Doon Public School, Bhuj

Subject : Maths Exercise 2.1

Dear Students,
This is your homework which you have to do in your Maths fair notebook in good handwriting. Students those who are having fair notebook with them, they will do in the same and others will do after receiving their notebooks. Also follow the correct pattern of writing in notebook (such as Date in the right most corner in the first line , home work in the middle of the first line, ch. No. in the left most corner etc).

Example 2: Subtract 7,81,601 from 9,87,50,210.

	C	TL	L	TTh	Th	H	T	O
	9	8	7	5	0	2	1	0
−			7	8	1	6	0	1
	9	7	9	6	8	6	0	9

Thus, 9,87,50,210 – 7,81,601 = 9,79,68,609

Properties of Subtraction

Property 1: When zero is subtracted from any number, then the difference is the number itself.

Example: 59,57,643 – 0 = 59,57,643

Property 2: When a number is subtracted from itself, then the difference is zero.

Example: 36,53,784 – 36,53,784 = 0

Property 3: When 1 is subtracted from any number, you get the previous number which is called the **predecessor** of the number.

Example: 7,64,82,457 – 1 = 7,64,82,456, which is the predecessor of 7,64,82,457.

Word Problem

Example 1: Mr Smith bought a bike for ₹ 2,46,745 and a car for ₹ 15,80,480. What amount of money did he spend in all?

Solution:

	TL	L	TTh	Th	H	T	O
Cost of bike		2	4	6	7	4	5
Cost of car +	1	5	8	0	4	8	0
Total amount spent	1	8	2	7	2	2	5

Total amount spent by Mr Smith is ₹ 18,27,225.

Try This!

a. 900000 + 1305684 = _____ b. 1305684 – 900000 = _____

Example 2: Sabina had ₹ 15,00,000 with her. She bought a new car for ₹ 8,42,800 and an used car for ₹ 2,82,170. How much money is left with her?

Solution:

	TL	L	TTh	Th	H	T	O
Cost of the new car		8	4	2	8	0	0
Cost of the used car +		2	8	2	1	7	0
Money spent by Sabina	1	1	2	4	9	7	0

Amount of money left with Sabina = Total money Sabina had – Total money spent by her

	TL	L	TTh	Th	H	T	O
Total money Sabina had	1	5	0	0	0	0	0
Amount spent −	1	1	2	4	9	7	0
Amount left		3	7	5	0	3	0

Thus, Sabina is left with ₹ 3,75,030.

Maths Around Us

Lima goes to a shopping mall with her father. She finds out that a few thousand people visit the shopping mall every weekend, and the sale transaction runs into some crores. She was curious to know how a shop owner calculates his/her profit over the weekend.

Seeing this curiosity, her father explained that a shop owner **adds** all the sales done in a week. Then he/she **subtracts** the rent of the shop, electricity charges, wages to be paid to the employees, etc., from the total sales. The remaining amount is his/her profit.

Lima understands the importance of operations on large numbers.

Exercise 2.1

1. Add the following:

a. 78,91,253 + 4,95,865
b. 35,78,928 + 4,75,935
c. 18,25,723 + 7,21,938 + 5,42,153
d. 18,59,231 + 48,92,193 + 53,52,476
e. 61,23,579 + 52,38,165 + 7,24,91,125
f. 65,41,854 + 9,58,421 + 4,52,144

2. Subtract the following:

a. 89,21,352 – 4,85,189
b. 73,52,192 – 8,39,187
c. 52,15,372 – 25,06,789
d. 35,21,792 – 18,39,198
e. 5,39,18,729 – 43,19,857
f. 52,14,120 – 23,19,857

3. Solve the following:

a. 2,54,27,192 + 32,51,678 + 58,41,902
b. 78,15,929 + 25,28,591 – 59,72,891

4. Ms Shrishti invested ₹ 15,50,500 in her business last year. The total sales was ₹ 8,78,450. What is the difference between her sales and investment?

5. Rahul's father saved ₹ 12,85,925 in the last 15 years. How much more should he save to make it ₹ 15,00,000?

6. Solve the following:

a. What should be added to 5,37,93,210 to get 8,89,06,972?
b. What should be subtracted from 9,66,05,398 to get 4,53,98,932?
c. Find the difference between the largest 8-digit number and the smallest 6-digit number.

