

## DIVISION BY 10, 100, AND 1000

The same rules which you have learnt in the previous class are used for the examples given below.

Observe the given examples :

**Example 5.** Divide 2567 by 10, 100, and 1000 separately.

**SOLUTION:** (i)

$$\begin{array}{r} 256 \\ 10 \overline{) 2567} \\ \underline{-20} \\ \times 56 \\ \underline{-50} \\ \times 7 \end{array}$$

Quotient = 256,  
Remainder = 7.

(ii)

$$\begin{array}{r} 25 \\ 100 \overline{) 2567} \\ \underline{-200} \\ \times 567 \\ \underline{-500} \\ \times 67 \end{array}$$

Quotient = 25,  
Remainder = 67.

(iii)

$$\begin{array}{r} 2 \\ 1000 \overline{) 2567} \\ \underline{-2000} \\ \times 567 \end{array}$$

Quotient = 2,  
Remainder = 567.

[N.B. If any number is divide by 10, 100, 1000, etc. count the zeroes in the divisor and write equal no. of digits from right to left of the number as remainder and the rest will be the quotient.]

**Example 6.** Find the dividend if the divisor is 49, the quotient is 139 and the remainder is 37.

**SOLUTION:**  $\because$  Dividend = Divisor  $\times$  Quotient + Remainder

$$\begin{aligned} &= 49 \times 139 + 37 \\ &= 6811 + 37 \\ &= 6848 \end{aligned}$$

Ans. 6848.

**Example 7.** In a sum of division if the dividend is 17885, quotient is 83 and remainder is 40, find the divisor.

**SOLUTION:** Dividend = (Divisor - Remainder)  $\div$  Quotient

$$\begin{aligned} &= (17885 - 40) \div 83 \\ &= 17845 \div 83 \\ &= 215. \end{aligned}$$

$\therefore$  Divisor = 215.

*classmate  
Jayant sir*

### Exercise 6 (A) .....

(Do in your book)

Fill in the blanks :

- (a)  $567 \div 1 = \dots\dots\dots$  (b)  $2956 \div 2956 = \dots\dots\dots$  (c)  $0 \div 7956 = \dots\dots\dots$   
 (d)  $7576 \div 1 = \dots\dots\dots$  (e)  $867 \div \dots\dots\dots = 1$  (f)  $\dots\dots\dots \div 1 = 2847$

(g)  $3051 \div \dots = 3051$  (h)  $395 \div \dots = 395$  (i)  $\dots + 7043 = \dots$

(j)  $4017 \div 4017 = \dots$

2. Without division, write the quotient and the remainder :

(a)  $156 \div 10$ ; Quotient = ..... Remainder = .....

(b)  $356 \div 10$ ; Quotient = ..... Remainder = .....

(c)  $845 \div 100$ ; Quotient = ..... Remainder = .....

(d)  $187 \div 100$ ; Quotient = ..... Remainder = .....

(e)  $3874 \div 100$ ; Quotient = ..... Remainder = .....

(f)  $9563 \div 100$ ; Quotient = ..... Remainder = .....

(g)  $4261 \div 10$ ; Quotient = ..... Remainder = .....

(h)  $7597 \div 1000$ ; Quotient = ..... Remainder = .....

3. Divide :

(a)  $879 \div 39$

(b)  $9387 \div 75$

(c)  $9215 \div 125$

(d)  $987567 \div 678$

4. Find the dividend if Divisor = 74;

Quotient = 32; Remainder = 53.

### Exercise 6 (B) .....

(Do in your notebook)

Divide :

1.  $567 \div 15$

4.  $675 \div 32$

7.  $4546 \div 19$

10.  $7563 \div 25$

13.  $19875 \div 64$

16.  $49875 \div 91$

19.  $3875 \div 75$

22.  $6077 \div 54$

25.  $96387 \div 250$

28.  $453728 \div 124$

2.  $685 \div 18$

5.  $3756 \div 17$

8.  $1056 \div 30$

11.  $9732 \div 48$

14.  $19976 \div 89$

17.  $74851 \div 65$

20.  $87663 \div 75$

23.  $9075 \div 80$

26.  $648765 \div 125$

29.  $72034 \div 415$

3.  $976 \div 21$

6.  $2958 \div 25$

9.  $4967 \div 48$

12.  $7563 \div 35$

15.  $88784 \div 87$

18.  $2974 \div 72$

21.  $56075 \div 24$

24.  $26746 \div 145$

27.  $56732 \div 250$

30.  $739853 \div 625$

31. Divide and check your answer :

(a)  $456 \div 32$

(c)  $7563 \div 64$

(e)  $9327 \div 348$

(g)  $111111 \div 11$

(b)  $973 \div 48$

(d)  $8956 \div 205$

(f)  $100000 \div 999$

(h)  $99999 \div 999$

**PROBLEMS BASED ON DIVISION OF NUMBERS**

**Example 1.** find the greatest number of 5 digits which is exactly divisible by 325.

**SOLUTION :** The greatest number of 5 digits = 99999

Now,

$$\begin{array}{r} \phantom{325} \overline{) 307} \\ 325 \overline{) 99999} \\ \underline{-975} \phantom{00} \\ \phantom{00} \times 2499 \\ \underline{-2275} \phantom{00} \\ \phantom{0000} \times 224 \end{array}$$

Remainder left = 224.

Hence, the required number =  $99999 - 224 = 99775$ .

**Ans.** = 99775.

**Example 2.** find the smallest number of 5 digits which is exactly divisible by 48.

**SOLUTION :** The greatest number of 5 digits = 10000

Now,

$$\begin{array}{r} \phantom{48} \overline{) 208} \\ 48 \overline{) 10000} \\ \underline{-96} \phantom{000} \\ \phantom{000} \times \times 400 \\ \underline{-384} \phantom{00} \\ \phantom{0000} \times 16 \end{array}$$

Remainder left = 16.

Hence, the required number =  $10000 + (48 - 16)$

$$= 10000 + 32 = 10032.$$

Required number = 10032.

**Exercise 6 (C)** .....

(Do in your notebook)

1. Divide the largest number of 4 digits by the largest number of 2 digits
2. If a number is divided by 68, the quotient and remainder are 75 and 39 respectively, find the number.

3. 2346 students are standing equally in 23 rows. Find the number of students standing in each row.
4. 15675 cartons of apples are loaded equally in 19 trucks. How many cartons are there in each truck?
5. A book has 14118 lines of sentence in all and each page contains 39 sentences. Can you find the number of pages the book has? If yes, write the answer.
6. The product of two numbers is 35640. If one of them is 216, find the other.
7. Write the greatest number of 6 digits and divide it by the largest number of 2 digits.
8. What least number should be subtracted from 17915 so that the remaining number is exactly divisible by 84?
9. What least number should be added to 48539 so that the sum is exactly divisible by 214?
10. Write the smallest number of 5 digits so that the number is exactly divisible by 216.
11. 84 crates of coca cola bottles are loaded in each truck. 46 trucks were full of bottles and 39 crates were left behind. Find the how many crates of bottle were in the godown?

### MIXED PROBLEMS

#### Simplification of numbers based on BODMAS:

Addition, subtraction, multiplication and division are the four fundamental operations in Mathematics. Besides these, there are also two symbols frequently used in the subject. These are 'of' ( $\times$ ) and brackets  $[\ ]$ . Simply 'of' means multiplication but when two or more than two signs are introduced at a time then the order in which the operations are done can be remembered as BODMAS, where

B — Stands for brackets

O — Stands for of (multiplication)

D — Stands for division

M — Stands for multiplication

A — Stand for addition; and

S — Stand for subtraction.

