Highest Common Factor (HCF)

The Highest Common Factor (HCF), also known as the Greatest Common Divisor (GCD), is the largest number that divides two or more numbers without leaving a remainder. It's a measure of the "common divisors" of a set of numbers.

For example, let's consider the numbers 18 and 24. The divisors of 18 are 1, 2, 3, 6, 9, and 18. The divisors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24. The common divisors are 1, 2, 3, and 6. The largest of these is 6, so the HCF of 18 and 24 is 6.

We have different methods to calculate the Highest Common Factor

- HCF by listing factors method
- HCF by prime factorization method
- HCF by division method

Properties of HCF

Property 1: The HCF of two or more numbers is the greatest of their common factors.

Property 2: The HCF of the given composite numbers is smaller than the given numbers.

Property 3: If one number is a factor of another number, then the smaller number is the HCF.

Property 4: The HCF of two co-prime numbers is 1.