7. 21,32,481 people live in State A. 2,42,745 people moved from State B to State A and 18,452 people moved from State A to State C. How many people now live in State A?

8. Fill in the missing digits.

a.

	L	TTh	Th	H	T	O
	8	2	□	4	2	5
+	1	□	5	□	7	8
	9	5	9	8	0	3

b.

	L	TTh	Th	H	T	O
	7	8	□	5	7	2
–	4	□	1	□	2	□
	3	5	5	3	4	9

c.

	L	TTh	Th	H	T	O
	7	9	□	2	8	□
+	□	□	2	8	□	3
	8	3	5	1	2	1

d.

	L	TTh	Th	H	T	O
	9	□	7	2	□	2
–	□	8	□	2	3	□
	8	4	3	0	4	7

HOTS

1. Write the largest 7-digit number that ends with 1 and the smallest 7-digit number that ends with 2, using the digits 7, 8, 9, 2, 0, 1, 4 without repeating any digit.
2. What number should be added to the sum of the above two numbers to make it 1,25,42,179?

Multiplication

We have already learnt how to multiply two 3-digit numbers and how to multiply a 4-digit number by a 2-digit number. Let us discuss the steps involved in the multiplication of any number by a 3-digit or a 4-digit number.

Multiplication of a Number by a 3-digit Number

Multiplication of a number by a 3-digit number involves 3 steps. First, multiply the multiplicand by the place value of ones digit of the multiplier, then by the place value of tens digit of the multiplier, and then by the place value of hundreds digit of the multiplier. Then add the three answers.

Example 1: Multiply 1275 by 428.

Here, 1275 is the multiplicand and 428 is the multiplier.

		L	TTh	Th	H	T	O	
				1	2	7	5	← Multiplicand
	x				4	2	8	← Multiplier
Step 1: 1275 × 8 =			1	0	2	0	0	
Step 2: 1275 × 20 =			2	5	5	0	0	
Step 3: 1275 × 400 =	+	5	1	0	0	0	0	
		5	4	5	7	0	0	← Product

Therefore, 1275 × 428 = 5,45,700

Multiplication of a Number by a 4-digit Number

Multiplication of a number by a 4-digit number involves 4 steps. First, multiply the multiplicand by the place value of ones digit, then by the place value of tens digit, then by the place value of hundreds digit and then by the place value of thousands digit.

Then add the four answers.

Example: Multiply 5297 by 1025.

Here, 5297 is the multiplicand and 1025 is the multiplier.

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Pre - Mid Term

Ch-2

Home Work

Operations on Large Numbers

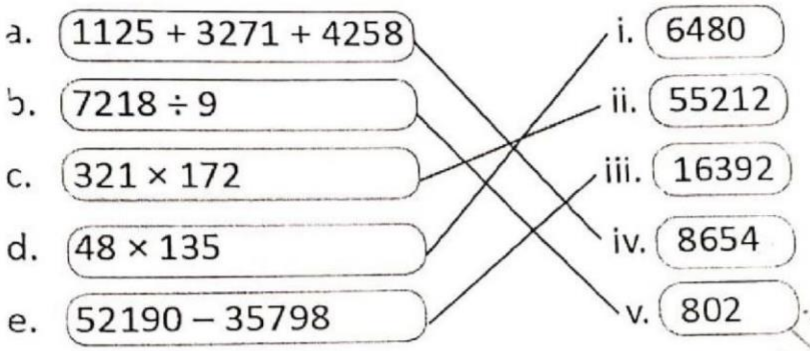
Exercise- 2.1

Q1.