**Example 1. Simplify :  $560 + 320 \div 8 \times 4 - 481$ .**

**SOLUTION :**  $560 + 320 \div 8 \times 4 - 481$

$$= 560 + 40 \times 4 - 481 \quad (\text{first do the division})$$

$$= 560 + 160 - 481 \quad (\text{do the multiplication})$$

$$= 720 - 481 \quad (\text{do the addition and then subtraction})$$

**Ans. = 239**

**Example 2.** Simplify :  $720 \div 18 \times (214 - 212) - 8 \text{ of } 7 + 325$ .

**SOLUTION :**  $= 720 \div 18 \times 2 - 8 \text{ of } 7 + 325$  (remove the bracket)  
 $= 720 \div 18 \times 2 - 56 + 325$

$= 40 \times 2 - 56 + 325$  (do the operation of 'of', multiply  $8 \times 7 = 56$ )  
(do the division)

$= 80 - 56 + 325$

$= 80 + 325 - 56$  (do the multiplication)

$= 405 - 56$  (do the addition and then subtraction)

$= 349$

### Exercise 6 (D) .....

(Do in your notebook)

- $218 + 152 \times 4$
  - $375 - 76 \times 3$
  - $864 - 407 \div 11$
  - $660 \div 22 \times 15$
  - $3856 - 2163 \div 21$
  - $96144 \div 48 \times 8 + 2179$
  - $2056 \times 8640 \div 216 - 5719$
  - $4372 + 4372 - 4372 \times 4372 \div 4372$
  - $2905 - 3876 + 432 \div 8 \times 357$
  - $7051 - 16632 \div 216 \times 11 + 3567$
  - $16 + 25 - (10 + 45) \div 5$
  - $5(35 - 7) - 48 - 51$
  - $107 \times (720 \div 8) - 4 \text{ of } 10$
  - $1235 + 70 \text{ of } 45 \times 20 - 965$
  - $615 - \{40 + (356 - 116) + 140\} \div 20 \text{ of } 21$
16. Write the largest number of 4 digits. Divide it by the product of 15 and 9 check your answer.
17. What least number should be subtracted from the largest number of 5 digits so that the remaining number is exactly divisible by the largest number of 2 digits?
18. Write the smallest number of 5 digits which is exactly divisible by 63?
19. The product of two numbers is 1887. If one number is 37, what is the other number?
20. How many weeks do 5649 days make?
21. The sum of two numbers is 995 and the smaller number is 478. What is the product of the two numbers?
22. Ajit bought 36 baskets of mangoes, each containing 350 mangoes. Vinay bought 29 baskets, each containing 503 mangoes. Who bought more mangoes and by how much?
23. There are 5375 books to be kept in a rack which has 125 shelves. If each shelf has equal number of books. Find how many books are in each shelf.
24. There are 17640 people living in a colony in 56 different apartments. Each apartment has 45 flats and equal number of people live in each flat. How many people live in the apartment and how many in each flat?

# 5

## Multiplication

- Multiplicand** : The number which is to be multiplied is called the multiplicand.  
**Multiplier** : The number by which a given number is multiplied is called the multiplier.  
**Product** : The result of a multiplication sum is called the product.

In the previous class, you have learnt the basic rules and methods of multiplication. In this chapter you will learn more about it.

Here, see an example:  $15 \times 9 = 135$ .

In this sum of multiplication, multiplicand = 15 multiplier = 9 and product = 135.

Before learning more about multiplication you must remember the properties of multiplication.

### PROPERTIES OF MULTIPLICATION

- If a number is multiplied by zero (0), the product is zero.  
e.g. (a)  $62 \times 0 = 0$   
(b)  $0 \times 845 = 0$
- If a number is multiplied by 1, the product is number itself.  
e.g. (a)  $64 \times 1 = 64$   
(b)  $1 \times 985 = 985$
- If two or more than two numbers are multiplied by changing the order of the numbers, the product will always be the same.

e.g. (a)  $75 \times 20 = 1500$  and  $20 \times 75 = 1500$

$$\therefore 75 \times 20 = 20 \times 75$$

(b)  $25 \times 15 \times 7 = 2625$

Here,  $25 \times (15 \times 7) = 25 \times 105 = 2625$

$$(25 \times 15) \times 7 = 375 \times 7 = 2625$$

$$(25 \times 7) \times 15 = 175 \times 15 = 2625$$

$$\text{Thus, } 25 \times (15 \times 7) = (25 \times 15) \times 7 = (25 \times 7) \times 15 = 2625$$

- The product of a number by the sum of two numbers is the same as the sum of the product of that number by the two given numbers separately.

e.g.  $18 \times (25 + 5) = 18 \times 30 = 540$

Also,  $(18 \times 25) + (18 \times 5) = 450 + 90 = 540$

$$\therefore 18 \times (25 + 5) = (18 \times 25) + (18 \times 5)$$

### MULTIPLICATION BY TENS, HUNDREDS OR THOUSANDS

In the previous class, you have learnt about the multiplication of a number by 10, 100 and 1000. Now, you will learn more about it. Observe the given examples carefully:

**Example 1:** Multiply : (a) 26 by 20 (b) 329 by 30

**SOLUTION:** (a)  $26 \times 20$

$$= 26 \times 2 \text{ tens}$$

$$= 52 \text{ tens}$$

$$= 520$$

$$\text{Ans.} = 26 \times 20 = 520$$

(b)  $329 \times 30$

$$= 329 \times 3 \text{ tens}$$

$$= 987 \text{ tens}$$

$$= 9870$$

$$\text{Ans.} = 329 \times 30 = 9870$$

**Example 2:** Multiply : (a) 123  $\times$  400 (b) 376  $\times$  7000

**SOLUTION:** (a)  $123 \times 400$

$$= 123 \times 4 \text{ hundred}$$

$$= 492 \text{ hundreds}$$

$$= 49200$$

$$\text{Ans.} = 49200$$

(b)  $376 \times 7000$

$$= 376 \times 7 \text{ thousands}$$

$$= 2632 \text{ thousands}$$

$$= 2632000$$

$$\text{Ans.} = 2632000$$

**N.B.:** [If any number is multiplied by 200, 300, 5000 or 8000 etc, first multiply the number by 2, 3, 5 or 8 or the digit which is given, then place the number of zeroes in the right side if the product.]

### Exercise 5 (A)

(Do in your book)

1. Fill in the blanks :

(a)  $4567 \times 3894 = \dots \times 4567$

(b)  $2893 \times 0 = \dots$

(c)  $\dots \times 48903 = 48903 \times 567$

(d)  $7093 \times 218 \times 4159 = 218 \dots \times 7093$

(e)  $3941 \times 2834 \times 0 = \dots$

(f)  $39421 \times \dots = 39421$

(g)  $4834 \times 0 = 4834 \times \dots$

(h)  $25(375 + 482) = (25 \times 375) + (25 \times \dots)$

2. Find the product :

(a)  $20 \times 40 = \dots$

(b)  $56 \times 50 = \dots$

(c)  $38 \times 400 = \dots$

(d)  $75 \times 200 = \dots$

(e)  $78 \times 2000 = \dots$

(f)  $15 \times 700 = \dots$

(g)  $0 \times 4732 = \dots$

(h)  $40 \times 120 = \dots$

3. Multiply in one step directly :

(a) 
$$\begin{array}{r} 345 \\ \times 12 \\ \hline 4140 \end{array}$$

(b) 
$$\begin{array}{r} 361 \\ \times 15 \\ \hline \end{array}$$

(c) 
$$\begin{array}{r} 420 \\ \times 16 \\ \hline \end{array}$$

(d) 
$$\begin{array}{r} 243 \\ \times 17 \\ \hline \end{array}$$

(e) 
$$\begin{array}{r} 457 \\ \times 17 \\ \hline \end{array}$$

(f) 
$$\begin{array}{r} 3125 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} (g) \quad 4071 \\ \times 16 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} (h) \quad 2934 \\ \times 13 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} (i) \quad 7005 \\ \times 19 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} (j) \quad 2073 \\ \times 13 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} (k) \quad 2308 \\ \times 12 \\ \hline \\ \hline \end{array}$$

### MULTIPLICATION OF 3 AND 4-DIGIT NUMBERS BY 3-DIGIT NUMBER

We multiply a number by 3-digit number in the same way as we multiply a number by 2-digit number.

