Chapter- 4

SUBTRACTION

STUDY NOTES

This lesson will help you to know about :

- 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, 64- 0 = 64

36 - 0 = 36, 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 (22 is the predecessor of 23)

75 - 1 = 74 (74 is the predecessor of 75)

2)Subtraction of Two 2-digit Numbers;

Example: subtract 34 from 79

	T	O
	7	9
-	3	4
	4	5

Method:

Step 1: Subtract the ones and write the difference under ones column.

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

1 2 7

\- 5

1 2 2

Method:

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

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

6 9 5

\- 2 3

6 7 2

Method:

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

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
5	4	6
- 3	2	1
2	2	5

Method:

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

6 ones - 1 one = 5 ones

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

4 tens - 2 tens = 2 tens

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

5 hundreds - 3 hundreds = 2 hundreds

Ans- 225

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
5	10
6	0
- 3	5
2	5

Method :

Step-1: Since 0<5, to subtract 5 from 0, we will borrow 1 ten from the tens column.

Now we have 5 tens and 10 ones instead of 6 tens and 0 ones.

Step-2 : Subtract the ones

10 ones - 5 ones = 5 ones

Step-3 : Subtract the tens.

5 tens - 3 tens = 2 tens

Ans - 25

Example 2 : Subtract 7 from 326

H	T	O
	1	16
3	2	6
-		7
3	1	9

Method:

Step-1: 7 > 6, we cannot subtract 7 from 6 in ones column.

So we will borrow 1 ten from the tens column.

Instead of 2 tens and 6 ones, now we have 1 ten and 16 ones.

16 ones - 7 ones = 9 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
	1	14
3	2	4
-	1	7
3	0	7

Method:

Step-1: As 4 < 7,so we will borrow 1 ten from the tens column. Now 2 tens will become 1 ten and 4 ones will become 14 ones.

Step-2:

14 ones - 7 ones = 7 ones

(write in ones column)

Step-3: 1 ten - 1 ten = 0 tens

Step-4: As there is no digit to be 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

9

2 ~~10~~ 12

3 ~~0~~ ~~2~~

\- 9

2 9 3

Method:-

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

Step-2 :- Since there is 0 tens in the tens column , we will first borrow 1 hundred from the hundreds column. Now 3 hundred and 0 tens become 2 hundreds and 10 tens.

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

Step 4:-

12 ones - 9 ones = 3 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

3 11 18

4 2 8

\- 1 3 9

Number of trees left now = 2 8 9

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

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