Properties of Addition

Understanding the Concept:

Addition has some special rules called properties

These rules help us add numbers easily and quickly

Let’s learn about the three main properties of addition

i. Order Property of Addition

Changing the order of numbers does not change the sum

We can add numbers in any order

Example:

4 + 7 = 11 and 7 + 4 = 11

So, 4 + 7 = 7 + 4

ii. Grouping Property of Addition

When we add three numbers, we can group them in any way

The answer will be the same

Example:

(2 + 3) + 5 = 5 + 5 = 10

2 + (3 + 5) = 2 + 8 = 10

So, (2 + 3) + 5 = 2 + (3 + 5)

iii. Zero Property of Addition

When we add 0 to any number, the answer is the number itself

Adding zero does not change the value

Example:

6 + 0 = 6

0 + 9 = 9

Let's Understand with Examples:

Example 1

Use order property:

Add 123 + 456

Now change the order: 456 + 123

Solution:

123 + 456 = 579

456 + 123 = 579

So, the sum is the same in both cases

Example 2

Use grouping property:

Add (100 + 200) + 300 and 100 + (200 + 300)

Solution:

(100 + 200) + 300 = 300 + 300 = 600

100 + (200 + 300) = 100 + 500 = 600

So, both give the same sum

Example 3

Use zero property:

Add 875 + 0

Solution:

875 + 0 = 875

Adding zero does not change the number

Example 4

Use order property:

Add 345 + 123 and 123 + 345

Solution:

345 + 123 = 468

123 + 345 = 468

Same answer both times

Example 5

Use grouping property:

Add (50 + 25) + 75 and 50 + (25 + 75)

Solution:

(50 + 25) + 75 = 75 + 75 = 150

50 + (25 + 75) = 50 + 100 = 150

So, the way we group does not change the answer