The LCM(lowest common multiple) of two or more numbers is the smallest number that each will divide into exactly.

the LCM of 2, 3, 5 is.....30 (2 x 3 x 5)

example#1 - find the LCM of the following: 30, 64

First find the factors by dividing the numbers by prime numbers, 2, 3, 5 etc. to reduce them to '1',

2	30
3	15
5	5
	1

2	64
2	32
2	16
2	8
2	4
2	2
	1

30 = 3 x 5 x 2

64 = 2 x 2 x 2 x 2 x 2 x 2

The number that both will go into is all these factors multiplied together.

(3 x 5 x 2) x (2 x 2 x 2 x 2 x 2 x 2)

However, this is **not** the lowest common multiple.

To make the multiple smaller we can lose one of the 2's and still have each of the numbers divide into it(because the factor '2' is common to both numbers). .

3 x 5 x 2 x 2 x 2 x 2 x 2 x 2

So the LCM is of 30 & 64 is ....(3 x 5 x 2 x 2 x 2 x 2 x 2 x 2) = 960

example#2 - find the LCM of the following: 54, 96

First find the factors by dividing the numbers by prime numbers, 2, 3, 5 etc. to reduce the numbers to '1',

2	54
3	27
3	9
3	3
	1

2	96
2	48
2	24
2	12
2	6
3	3
	1

54 = 3 x 3 x 3 x 2

96 = 3 x 2 x 2 x 2 x 2 x 2

The number that both will go into is all these factors multiplied together.

(3 x 3 x 3 x 2) x (3 x 2 x 2 x 2 x 2 x 2)

However, this is **not** the lowest common multiple.

To make the multiple smaller we can lose one of the 3's and one of the 2's and still have each of the numbers divide into it(because these factors '3 x 2' are common to both numbers).

3 x 3 x 3 x 2 x 2 x 2 x 2 x 2

So the LCM of 54 & 96 is ... (3 x 3 x 3 x 2 x 2 x 2 x 2 x 2) = 864

example#3 - find the LCM of the following: 36, 98

First find the factors by dividing the numbers in turn by prime numbers, 2, 3, 5 etc. to reduce them to '1',

2	36
2	18
3	9
3	3
	1

2	98
7	49
7	7
	1

36 = 2 x 2 x 3 x 3

98 = 2 x 7 x 7

The number that both will go into is all these factors multiplied together.

(3 x 3 x 2 x 2) x (2 x 7 x 7)

However, this is **not** the lowest common multiple.

To make the multiple smaller we can lose one of the 2's and still have each of the numbers divide into it(because this factor '2' is common to both numbers).

(3 x 3 x 2 x 2 x 7 x 7)

So the LCM of 36 & 98 is .....(3 x 3 x 2 x 2 x 7 x 7) = 1764