

## Chapter- 4

### SUBTRACTION

#### STUDY NOTES

##### LEARNING OBJECTIVE:

- Properties of subtraction
- Subtraction of Two 2-digit numbers
- Subtraction of 1-digit and 2-digit Numbers from a 3-digit Number (without borrowing)
- Subtraction of Two 3-digit Numbers (without borrowing)
- Subtraction by Regrouping or Borrowing
- Word Problems

**SUBTRACTION:** Subtraction means taking away a number from another number or to take away from a group of objects or a number of things. When we subtract, the number of things in the group reduce or become less.

Symbol of subtraction is minus; 

Answer of subtraction is - DIFFERENCE

##### 1. Properties of subtraction:

- a) The order of numbers is important in subtraction. Usually, only a smaller number is subtracted from a bigger number.

**EXAMPLE:**

$$8 - 3 = 5$$

3 - 8 = Not possible at our level.

b) When we subtract 0 (zero) from a number, the difference is the number itself.

**Example:**

$$24 - 0 = 24, \quad 64 - 0 = 64$$

$$36 - 0 = 36, \quad 100 - 0 = 100$$

C) When we subtract 1 from a number, the difference is the previous (Just before) number, also called the **predecessor** of the number.

**Example:**

$$23 - 1 = 22 \text{ (22 is the predecessor of 23)}$$

$$75 - 1 = 74 \text{ ( 74 is the predecessor of 75)}$$

**2)Subtraction of Two 2-digit Numbers:**

**Example:** subtract 34 from 79

T      O      Method:

7      9      **Step 1:** Subtract the ones and write the difference

- 3      4 under ones column.

4      5      **9 ones - 4 ones = 5 ones**

**Step 2:** Subtract the tens and write the difference

Under tens column.

**7 tens - 3 tens = 4 tens**

**Ans. 45**

3. Subtraction of 1-digit and 2-digit numbers from a 3-digit number (Without Borrowing)

Example 1 : Subtract 5 from 127

H T O

Method:

1 2 7

Step-1 : Subtract the ones and write the difference below

-        5 the ones column.

1 2 2 7 ones - 5 ones = 2 ones

Step 2 : As there are no digits to be subtracted from the tens and the hundreds columns. So write the digits below in their respective places.

Or

2 - 0 = 2 (Write in tens column)

1 - 0 = 1 (Write in hundreds column)

Ans - 122

Example 2 : Subtract 23 from 695

H T O

Method:

6 9 5

Step 1 - Subtract the ones and write the difference under the ones'

- 2 3 column.

6 7 2 5 ones - 3 ones = 2 ones.

Step 2: Subtract the tens and write the difference under the tens column.

9 tens - 2 tens = 7 tens.

Step 3 : As there is no digit to be subtracted from the hundreds' column. Write the digit below as it is.

Ans- 672

4. Subtraction of Two 3-digit Numbers (without borrowing) :

Example : Subtract 321 from 546

H T O      Method:

5 4 6      Step 1: Subtract 1 from 6 in ones' column.

$$\begin{array}{r} 546 \\ - 321 \\ \hline \end{array} \text{ 6 ones - 1 one = 5 ones}$$

$$\begin{array}{r} 225 \\ \hline \end{array}$$

Step 2 : Now subtract 2 from 4 in tens, column.

$$4 \text{ tens} - 2 \text{ tens} = 2 \text{ tens}$$

Step 3: Finally subtract 3 from 5 in hundreds' column.

$$5 \text{ hundreds} - 3 \text{ hundreds} = 2 \text{ hundreds}$$

Ans- 225



# EDUCATIONAL GROUP

5. Subtraction by Regrouping or Borrowing

A. Regrouping tens into tens and ones

EXPLANATION:

While subtracting ,if the digit at the ones place is less than the digit to be subtracted,we regroup the tens in such a way that 1 ten is borrowed from the tens place and add as 10 ones to the existing ones for subtraction.

### Example 1 : Subtract 35 from 60

T O

510 Step-1: Since  $0 < 5$ , to subtract 5 from 0, we will borrow 1 ten

6 0 from the tens column.

**Step-2** : Subtract the ones

$$10 \text{ ones} - 5 \text{ ones} = 5 \text{ ones}$$

**Step-3** : Subtract the tens.

$$5 \text{ tens} - 3 \text{ tens} = 2 \text{ tens}$$

Ans - 25

**Example 2 :** Subtract 7 from 326

HTO

## Method:

116 Step-1:  $7 \geq 6$ . we cannot subtract 7 from 6 in ones column.

3 2 6      So we will borrow 1 ten from the tens column

- 7 Instead of 2 tens and 6 ones, now we have 1 ten and

3 1 9 16 ones

$$16 \text{ ones} - 7 \text{ ones} = 9 \text{ ones}$$

**Step-2:** As there are no digits to be subtracted from the tens and hundreds columns, write the digits below in their respective places.

Ans : 319

**Example 3** : Subtract 17 from 324

H T O

Method:

114 Step-1: As  $4 < 7$ , so we will borrow 1 ten from the tens

3 2 4

column. Now 2 tens will become 1 ten and 4 ones will

- 1 7

become 14 ones.

3 0 7 Step-2:

14 ones - 7 ones = 7 ones

(write in ones column)

Step-3:  $1 \text{ ten} - 1 \text{ ten} = 0 \text{ tens}$

Step-4: As there is no digit to be subtracted in the hundreds column, we will write the same digit hundreds column.

Ans: 307

**B. Regrouping Hundreds into Hundreds and Tens**

EXPLANATION:

When the digit at the tens place is less than the digit to be subtracted, we borrow one hundred from the hundreds place and bring it to the tens place. Then we add the tens to the existing tens for subtraction.

**Example 1** :- Subtract 9 from 302

**Solution:**

H T O

Method:

9

Step-1: As  $2 < 9$ , we will borrow 1 ten from tens column.

21012 Step-2 :- Since there is 0 tens in the tens column, we

3 ~~0~~ 2

will first borrow 1 hundred from the hundreds column.

-        9

Now 3 hundred and 0 tens become 2 hundreds and

2 9 3

10 tens.

**Step 3:-** Now that there are 10 tens in the tens column, we will borrow. Now we have 9 tens and 12 ones.

**Step 4:-**

$$12 \text{ ones} - 9 \text{ ones} = 3 \text{ ones.}$$

**Step 5 :-** As there is nothing to be subtracted from the tens and hundreds columns. Write the digit in the respective places.

Ans :- 293

### 7. Word Problems :

**EXPLANATION:-**

Read the question carefully. Understand clearly what is given and what is to be found. Write the steps properly and then solve the problem.

**Example:-**

In an orchard, there were 428 apple trees. Of these 139 were destroyed in a storm. How many trees are left now?

**Solution:**

Total number of apple trees in the orchard = 428

Number of trees destroyed in the storm = 139

311 18

Number of trees left now = 4 2 8  

$$- \underline{1} \underline{3} \underline{9}$$

2 8 9

**Ans:-** So, 289 apple trees are left now in the

## MINDMAP