Chapter 2 Operations on Large Numbers

LET'S RECALL (Page 17)

1. Match the following.



TRY THIS! (Page 20)

a. 900000 + 1305684 = <u>2205684</u>

	TL	L	TTh	Th	H	T	O
		9	0	0	0	0	0
+	1	3	0	5	6	8	4
	2	2	0	5	6	8	4

b. 1305684 – 900000 = <u>405684</u>

	TL	L	TTh	Th	H	T	O
	1	3	0	5	6	8	4
–		9	0	0	0	0	0
		4	0	5	6	8	4

Exercise 2.1 (Page 21)

1. a. 78,91,253 + 4,95,865 = <u>83,87,118</u>

Solution:

	TL	L	TTh	Th	H	T	O
	1 7	1 8	9	1 1	1 2	5	3
+		4	9	5	8	6	5
	8	3	8	7	1	1	8

b. 35,78,928 + 4,75,935 = <u>40,54,863</u>

Solution:

	TL	L	TTh	Th	H	T	O
	1 3	1 5	1 7	1 8	9	1 2	8
+		4	7	5	9	3	5
	4	0	5	4	8	6	3

c. 18,25,723 + 7,21,938 + 5,42,153 = 30,89,814

Solution:

	TL	L	TTh	Th	H	T	O
	2			1	1	1	
	1	8	2	5	7	2	3
		7	2	1	9	3	8
+		5	4	2	1	5	3
	3	0	8	9	8	1	4

d. 18,59,231 + 48,92,193 + 53,52,476 = 1,21,03,900

Solution:

	C	TL	L	TTh	Th	H	T	O
		2	2	1		2	1	
		1	8	5	9	2	3	1
		4	8	9	2	1	9	3
+		5	3	5	2	4	7	6
	1	2	1	0	3	9	0	0

e. 61,23,579 + 52,38,165 + 7,24,91,125 = 8,38,52,869

Solution:

	C	TL	L	TTh	Th	H	T	O
	1		1	1		1	1	
		6	1	2	3	5	7	9
		5	2	3	8	1	6	5
+	7	2	4	9	1	1	2	5
	8	3	8	5	2	8	6	9

f. 65,41,854 + 9,58,421 + 4,52,144 = 79,52,419

Solution:

	TL	L	TTh	Th	H	T	O
	1	1	1	1	1		
	6	5	4	1	8	5	4
		9	5	8	4	2	1
+		4	5	2	1	4	4
	7	9	5	2	4	1	9

2. a. 89,21,352 – 4,85,189 = 84,36,163

Solution:

	TL	L	TTh	Th	H	T	O
		8	11	11	2	14	12
	8	~~9~~	~~2~~	~~1~~	~~3~~	~~5~~	~~2~~
–		4	8	5	1	8	9
	8	4	3	6	1	6	3

b. 73,52,192 – 8,39,187 = 65,13,005

Solution:

	TL	L	TTh	Th	H	T	O
	6	13	4	12		8	12
	~~7~~	~~3~~	~~5~~	~~2~~	1	~~9~~	~~2~~
–		8	3	9	1	8	7
	6	5	1	3	0	0	5

c. 52,15,372 – 25,06,789 = 27,08,583

Solution:

	TL	L	TTh	Th	H	T	O
	4	12	0	14	12	16	12
	~~5~~	~~2~~	~~1~~	~~5~~	~~3~~	~~7~~	~~2~~
–	2	5	0	6	7	8	9
	2	7	0	8	5	8	3

d. 35,21,792 – 18,39,198 = 16,82,594

Solution:

	TL	L	TTh	Th	H	T	O
	2	14	11	11	6	18	12
	~~3~~	~~5~~	~~2~~	~~1~~	~~7~~	~~9~~	~~2~~
–	1	8	3	9	1	9	8
	1	6	8	2	5	9	4

e. 5,39,18,729 – 43,19,857 = 4,95,98,872

Solution:

	C	TL	L	TTh	Th	H	T	O
	4	13	8	10	17	16	12	
	~~5~~	~~3~~	~~9~~	~~1~~	~~8~~	~~7~~	~~2~~	9
–		4	3	1	9	8	5	7
	4	9	5	9	8	8	7	2

f. 52,14,120 – 23,19,857 = 28,94,263

Solution:

	TL	L	TTh	Th	H	T	O
	4	11	10	13	10	11	10
	~~5~~	~~2~~	~~1~~	~~4~~	~~1~~	~~2~~	~~0~~
–	2	3	1	9	8	5	7
	2	8	9	4	2	6	3

3. a. 2,54,27,192 + 32,51,678 + 58,41,902 = <u>3,45,20,772</u>

Solution:

	C	TL	L	TTh	Th	H	T	O
	1	1	1	1	1	1	1	
	2	5	4	2	7	1	9	2
		3	2	5	1	6	7	8
+		5	8	4	1	9	0	2
	3	4	5	2	0	7	7	2

b. 78,15,929 + 25,28,591 – 59,72,891 = <u>43,71,629</u>

Step 1:

	C	TL	L	TTh	Th	H	T	O
		1		1	1	1	1	
		7	8	1	5	9	2	9
+		2	5	2	8	5	9	1
	1	0	3	4	4	5	2	0

Step 2:

	C	TL	L	TTh	Th	H	T	O
		9	12	14	3	14	11	10
	~~1~~	~~0~~	~~3~~	~~4~~	~~4~~	~~5~~	~~2~~	~~0~~
–		5	9	7	2	8	9	1
		4	3	7	1	6	2	9

4. Invested money ⇒ ₹15,50,500
   Total Sales ⇒ ₹8,78,450

Solution:

Difference between sales and Investment = Investment – Sales

	L	TTh	Th	H	T	O
	14 15	14 ~~5~~	10 ~~0~~	4 ~~5~~	10 ~~0~~	0
–	8	7	8	4	5	0
	6	7	2	0	5	0

Difference between Ms Shrishti's sales and Investment = ₹6,72,050

5. Rahul's father saving = ₹12,85,925

	TL	L	TTh	Th	H	T	O
		4 ~~5~~	9 ~~0~~	9 ~~0~~	9 ~~0~~	9 ~~0~~	10 ~~0~~
	1						
–	1	2	8	5	9	2	5
	0	2	1	4	0	7	5

Therefore, ₹2,14,075 more should Rahul's father has to save to make it ₹15,00,000.

6. a.

C	TL	L	TTh	Th	H	T	O
		8 ~~9~~	10 ~~0~~				
8	8			6	9	7	2
– 5	3	7	9	3	2	1	0
3	5	1	1	3	7	6	2

Therefore, 3,51,13,762 should be added to 5,37,93,210 to get 8,89,06,972.

b.

C	TL	L	TTh	Th	H	T	O
9	6	6	0	5	3	9	8
– 4	5	3	9	8	9	3	2
5	1	2	0	6	4	6	6

Therefore, 5,12,06,466 should be subtracted from 9,66,05,398 to get 4,53,98,932.

c. The largest 8-digit number = 9,99,99,999
The smallest 6-digit number = 1,00,000
Therefore, the difference between the largest 8-digt number and smallest 6-digit number is 9,98,99,999

7.

People live in State A	=	21,32,481
People moved from State B to State A	=	+ 2,42,745
Total People in State A	=	23,75,226
Total People in state A	=	23,75,226
People moved from State A to State C	=	− 18,452
∴ People live in State A	=	23,56,774

8. a.

	L	TTh	Th	H	T	O
	8	2	4	4	2	5
+	1	3	5	3	7	8
	9	5	9	8	0	3

b.

	L	TTh	Th	H	T	O
	7	8	6	5	~~1~~ 6	~~2~~ 12
−	4	3	1	2	2	3
	3	5	5	3	4	9

c.

	L	TTh	Th	H	T	O
	1 7	9	1 2	1 2	1 8	8
+	0	4	2	8	3	3
	8	3	5	1	2	1

d.

	L	TTh	Th	H	T	O
	~~9~~ 8	12 2	7	2	7 8	~~2~~ 12
−	0	8	4	2	3	5
	8	4	3	0	4	7

HOTS (Page 23)

1. Largest 7-digit number that ends with 1 is 98,74,201.
Smallest 7-digit number that ends with 2 is 10,47,892.

2. Sum of the above 2 numbers is 98,74,201 + 10,47,892 = 1,09,22,093
The number to be added with 1,09,22,093 to get 1,25,42,179 is 16,20,086.

	C	TL	L	TTh	Th	H	T	O
		1	15			0	17	
	1	~~2~~	~~5~~	4	2	~~1~~	~~7~~	9
−	1	0	9	2	2	0	9	3
		1	6	2	0	0	8	6