Observe the following examples carefully:

**Example:** Multiply 378 by 234.

**SOLUTION:**  $378 \times 234$

$$\begin{aligned} &= 378 \times (200 + 30 + 4) \\ &= 378 \times 200 + 378 \times 30 + 378 \times 4 \\ &= 75600 + 11340 + 1512 \\ &= 88452. \end{aligned}$$

**Ans.**  $= 378 \times 234 = 88452.$

This multiplication sum can also be solved like this:

$$\begin{array}{r} 378 \\ \times 234 \\ \hline 1512 \\ 11340 \\ 75600 \\ \hline 88452 \end{array}$$

**Ans.** = 88452

**Short-cut method:**

$$\begin{array}{r} 378 \\ \times 234 \\ \hline 1512 \\ 1134 \times \\ 756 \times \times \\ \hline 88452 \end{array}$$

In this method, write the digits leaving ones place in 2nd step, ones and tens place in 3rd step and so on. Finally add all the steps to get the answer.

### CONTINUED MULTIPLICATION

**Example 2.** Multiply  $128 \times 35 \times 405$ .

**SOLUTION:** In this problems, first multiply 128 by 35 and then multiply the product by 405 using any method as you like.

$$\begin{array}{r} 128 \\ \times 35 \\ \hline 640 \\ 3840 \\ \hline 4480 \end{array}$$

$$\begin{array}{r} 4480 \\ \times 405 \\ \hline 22400 \\ 00000 \\ 1792000 \\ \hline 1814400 \end{array}$$

**Ans.**  $= 128 \times 35 \times 405 = 1814400.$

### Exercise 5 (B)

(Do in your book)

Find the product:

$$\begin{array}{r} 1. \quad 325 \\ \times 37 \\ \hline \dots\dots \\ \dots\dots \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 367 \\ \times 45 \\ \hline \dots\dots \\ \dots\dots \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 205 \\ \times 79 \\ \hline \dots\dots \\ \dots\dots \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 879 \\ \times 236 \\ \hline \dots\dots \\ \dots\dots \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 476 \\ \times 495 \\ \hline \dots\dots \\ \dots\dots \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 587 \\ \times 469 \\ \hline \dots\dots \\ \dots\dots \\ \hline \end{array}$$

7. A bus can carry 85 persons. How many persons can travel in 476 such buses?

8. If  $274 \times 4 = 1096$  then without proper multiplication find

(a)  $274 \times 40 = \dots\dots\dots$

(b)  $274 \times 400 = \dots\dots\dots$

(c)  $274 \times 41 = \dots\dots\dots$

(d)  $274 \times 410 = \dots\dots\dots$

(e)  $274 \times 39 = \dots\dots\dots$

(f)  $274 \times 401 = \dots\dots\dots$

### Exercise 5 (C)

(Do in your notebook)

Find the product:

$$\begin{array}{r} 1. \quad 382 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 576 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 497 \\ \times 48 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 306 \\ \times 74 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 607 \\ \times 49 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 897 \\ \times 532 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 509 \\ \times 763 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 6007 \\ \times 809 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 2874 \\ \times 519 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 2075 \\ \times 168 \\ \hline \end{array}$$

Multiply:

11. 625 by 79

12. 834 by 95

13. 289 by 67

14. 2153 by 24

15. 8179 by 36

16. 204 by 903

Find the continued product:

17.  $21 \times 81 \times 15$

18.  $32 \times 96 \times 45$

19.  $66 \times 33 \times 77$

20.  $101 \times 22 \times 54$

21.  $205 \times 15 \times 19$

22.  $32 \times 49 \times 565$

23. Fill in the blanks (write only answer):

- (a)  $25 \times 40 \times 20 = \dots\dots\dots$  (b)  $80 \times 20 \times 50 = \dots\dots\dots$   
 (c)  $125 \times 400 \times 20 = \dots\dots\dots$  (d)  $75 \times 20 \times 30 = \dots\dots\dots$

24. If  $3796 \times 47 = 178412$  then without doing proper multiplication find:

- (a)  $3795 \times 47$  (b)  $3797 \times 47$   
 (c)  $3796 \times 48$  (d)  $3797 \times 46$

25. If  $163 \times 5 = 815$  and  $163 \times 4 = 652$  then without doing proper multiplication find:

- (a)  $163 \times 54$  (b)  $163 \times 45$   
 (c)  $163 \times 504$  (d)  $163 \times 405$

26. Find the missing digits:

(a)

$$\begin{array}{r} \phantom{0}3\phantom{0}2\phantom{0}7 \\ \times \phantom{0}4\phantom{0}\phantom{0} \\ \hline \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \hline 1\phantom{0}\phantom{0}\phantom{0}\phantom{0}2 \end{array}$$

(b)

$$\begin{array}{r} \phantom{0}7\phantom{0}5\phantom{0}\phantom{0} \\ \times \phantom{0}8\phantom{0}6 \\ \hline \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \hline \phantom{0}\phantom{0}\phantom{0}1\phantom{0}6 \end{array}$$

### PROBLEMS BASED ON MULTIPLICATION OF NUMBERS

**Example 1.** In a garden, there are 278 flower plants in each row. How many plants are altogether if there are 97 rows in the garden?

**Solution:** Flower plants in each row = 278

Number of rows = 97

Total number of plants:

$$\begin{array}{r} 278 \\ \times 97 \\ \hline 1946 \\ 25020 \\ \hline 26966 \end{array}$$

Ans. = 26966 plants.

### Exercise 5 (D) .....

(Do in your notebook)

1. A bus can carry 98 passengers. How many passengers can travel by 346 such buses?
2. A factory produces 457 scooters in a month. How many scooters can be produced in 9 years?
3. There are 480 sheets of paper in a ream. Find the number of sheets in 934 reams.
4. A basket contains 378 mangoes. Find the number of mangoes in 406 such baskets.
5. A truck can carry 275 bags of cement. How many bags can 703 such trucks carry?



# 5

## Multiplication

- Multiplicand** : The number which is to be multiplied is called the multiplicand.  
**Multiplier** : The number by which a given number is multiplied is called the multiplier.  
**Product** : The result of a multiplication sum is called the product.

In the previous class, you have learnt the basic rules and methods of multiplication. In this chapter you will learn more about it.

Here, see an example:  $15 \times 9 = 135$ .

In this sum of multiplication, multiplicand = 15 multiplier = 9 and product = 135.

Before learning more about multiplication you must remember the properties of multiplication.

