

CHAPTER – 3

PLAYING WITH NUMBERS

We have discussed multiples, divisors, factors and have seen how to identify factors and multiples.

- We have discussed and discovered the following:
 - (a) A factor of a number is an exact divisor of that number.
 - (b) Every number is a factor of itself. 1 is a factor of every number.
 - (c) Every factor of a number is less than or equal to the given number.
 - (d) Every number is a multiple of each of its factors.
 - (e) Every multiple of a given number is greater than or equal to that number.
 - (f) Every number is a multiple of itself.
- We have learnt that –
 - (a) The number other than 1, with only factors namely 1 and the number itself, is a prime number. Numbers that have more than two factors are called composite numbers. Number 1 is neither prime nor composite.
 - (b) The number 2 is the smallest prime number and is even. Every prime number other than 2 is odd.
 - (c) Two numbers with only 1 as a common factor are called co-prime numbers.
 - (d) If a number is divisible by another number then it is divisible by each of the factors of that number.
 - (e) A number divisible by two co-prime numbers is divisible by their product also.
- We have discussed how we can find just by looking at a number, whether it is divisible by small numbers 2,3,4,5,8,9 and 11. We have explored the relationship between digits of the numbers and their divisibility by different numbers.
 - (a) Divisibility by 2,5 and 10 can be seen by just the last digit.
 - (b) Divisibility by 3 and 9 is checked by finding the sum of all digits.
 - (c) Divisibility by 4 and 8 is checked by the last 2 and 3 digits respectively.
 - (d) Divisibility of 11 is checked by comparing the sum of digits at odd and even places.
- We have discovered that if two numbers are divisible by a number then their sum and difference are also divisible by that number.

- We have learnt that –
 - (a) The Highest Common Factor (HCF) of two or more given numbers is the highest of their common factors.
 - (b) The Lowest Common Multiple (LCM) of two or more given numbers is the lowest of their common multiples.

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