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What is LCM (Least Common Multiple)?

We can define Least Common Multiple in short LCM as the smallest multiple that is the product of two or more numbers.

Another definition of LCM or Least Common Multiple of two or more numbers is the smallest whole number that is divisible by each of the numbers. For instance 21 is the multiple of 3 and 7 as it is divisible by both 3 and 7

Least Common Denominator:

In Math, we come across the term denominator in the chapter of Fractions. In the fraction 5/6, 6 is the denominator which is the bottom number.

Least Common Denominator or LCD is defined as the smallest whole number (non-zero) that is divisible by each of the numbers (the numbers being the denominators)

How to find Least Common Multiple?

OR

How to find the least Common Denominator?

Least Common Denominator is same as the least common multiple of two or more numbers. LCD is used while finding the sum or difference of unlike fractions.

To find the LCM or LCD of two numbers consider the following example,

Marshal has 16 inch pieces of toy train track and Jacob has 24 inch pieces of toy train tracks. How many of each piece would each child need to build a track of equal length?

In the above example, the boys need to build a track of same length.

So, we need to find that common length. How do we find this common length? For that we shall find the smallest common number divisible by both 16 and 24. Let us see how we can find that common number. We shall first list out the multiples of 16 and 24 separately and then find the common number.

16 = 16, 32, 48, 64,80,96â€¦

24 = 24, 48, 72, 96,120â€¦

The common multiples from the above list are 48 and 96. But we need the smallest common multiple, which is 48. The track should be of 48inches of length. Marshal needs three 16-inch pieces and Jacob needs two 24-inch pieces to make the track of equal length.

Example: Find the sum of 1/18 + 1/12

Solution: Here we need to make the denominators same and hence find the Least common

Denominator (LCM of the numbers)

So, LCM of 12 and 18 is

12 = 2 x 2 x 3

18=2x 3 x 3

Product of the primes = 2 x 3 x 2 x 3 = 36 which is the LCD

(1/18) x (2/2) + (1/12) x (3/3) = 2/36 + 3/36 =5/36

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