### PROPERTIES OF MULTIPLICATION

- If a number is multiplied by zero (0), the product is zero.  
e.g. (a)  $62 \times 0 = 0$   
(b)  $0 \times 845 = 0$
- If a number is multiplied by 1, the product is number itself.  
e.g. (a)  $64 \times 1 = 64$   
(b)  $1 \times 985 = 985$
- If two or more than two numbers are multiplied by changing the order of the numbers, the product will always be the same.  
e.g. (a)  $75 \times 20 = 1500$  and  $20 \times 75 = 1500$

$$\therefore 75 \times 20 = 20 \times 75$$

$$(b) 25 \times 15 \times 7 = 2625$$

$$\text{Here, } 25 \times (15 \times 7) = 25 \times 105 = 2625$$

$$(25 \times 15) \times 7 = 375 \times 7 = 2625$$

$$(25 \times 7) \times 15 = 175 \times 15 = 2625$$

$$\text{Thus, } 25 \times (15 \times 7) = (25 \times 15) \times 7 = (25 \times 7) \times 15 = 2625$$

- The product of a number by the sum of two numbers is the same as the sum of the product of that number by the two given numbers separately.

$$\text{e.g. } 18 \times (25 + 5) = 18 \times 30 = 540$$

$$\text{Also, } (18 \times 25) + (18 \times 5) = 450 + 90 = 540$$

$$\therefore 18 \times (25 + 5) = (18 \times 25) + (18 \times 5).$$

### MULTIPLICATION BY TENS, HUNDREDS OR THOUSANDS

In the previous class, you have learnt about the multiplication of a number by 10, 100 and 1000. Now, you will learn more about it. Observe the given examples carefully:

**Example 1: Multiply : (a) 26 by 20 (b) 329 by 30**

**SOLUTION:** (a)  $26 \times 20$

$$= 26 \times 2 \text{ tens}$$

$$= 52 \text{ tens}$$

$$= 520$$

$$\text{Ans.} = 26 \times 20 = 520$$

(b)  $329 \times 30$

$$= 329 \times 3 \text{ tens}$$

$$= 987 \text{ tens}$$

$$= 9870$$

$$\text{Ans.} = 329 \times 30 = 9870.$$

**Example 2: Multiply : (a) 123 \times 400 (b) 376 \times 7000**

**SOLUTION:** (a)  $123 \times 400$

$$= 123 \times 4 \text{ hundred}$$

$$= 492 \text{ hundreds}$$

$$= 49200$$

$$\text{Ans.} = 49200$$

(b)  $376 \times 7000$

$$= 376 \times 7 \text{ thousands}$$

$$= 2632 \text{ thousands}$$

$$= 2632000$$

$$\text{Ans.} = 2632000$$

**N.B.:** [If any number is multiplied by 200, 300, 5000 or 8000 etc, first multiply the number by 2, 3, 5 or 8 or the digit which is given, then place the number of zeroes in the right side if the product.]

### Exercise 5 (A)

(Do in your book)

#### 1. Fill in the blanks :

(a)  $4567 \times 3894 = \dots \times 4567$

(b)  $2893 \times 0 = \dots$

(c)  $\dots \times 48903 = 48903 \times 567$

(d)  $7093 \times 218 \times 4159 = 218 \dots \times 7093$

(e)  $3941 \times 2834 \times 0 = \dots$

(f)  $39421 \times \dots = 39421$

(g)  $4834 \times 0 = 4834 \times \dots$

(h)  $25(375 + 482) = (25 \times 375) + (25 \times \dots)$

#### 2. Find the product :

(a)  $20 \times 40 = \dots$

(b)  $56 \times 50 = \dots$

(c)  $38 \times 400 = \dots$

(d)  $75 \times 200 = \dots$

(e)  $78 \times 2000 = \dots$

(f)  $15 \times 700 = \dots$

(g)  $0 \times 4732 = \dots$

(h)  $40 \times 120 = \dots$

#### 3. Multiply in one step directly :

(a) 
$$\begin{array}{r} 345 \\ \times 12 \\ \hline 4140 \end{array}$$

(b) 
$$\begin{array}{r} 361 \\ \times 15 \\ \hline \end{array}$$

(c) 
$$\begin{array}{r} 420 \\ \times 16 \\ \hline \end{array}$$

(d) 
$$\begin{array}{r} 243 \\ \times 17 \\ \hline \end{array}$$

(e) 
$$\begin{array}{r} 457 \\ \times 17 \\ \hline \end{array}$$

(f) 
$$\begin{array}{r} 3125 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(g)} \quad 4071 \\ \times 16 \\ \hline \\ \text{(j)} \quad 2073 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(h)} \quad 2934 \\ \times 13 \\ \hline \\ \text{(k)} \quad 2308 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(i)} \quad 7005 \\ \times 19 \\ \hline \\ \text{(l)} \quad 2141 \\ \times 17 \\ \hline \end{array}$$

### MULTIPLICATION OF 3 AND 4-DIGIT NUMBERS BY 3-DIGIT NUMBER

We multiply a number by 3-digit number in the same way as we multiply a number by 2-digit number.

Observe the following examples carefully:

**Example:** Multiply 378 by 234.

**SOLUTION:**  $378 \times 234$

$$\begin{aligned} &= 378 \times (200 + 30 + 4) \\ &= 378 \times 200 + 378 \times 30 + 378 \times 4 \\ &= 75600 + 11340 + 1512 \\ &= 88452. \end{aligned}$$

**Ans.**  $= 378 \times 234 = 88452$ .

This multiplication sum can also be solved like this:

$$\begin{array}{r} 378 \\ \times 234 \\ \hline 1512 \\ 11340 \\ 75600 \\ \hline 88452 \end{array}$$

**Ans.** = 88452

**Short-cut method:**

$$\begin{array}{r} 378 \\ \times 234 \\ \hline 1512 \\ 1134 \times \\ 756 \times \times \\ \hline 88452 \end{array}$$

In this method, write the digits leaving ones place in 2nd step, ones and tens place in 3rd step and so on. Finally add all the steps to get the answer.

### CONTINUED MULTIPLICATION

**Example 2.** Multiply  $128 \times 35 \times 405$ .

**SOLUTION:** In this problems, first multiply 128 by 35 and then multiply the product by 405 using any method as you like.

$$\begin{array}{r} 128 \\ \times 35 \\ \hline 640 \\ 3840 \\ \hline 4480 \end{array} \qquad \begin{array}{r} 4480 \\ \times 405 \\ \hline 22400 \\ 00000 \\ 1792000 \\ \hline 1814400 \end{array}$$

**Ans.**  $= 128 \times 35 \times 405 = 1814400$ .

### Exercise 5 (B)

(Do in your book)

Find the product:

$$\begin{array}{r} 1. \quad 325 \\ \times 37 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 367 \\ \times 45 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 205 \\ \times 79 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 879 \\ \times 236 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 476 \\ \times 495 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 587 \\ \times 469 \\ \hline \end{array}$$

7. A bus can carry 85 persons. How many persons can travel in 476 such buses?

8. If  $274 \times 4 = 1096$  then without proper multiplication find

(a)  $274 \times 40 = \dots\dots\dots$

(b)  $274 \times 400 = \dots\dots\dots$

(c)  $274 \times 41 = \dots\dots\dots$

(d)  $274 \times 410 = \dots\dots\dots$

(e)  $274 \times 39 = \dots\dots\dots$

(f)  $274 \times 401 = \dots\dots\dots$

### Exercise 5 (C)

(Do in your notebook)

Find the product:

$$\begin{array}{r} 1. \quad 382 \\ \times 36 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 576 \\ \times 54 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 497 \\ \times 48 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 306 \\ \times 74 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 607 \\ \times 49 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 897 \\ \times 532 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 509 \\ \times 763 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 6007 \\ \times 809 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 2874 \\ \times 519 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 2075 \\ \times 168 \\ \hline \end{array}$$

Multiply:

11. 625 by 79

12. 834 by 95

13. 289 by 67

14. 2153 by 24

15. 8179 by 36

16. 204 by 903

Find the continued product:

