

Lesson 3-5 Least Common Multiple

SWBAT: Find the LCM of two or more numbers by using various methods.

Definitions:

Multiple –

Least common multiple –

Listing all the factors – To use this method, you just need _____
_____ for each number.

Ex: Find the LCM of 4 and 6

Multiples of 4: 4, 8, , 16, 20, , 28, 32, 36

Multiples of 6: 6, , 18, , 30, 36, 42

- You can see that both 12 and 24 are in the lists of multiples, but 12 is the lowest so it is the LCM.

Find the LCM of each example below:

6: 10:

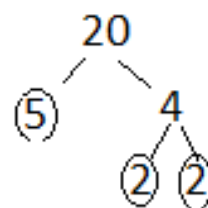
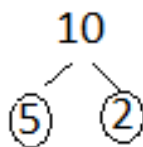
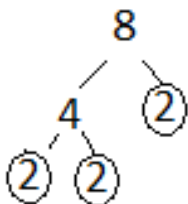
8: 12:

Shortcut – If you just do the multiples of the _____ and see if the smaller number goes into _____.

Using the factor tree and prime factorization:

Use _____ to write down the prime factors of each number

Ex: Find the LCM of 8, 10 and 20.



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Now we must write the Prime numbers for each in a list

$$8: 2 \cdot 2 \cdot 2$$

$$10: 5 \cdot 2$$

$$20: 5 \cdot 2 \cdot 2$$

We now _____ the biggest group
of each different _____.

The biggest group of 2's is in the first row so I will include all of them, and the biggest group of 5's would be in either the 10 row or 20 row so I will include one of them. I now have $2 \cdot 2 \cdot 2 \cdot 5$ and that would be 40.

Find the LCM of 36 and 42

Find the LCM of 6, 9, 15

Shortcut: If every number is prime, you just have to multiply the numbers together!!

Challenge: The pennies in a jar can be shared equally by 2, 3, 4, 5, 6, 7, 8, 9, or 10 friends, with no pennies left over. What is the least number of pennies in the jar?