Lowest Common Multiple

We can find the lowest common multiple by the following methods

(i) Prime factorization Method

(ii) Listing Multiples

Let's understand both methods one by one with examples

Prime Factorisation Method

Example: What is the LCM of 14 and 18?

Solution: By prime factorisation, we can write,

14 = 2 x 7

18 = 2 x 3 x 3

The prime factors 2, 3, 3 and 7 are the maximum number of times they occurred in the numbers. So, product of these prime factors will result in required LCM.

Therefore, LCM of 14 and 18 = 2 x 3 x 3 x 7 = 126 LCM (14, 18) = 126

Listing Multiples

Example: Find the LCM of 10, 12, 15 using listing methods.

Solution: First listing all the multiples, we get;

Multiples of 10 = 10, 20, 30, 40, 50, 60, 70, 80

Multiples of 12 = 12, 24, 36, 48, 60, 72, 84

Multiples of 15 = 15, 30, 45, 60, 75, 90

Therefore, LCM of (10, 12, 15) = 60