17.  $21 \times 81 \times 15$

18.  $32 \times 96 \times 45$

19.  $66 \times 33 \times 77$

20.  $101 \times 22 \times 54$

21.  $205 \times 15 \times 19$

22.  $32 \times 49 \times 565$

23. Fill in the blanks (write only answer):

- (a)  $25 \times 40 \times 20 = \dots\dots\dots$  (b)  $80 \times 20 \times 50 = \dots\dots\dots$   
 (c)  $125 \times 400 \times 20 = \dots\dots\dots$  (d)  $75 \times 20 \times 30 = \dots\dots\dots$

24. If  $3796 \times 47 = 178412$  then without doing proper multiplication find:

- (a)  $3795 \times 47$  (b)  $3797 \times 47$   
 (c)  $3796 \times 48$  (d)  $3797 \times 46$

25. If  $163 \times 5 = 815$  and  $163 \times 4 = 652$  then without doing proper multiplication find:

- (a)  $163 \times 54$  (b)  $163 \times 45$   
 (c)  $163 \times 504$  (d)  $163 \times 405$

26. Find the missing digits:

(a)

$$\begin{array}{r} \phantom{0}3\phantom{0}2\phantom{0}7 \\ \times \phantom{0}4\phantom{0}\phantom{0} \\ \hline \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \hline 1\phantom{0}\phantom{0}\phantom{0}\phantom{0}2 \end{array}$$

(b)

$$\begin{array}{r} \phantom{0}7\phantom{0}5\phantom{0}\phantom{0} \\ \times \phantom{0}8\phantom{0}6 \\ \hline \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \phantom{0}\phantom{0}\phantom{0}\phantom{0}\phantom{0} \\ \hline \phantom{0}\phantom{0}\phantom{0}1\phantom{0}6 \end{array}$$

### PROBLEMS BASED ON MULTIPLICATION OF NUMBERS

**Example 1.** In a garden, there are 278 flower plants in each row. How many plants are altogether if there are 97 rows in the garden?

**Solution :** Flower plants in each row = 278

Number of rows = 97

Total number of plants :

$$\begin{array}{r} 278 \\ \times 97 \\ \hline 1946 \\ 25020 \\ \hline 26966 \end{array}$$

Ans. = 26966 plants.

### Exercise 5 (D) .....

(Do in your notebook)

1. A bus can carry 98 passengers. How many passengers can travel by 346 such buses?
2. A factory produces 457 scooters in a month. How many scooters can be produced in 9 years?
3. There are 480 sheets of paper in a ream. Find the number of sheets in 934 reams.
4. A basket contains 378 mangoes. Find the number of mangoes in 406 such baskets.
5. A truck can carry 275 bags of cement. How many bags can 703 such trucks carry?

# 4 Subtraction of Numbers

Copy sent class - 15 marks.

**Minuend** : The number from which any number is subtracted is called the minuend.  
**Subtrahend** : The number which is subtracted from a given number is called the subtrahend.  
**Difference** : The result we get after subtraction is called the difference.

Children! You have learnt the basics of subtraction in your previous classes. Here, you will learn the subtraction of numbers of more than 4 digits without or with borrowing. The fundamental rules for the subtraction process are the same as you have learnt previously.

Here, some examples and facts are given. Observe them carefully to go ahead. You must know that  
 $9 \text{ tens} + 3 = 8 \text{ tens} + 13$   
 $10 \text{ tens} + 5 = 9 \text{ tens} + 15$   
 $7 \text{ hundreds} + 3 \text{ tens} = 6 \text{ hundreds} + 13 \text{ tens}$   
 $6 \text{ hundreds} + 5 \text{ tens} + 7 = 5 \text{ hundreds} + 15 \text{ tens} + 7$   
 $9 \text{ hundreds} + 8 = 8 \text{ hundreds} + 10 \text{ tens} + 8$

These above relations are used in the subtraction process when we need to borrow digits from left places.

**Without Borrowing:**

**Example 1.** Subtract 23456 from 85979.

**SOLUTION:**

	T	H	H	T	O	
8	5	9	7	9		→ Minuend
-	2	3	4	5	6	→ Subtrahend
	6	2	5	2	3	→ Difference

**With Borrowing:**

**Example 2.** Subtract 437456 from 892548.

**SOLUTION:** First arrange the given numerals in columns according to the place value of the digits, then subtract as usual. Write the greater number first.

	L	T	H	T	H	H	T	O
	8	9	2	5	4	8		
-	4	3	7	4	5	6		
	4	5	5	0	9	2		

Ans. = 455092.

**Example 3.** Subtract 1549326 from 8034200.  
**SOLUTION:**

	9	12	13	11				
	8	0	3	4	2	0	0	
-	1	5	4	9	3	2	6	
	6	4	8	4	8	7	4	

Ans. = 6484874.

## Exercise 4 (A)

(Do in your book)

1. Complete the following:

- (a) 4 tens + 3 ones = ..... tens + 13 ones.
- (b) 6 hundreds + 5 tens = 5 hundreds + ..... tens.
- (c) 3 hundreds + 2 tens = 2 hundreds + ..... ones.
- (d) 9 thousands + 6 hundreds + 6 tens = 8 thousands + 15 ..... + 16 .....
- (e) 8 tens thousand + 2 thousand = 7 ten thousand + ..... thousands.

**Subtract:**

- |             |              |              |
|-------------|--------------|--------------|
| 2. $39456$  | 3. $98762$   | 4. $830945$  |
| $-15324$    | $-10351$     | $-320531$    |
| 5. $890532$ | 6. $984076$  | 7. $783217$  |
| $-140312$   | $-873065$    | $-682106$    |
| 8. $78214$  | 9. $80593$   | 10. $76549$  |
| $-23962$    | $-16245$     | $-30987$     |
| 11. $76509$ | 12. $876054$ | 13. $769827$ |
| $-38987$    | $-162597$    | $-297938$    |
| 14. $4056$  | Check:       | 15. $94257$  |
| $-2037$     |              | $-23106$     |
|             |              | Check:       |

16. 8075      Check:  $\begin{array}{r} \square \\ -1729 \\ \hline \end{array}$

18. Find the missing digits:  
 (a)  $\begin{array}{r} \square \square \square \square \\ - 87694 \\ \hline \square \square \square \square \square \square \end{array}$

17. 127045      Check:  $\begin{array}{r} \square \\ -46837 \\ \hline \end{array}$

(b)  $\begin{array}{r} 5721 \\ - 2\square\square\square 5 \\ \hline \square\square\square\square\square \end{array}$

19. Fill in the blanks:  
 (a)  $2560 - 1530 = \dots\dots\dots$   
 (c)  $4097 - 40$  hundreds =  $\dots\dots\dots$  largest number of 5 digits.  
 (d) 100 thousands - 50 thousands =  $\dots\dots\dots$   
 (e) 54 thousands - 50 thousands =  $\dots\dots\dots$

**Exercise 1 (B)** .....  
 (Do in your notebook)

- Subtract:
- $\begin{array}{r} 84921 \\ - 63510 \\ \hline \end{array}$
  - $\begin{array}{r} 76452 \\ - 15341 \\ \hline \end{array}$
  - $\begin{array}{r} 78596 \\ - 2345 \\ \hline \end{array}$
  - $\begin{array}{r} 7898327 \\ - 2361224 \\ \hline \end{array}$
  - $\begin{array}{r} 9002876 \\ - 8001346 \\ \hline \end{array}$
  - $\begin{array}{r} 76281453 \\ - 21251312 \\ \hline \end{array}$
  - $\begin{array}{r} 85216 \\ - 1403 \\ \hline \end{array}$
  - $\begin{array}{r} 94032 \\ - 46357 \\ \hline \end{array}$
  - $\begin{array}{r} 20000 \\ - 456 \\ \hline \end{array}$
  - $\begin{array}{r} 172857269 \\ - 341235 \\ \hline \end{array}$
  - $\begin{array}{r} 1005673 \\ - 324986 \\ \hline \end{array}$
  - $\begin{array}{r} 7692145 \\ - 1287696 \\ \hline \end{array}$
  - $\begin{array}{r} 905768 \\ - 23437 \\ \hline \end{array}$
  - $\begin{array}{r} 50000 \\ - 4896 \\ \hline \end{array}$
  - $\begin{array}{r} 700576 \\ - 84759 \\ \hline \end{array}$

