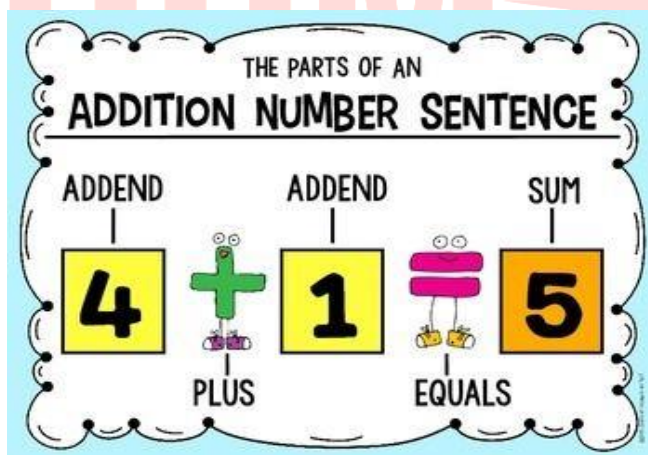Chapter – 4

ADDITION

STUDY NOTES

LEARN ABOUT:

- **PROPERTIES OF ADDITION**
- **ADDITION OF LARGE NUMBERS**
- **WORD PROBLEMS ON ADDITION**

❖ **PROPERTIES OF ADDITION:**

1. **Order property or commutative property-**
   Sum of two numbers remain the same even if the order, in which they are added, is changed.
   EXAMPLE-
   384475 + 29580 = 414055
   29580 + 384475 = 414055
   Thus, 384475 + 29580 = 29580 + 384475

Core Lesson
Commutative Property of Addition
We can add numbers in any order.

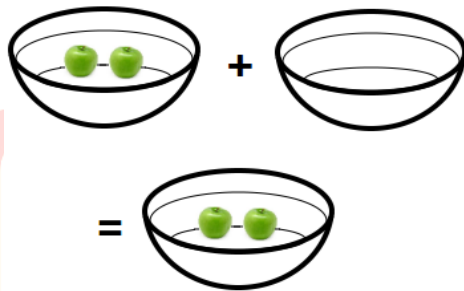1 + 2 = 2 + 1

★★★ = ★★★

3 = 3

LEARNZILLION

2. Addition of zero-

If '0' is added to a number, we get the number itself.

EXAMPLE-

89764 + 0 = 89764

Addition property of zero

3. Grouping property or associative property-

In whatever order three or more numbers are grouped for the purpose of addition, their sum remains the same.
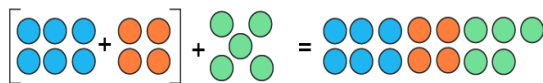
EXAMPLE-

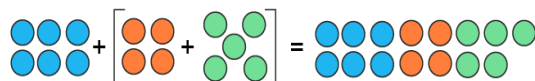(532492 + 2600781) + 48900 = 532492 + (2600781 + 48900)

(532492 + 2600781) + 48900 = 3133273 + 48900

Also, 532492 + (2600781 + 48900) = 532492 + 2649681 = 3182173

Associative Property of Addition

cuemath
THE MATH EXPERT

(6 + 4) + 5 = 15

6 + (4 + 5) = 15

❖ ADDITION OF LARGE NUMBERS:

We have already learnt to add numbers less than one lakh. Adding large numbers is quite similar.

STEPS-
1. Arrange the numbers in columns. Ones under ones, tens under tens and so on.
2. Add the digits in each column. Always start with ones place. Take the carry over (if any) to the next column and add it with the digits in that column. Continue till the last column.

(Note: The numbers being added are called addends.
The result of addition is called the sum.)

```
  1 1 1 1
1 0 6 5 3 2 1
+     4 5 9 8 6
─────────────
1 1 1 1 3 0 7
```

EXAMPLE-
Add 6,26,405   1,08,842   and   2,15,456.

SOLUTION-

	②		①		①		①		
	6.	2	6.	4	0	5
	1.	0	8.	8	4	2
+	2.	1	5.	4	5	6
	9.	5	0.	7	0	3

Common error – Always carry over the tens place not the ones place number.

❖ WORD PROBLEMS ON ADDITION:

5 steps should be followed while solving the story sums.

1. Read the question and find out the known facts.

2. Find out the unknown facts (what do you need to know).

3. Find out which operation you will follow to solve the problem.

4. Solve the problem and write the answer in sentence.

5. Check the answer.
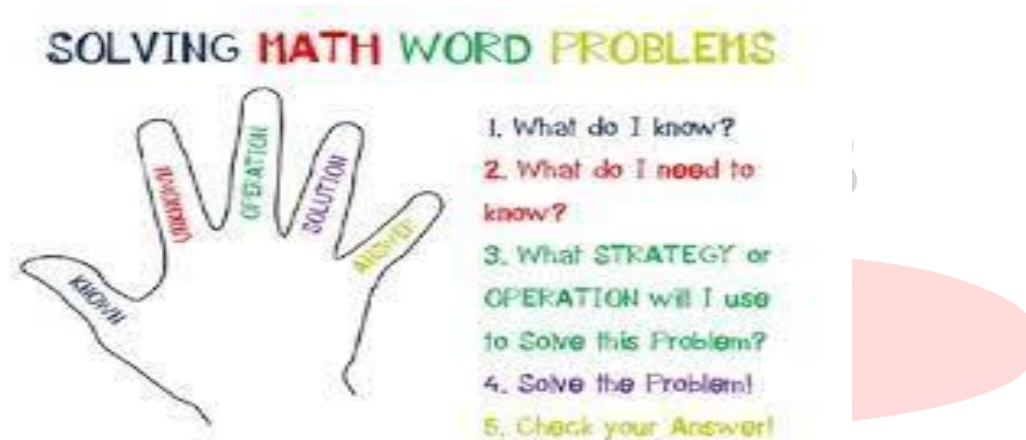
There are some key words for addition word problems.

EXAMPLE-

There are 14603 hens in a poultry farm. Due to some diseases 12625 hens died. How many are left?

SOLUTION-

Total hens in the poultry farm = 14,603

Number of hens died = 12,625

Remaining hens = 14,603 – 12,625 = 1,978

Thus, **1,978** hens were left.

MIND MAP

ADDITION

WORD PROBLEMS

PROPERTIES OF ADDITION

ADDITION OF LARGE NUMBERS

ORDER PROPERTY

ADDITION OF ZERO

GROUPING PROPERTY