

3 | 33   66

11 | 11   22

1   2