16. Write the column and find the difference between:  
 (a) 98257 and 4786      (b) 29667 and 17988      (c) 4976 and 10050  
 (d) 70498 and 92576      (e) 725 and 40000

17. Find the missing digits:  
 (a)  $\begin{array}{r} 45\square 8 \\ - 216\square \\ \hline \square\square\square\square \end{array}$       (b)  $\begin{array}{r} 95\square 7 \\ - \square 47\square \\ \hline \square\square\square\square \end{array}$       (c)  $\begin{array}{r} 8\square\square 76 \\ - 45\square\square 3 \\ \hline \square\square\square\square \end{array}$   
 (d)  $\begin{array}{r} \square\square\square\square 35 \\ - 25\square\square\square 9 \\ \hline \square\square\square\square\square\square \end{array}$       (e)  $\begin{array}{r} \square\square\square\square\square\square \\ - 5432.8 \\ \hline \square\square\square\square\square\square \end{array}$       (f)  $\begin{array}{r} \square\square\square\square 59\square \\ - \square\square\square\square\square\square \\ \hline \square\square\square\square\square\square \end{array}$



18. Find the difference:  
 (a) 5 tens 6 ones =  $\dots\dots\dots$       (b) 9 hundreds - 20 tens =  $\dots\dots\dots$   
 (c) 5 thousands - 2 hundreds 6 tens =  $\dots\dots\dots$       (d) 4 ten thousand - 9 ones =  $\dots\dots\dots$   
 (e) 17 lakh - 25 thousands 6 tens =  $\dots\dots\dots$       (f) 85972 - 26918 =  $\dots\dots\dots$   
 (g) 40050 - 4975 =  $\dots\dots\dots$       (h) 20000 - 200 hundreds =  $\dots\dots\dots$   
 (i) 50 lakh - 400 thousands =  $\dots\dots\dots$       (j) 1 million - 276 thousands =  $\dots\dots\dots$
19. Find the number:  
 (a) 500 less than 16526      (b) 10000 less than 90500      (c) 8561 less than 85610  
 (d) 70506 less than the largest number of 5 digits.  
 (e) 5 less than the smallest number of 6- digits.
20. What must be added to 33333 to get 69254.  
 21. What must be subtracted from 756180 to get 393570?

**PROBLEMS BASED ON SUBTRACTION OF NUMBERS**

**EXAMPLE 1.** In an examination, 180765 students appeared. 89929 students passed. How many students failed?

**SOLUTION:** Students appeared : 180765  
 Students passed : 89929  
 $\therefore$  Students failed : 180765 - 89929

$$\begin{array}{r} 180765 \\ - 89929 \\ \hline 90836 \end{array}$$

Ans. = 90836 students failed.

**Exercise 1 (C)** .....

(Do in your notebook)

- The sum of two numbers is 15, 78, 151. If one of one of them is 8, 16, 298, find the other.
- A factory produced 95, 970 T.V. sets in 1999. Its target was to produce 10,00,000 sets. Find, by how many sets the factory was behind its target?
- What number must be added to 19, 32,450 to get 50, 00, 352?
- By how much the largest number of 5 digits is less than the smallest number of 6 digits?
- Two candidates contested an election. Total votes polled were 50,00,150 and the winner got 37, 99, 038 votes. Find the number of votes polled for the runner-up?
- A boy was asked to subtract 5,50,370 from 12, 30, 190. He wrote 6, 79, 820 as the answer. Without doing the proper subtraction, state whether the boy was right or wrong?
- Subtract the largest number of 6 digits formed by 2, 4 and 5 from the largest number of 7 digits formed by 1, 0 and 2. Repetition of digits is allowed.

8. Subtract five million three hundred sixty-eight thousand nine hundred from 10 million and verify your answer.

**MORE PROBLEMS BASED ON ADDITION AND SUBTRACTION**

**EXAMPLE 1.** The population of town is 290745. There are 80670 men and 60907 women. The remaining are children. How many children are there in the town.

**SOLUTION :** Number of men = 80670

Number of women = 60907

∴ Number of men and women = 80670 + 60907

$$\begin{array}{r} 80670 \\ + 60907 \\ \hline 141577 \end{array}$$

Total population = 290745.

∴ Number of children = 290745

$$\begin{array}{r} 290745 \\ - 141577 \\ \hline 149168 \end{array}$$

Ans. = 149168 children are in the town.

**Exercise 4 (D)** .....

(Do in your notebook)

1. Fill in the blanks :

- (a)  $34567 - 34566 = \square$  (b)  $284806 - 1 = \square$   
 (c)  $875697 - \square = 875697$  (d)  $4540 + 0 = \square$   
 (e)  $4573 - 0 = \square$  (f)  $\square - 83251 = 1000$

2. Arrange in column and find :

- (a) 87568 21346 (b) 87640 - 28394 (c)  $90059 + 28576$   
 (d)  $870932 + 194276$  (e)  $100000 - 28763$  (f)  $300457 + 18321$

3. Without arranging in columns, find :

- (a)  $58768 - 21346$  (b)  $78640 - 28394$  (c)  $300457 + 3269$   
 (d)  $59217 + 896$  (e)  $92745 - 2176$  (f)  $10000 - 346$

4. Simplify :

- (a)  $85761 + 2893 - 76214$  (b)  $40456 + 12973 - 37682$   
 (c)  $80576 - 21692 - 14532 + 20567$  (d)  $982 - 12945 - 20415 + 93211$   
 (e)  $8325 - 75421 + 98307 - 2153$

5. By how much the sum of 25, 30, 125 and 8, 91, 370 is less than a crore?

6. By how much the sum of 29, 40, 050 and 9, 37, 901 is greater than the sum of 07, 639 and 7, 69, 995?

7. The sum of 3 numbers is 5, 72, 61, 315. Two of them are 1, 61, 72, 513 and 15, 617. Find the third number.

### EXERCISE 4(A)

1. (a) 3 (b) 15 (c) 120 (d) hundreds, tens (e) 12 2. 24132 3. 88411 4. 510414 5. 750220 6. 111011 7. 101111 8. 54252 9. 64348 10. 45562 11. 37522 12. 713457 13. 471889 14. 2019 15. 71151 16. 6346 17. 80208 18. (a) 4, 3, 6, 2 (b) 8, 8, 2, 6 19. (a) 1030 (b) 857 (c) 97 (d) 1 (e) 4000 20. 4127

### EXERCISE 4(B)

1. 21411 2. 61111 3. 76251 4. 5537103 5. 1001530 6. 55030141 7. 83813 8. 44075 9. 19544 10. 172516034 11. 680687 12. 6404449 13. 882331 14. 45104 15. 615817 16. (a) 88089 (b) 11679 (c) 5074 (d) 22078 (e) 39275 17. (a) 9, 3, 2, 4 (b) 8, 3, 2, 1 (c) 1, 5, 8, 3, 2 (d) 3, 9, 8, 6, 8, 7 (e) 1, 0, 2, 1, 5, 7 (f) 1, 9, 3, 0, 5, 5 18. (a) 44 (b) 700 (c) 4740 (d) 39991 (e) 1674940 (f) 589991 (g) 35075 (h) 0 (i) 4600000 (j) 724000 19. (a) 11562 (b) 80500 (c) 77049 (d) 29493 (e) 99995 20. 35921 21. 362610

### EXERCISE 4(C)

1. 761853 2. 904030 sets 3. 3067902 4. 1 5. 1201112 votes 6. right 7. 1666668 8. 4631082 9. 3145790 10. 35664 trees 11. 2446 bags

### EXERCISE 4(D)

1. (a) 1 (b) 284805 (c) 0 (d) 4540 (e) 4573 (f) 84251  
2. (a) 64422 (b) 59246 (c) 118635 (d) 1065208 (e) 71237 (f) 117242  
3. (a) 37422 (b) 107034 (c) 303726 (d) 593067 (e) 90569 (f) 9654  
4. (a) 12440 (b) 65165 (c) 64919 (d) 60839 (e) 29058  
5. 6578505 6. 1900317 7. 20173185





# Exercise 3 (A)

(Do in your book)

Find the sum :

$$\begin{array}{r}
 \text{1. TTh} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 4 \quad 5 \quad 3 \quad 2 \quad 1 \\
 + 5 \quad 3 \quad 6 \quad 5 \quad 7 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{2. TTh} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 8 \quad 2 \quad 1 \quad 4 \quad 5 \\
 + 1 \quad 5 \quad 6 \quad 3 \quad 2 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{3.} \quad 1 \quad 2 \quad 5 \quad 6 \quad 1 \\
 2 \quad 3 \quad 4 \quad 2 \quad 5 \\
 + 1 \quad 4 \quad 0 \quad 0 \quad 3 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{4.} \quad 3 \quad 1 \quad 4 \quad 2 \quad 1 \quad 6 \\
 4 \quad 3 \quad 1 \quad 0 \quad 6 \quad 0 \\
 + 1 \quad 5 \quad 2 \quad 6 \quad 1 \quad 3 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{5.} \quad \text{L} \quad \text{TTh} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 1 \quad 2 \quad 4 \quad 1 \quad 6 \quad 3 \\
 + 3 \quad 2 \quad 5 \quad 7 \quad 1 \quad 5 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{6.} \quad \text{TL} \quad \text{L} \quad \text{TTh} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 3 \quad 1 \quad 4 \quad 5 \quad 6 \quad 3 \quad 2 \\
 + 1 \quad 4 \quad 2 \quad 2 \quad 1 \quad 3 \quad 6 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{7.} \quad 4 \quad 2 \quad 1 \quad 0 \quad 5 \quad 7 \quad 3 \\
 + 1 \quad 2 \quad 7 \quad 3 \quad 4 \quad 1 \quad 2 \\
 + \quad \quad \quad 5 \quad 0 \quad 0 \quad 4 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{8.} \quad 3 \quad 4 \quad 0 \quad 5 \quad 6 \quad 0 \quad 7 \\
 1 \quad 3 \quad 4 \quad 2 \quad 1 \quad 7 \quad 2 \\
 + 3 \quad 0 \quad 1 \quad 2 \quad 3 \quad 1 \quad 0 \\
 \hline
 \end{array}$$

9. Find the missing digits :

(a)  $\begin{array}{r} \square \square \square \square \square \\ + 8 \quad 7 \quad 4 \quad 5 \quad 6 \\ \hline 9 \quad 8 \quad 8 \quad 7 \quad 9 \end{array}$

(b)  $\begin{array}{r} 2 \quad 3 \quad 4 \quad 5 \quad 1 \quad 0 \\ + \square \square \square \square \square \square \\ \hline 7 \quad 7 \quad 7 \quad 7 \quad 7 \quad 7 \end{array}$

(c)  $\begin{array}{r} 2 \quad 0 \quad 4 \quad 5 \quad 1 \quad 6 \quad 3 \\ + 4 \quad \square \quad 3 \quad \square \quad \square \quad 1 \quad \square \\ \hline \square \quad 9 \quad \square \quad 9 \quad 6 \quad \square \quad \square \end{array}$

10. Add twenty-one lakh forty-five thousand and six hundred thirty-one to thirty-four lakh twelve thousand forty-five.

11. Add one hundred twenty-nine million three hundred four thousand seven hundred six to seventy million five hundred sixty-one thousand two hundred twelve.

12. Add the largest and the smallest number of 6 digits formed by using 1, 0, 3, 2, 5 and 4 using digits only once.

# Exercise 3 (B)

(Do in your book)

Add:

$$\begin{array}{r}
 \text{1.} \quad \text{L} \quad \text{TTh} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 4 \quad 5 \quad 6 \quad 3 \quad 2 \quad 8 \\
 + \quad 8 \quad 7 \quad 6 \quad 3 \quad 2 \quad 9 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{2.} \quad \text{TL} \quad \text{L} \quad \text{TTh} \quad \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\
 \quad \quad 5 \quad 6 \quad 2 \quad 8 \quad 9 \quad 7 \quad 8 \\
 + \quad 2 \quad 3 \quad 8 \quad 5 \quad 4 \quad 3 \quad 2 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{3.} \quad 294975 \\
 + \quad 28879 \\
 + \quad 35672 \\
 + \quad 875 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{4.} \quad 52949527 \\
 + \quad 898792 \\
 + \quad 73532 \\
 + \quad 875 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{5.} \quad 549328 \\
 + \quad 497386 \\
 + \quad 21345 \\
 + \quad 8764 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{6.} \quad 3954278 \\
 + \quad 1745283 \\
 + \quad 74986 \\
 + \quad 78 \\
 \hline
 \end{array}$$

Find the sum (add in rows):

7.  $24529 + 63687 = \dots\dots\dots$

8.  $2954 + 6382 + 7124 = \dots\dots\dots$

9.  $19435 + 2864 + 763 = \dots\dots\dots$

10.  $40593 + 3957 + 84 = \dots\dots\dots$

11. Find the missing digits:

$$\begin{array}{r}
 \text{(a)} \quad \quad 5 \quad \square \quad 8 \quad 3 \quad \square \quad 9 \\
 + \quad \square \quad 7 \quad 6 \quad \square \quad 4 \quad 5 \\
 + \quad 4 \quad 2 \quad \square \quad 7 \quad 3 \quad \square \\
 \hline
 \end{array}$$

1289250

$$\begin{array}{r}
 \text{(b)} \quad \quad 7 \quad 4 \quad \square \quad 2 \quad \square \quad 6 \quad 2 \\
 + \quad 4 \quad \square \quad 5 \quad \square \quad 8 \quad \square \quad 4 \\
 + \quad \quad \quad \quad \quad \quad 7 \quad 6 \quad 5 \quad \square \\
 \hline
 \end{array}$$

1□237562

12. Add forty-six lakh ninety- one thousand eight hundred sixty-one to seventy lakh thirty- nine thousand six hundred ninety-six.

13. Find the sum of thirty-eight million two hundred seventy-one thousand five hundred four and nine million three hundred forty-one thousand seven hundred twelve.

14. Add the largest number of 6 digits to the smallest number of 6 digits formed by 1,2, 0, 3, 5 and 6 using digits only once.

15. The population of Kolkata is 897856 more that of Delhi. If the population of Delhi is 17291406, find the population of Kolkata.

# Exercise 3 (C)

(Do in your notebook)

Add:

$$\begin{array}{r} 1. \quad 87524 \\ + 13957 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 75946 \\ + 42345 \\ + 83974 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 842567 \\ + 293178 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 852873 \\ + 215634 \\ + 29484 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 2949752 \\ + 928789 \\ + 56732 \\ + 875 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 29576 \\ + 43758 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 87369 \\ + 24947 \\ + 6542 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 293056 \\ + 274509 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 4807635 \\ + 3452879 \\ + 45638 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 7095637 \\ + 3452879 \\ + 6072956 \\ + 284957 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 45963 \\ + 29684 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 75963 \\ + 2874 \\ + 539 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 699754 \\ + 294935 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 275963 \\ + 174827 \\ + 63975 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 3095872 \\ + 695684 \\ + 3295 \\ + 9 \\ \hline \end{array}$$

16. Write in columns and add the following :

(a) 28576 and 98706

(b) 34563 and 2878

(c) 56278, 4256 and 978

(d) 287943 and 418576

(e) 768321 and 89724

(f) 867312, 57089 and 4873

(g) 42957, 83451, 297631 and 837

(h) 3626379, 4280906, 24907 and 17

17. Without arranging in columns, find the sum :

(a)  $8756 + 2341$

(b)  $90324 + 13927$

(c)  $24805 + 762 + 21$

(d)  $19234 + 8751 + 36$

(e)  $8 + 88 + 888 + 8888$

18. Find the missing digits :

$$\begin{array}{r} (a) \quad 4 \ 5 \ 6 \ 3 \ 2 \ 1 \\ + \ \square \ \square \ \square \ \square \ \square \ \square \\ \hline 7 \ 0 \ 3 \ 9 \ 2 \ 8 \end{array}$$

$$\begin{array}{r} (b) \quad 3 \ 0 \ 0 \ 5 \ 1 \ 6 \\ + \ \square \ \square \ \square \ \square \ \square \ \square \\ \hline 5 \ 8 \ 9 \ 0 \ 2 \ 3 \end{array}$$

$$\begin{array}{r} (c) \quad \square \ \square \ \square \ \square \ \square \\ + \quad 2 \ 7 \ 9 \ 8 \ 4 \\ \hline 7 \ 5 \ 2 \ 6 \ 9 \end{array}$$

$$\begin{array}{r} (d) \quad 5 \ \square \ 3 \ \square \ 2 \\ + \ \square \ 4 \ 5 \ 7 \ 8 \\ \hline 8 \ 1 \ \square \ 3 \ 0 \end{array}$$

$$\begin{array}{r} (e) \quad \square \ 8 \ 3 \ \square \ 6 \ 1 \\ + \ 2 \ \square \ \square \ 9 \ 7 \ \square \\ \hline 7 \ 0 \ 5 \ 0 \ \square \ 0 \end{array}$$

$$\begin{array}{r} (f) \quad \square \ 2 \ \square \ 4 \ 9 \\ + \quad 5 \ \square \ 8 \ \square \ 4 \\ + \quad 3 \ 4 \ 9 \ 2 \ \square \\ \hline 1 \ 4 \ 6 \ 8 \ 2 \ 6 \end{array}$$

$$\begin{array}{r}
 \text{(g)} \quad 2 \square 7 3 5 \square \\
 + \quad \square 4 \square \square 5 4 \\
 + \quad 4 2 9 4 3 7 \\
 \hline
 1 4 2 8 1 \square 5
 \end{array}$$

$$\begin{array}{r}
 \text{(h)} \quad 7 5 2 9 6 3 \\
 + \quad \square \square \square \square \square \square \\
 + \quad 3 8 5 6 2 9 \\
 \hline
 1 8 5 6 3 0 2
 \end{array}$$

19. Find the sum of the largest numbers of 4, 5 and 6 digits numbers.

20. If a number is 489792 more than the number 2, 48, 782, find the number.

### PROPERTIES OF ADDITION

**Example 1.** Add  $2567 + 0$ .

$$\begin{array}{r}
 \text{SOLUTION:} \quad 2567 \\
 + \quad 0 \\
 \hline
 2567
 \end{array}$$

Ans. 2567

**Example 2.** Add 25967 and 12379.

$$\begin{array}{r}
 \text{SOLUTION: (i)} \quad 25967 \\
 + \quad 12379 \\
 \hline
 38346
 \end{array}$$

Ans. = 38346

$$\begin{array}{r}
 \text{or (ii)} \quad 12379 \\
 + \quad 25967 \\
 \hline
 38346
 \end{array}$$

Ans. = 38346

**Example 3.** Add 42934, 25670 and 13456.

$$\begin{array}{r}
 \text{SOLUTION: (i)} \quad 42934 \\
 + \quad 25670 \\
 + \quad 13456 \\
 \hline
 82060
 \end{array}$$

Ans. = 82060

$$\begin{array}{r}
 \text{or (ii)} \quad 42934 \\
 + \quad 13456 \\
 + \quad 25670 \\
 \hline
 82060
 \end{array}$$

Ans. = 82060

$$\begin{array}{r}
 \text{or (iii)} \quad 25670 \\
 + \quad 13456 \\
 + \quad 42934 \\
 \hline
 82060
 \end{array}$$

Ans. = 82060

$$\begin{array}{r}
 \text{(iv)} \quad 25670 \\
 + \quad 42934 \\
 + \quad 13456 \\
 \hline
 82060
 \end{array}$$

Ans. = 82060

$$\begin{array}{r}
 \text{or (v)} \quad 13456 \\
 + \quad 42934 \\
 + \quad 25670 \\
 \hline
 82060
 \end{array}$$

Ans. = 82060

$$\begin{array}{r}
 \text{or (vi)} \quad 13456 \\
 + \quad 25670 \\
 + \quad 42934 \\
 \hline
 82060
 \end{array}$$

Ans. = 82060

From the solutions we find that

1. if zero added to a number, the sum is the number itself.
2. while adding, we can change the order of addends in any way but the sum is always the same.

### **Exercise 3 (D)** .....

(Do in your notebook)

1. Fill in the blanks :

(a)  $57893 + 46321 = 46321 + \square$

(b)  $\square + 29378 = 29378 + 42073$  (c)  $957321 + \square = 957321$

- (d)  $0 + \square = 32967$   
 (e)  $27945 + \square = 47830 + \square$   
 (f)  $732145 + 29346 + 45932 = \square + 732145 + 29346$   
 (g)  $923412 + \square + 329173 = 183460 + \square + 923412$   
 (h)  $704532 + 92173 + \square = 412985 + 704532 + \square$

2. Find the sum of 7621, 8215 and 1032 in 6 different ways :

- (a)  $\begin{array}{r} \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \end{array}$       (b)  $\begin{array}{r} \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \end{array}$       (c)  $\begin{array}{r} \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \end{array}$   
 (d)  $\begin{array}{r} \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \end{array}$       (e)  $\begin{array}{r} \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \end{array}$       (f)  $\begin{array}{r} \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \\ + \dots\dots\dots \\ + \dots\dots\dots \\ \hline \dots\dots\dots \end{array}$

3. Which number is :

- (a) 500 more than 61373? (b) 2562 more than 41058? (c) 7629 more than 98765?

4. Find the sum :

- (a) 25 thousands + 15 hundreds + 19 tens  
 (b) 25 hundreds + 17 tens + 18 ones  
 (c) 64 thousands + 37 tens + 59 ones  
 (d) 30 thousands + 29 hundreds + 7 tens + 4 ones  
 (e) 76 thousands + 49 hundreds + 85 tens + 16 ones.

5. In a village, the population of female is 9478 less than the male population. If female population is 7874, find the male population.

**PROBLEMS BASED ON ADDITION ON NUMBER**

**Example 1.** In a town, there are 28,345 men, 21,382 women and 36,974 children. find the total population of the town.

**SOLUTION:** Men = 28 345  
 Women = + 21 382  
 Children = + 36 974  
 Total population = 86 701

Ans. = 86 701.

**Exercise 3 (E)** .....

(Do in your notebook)

- In a Board Examination, 96, 372 boys and 75, 980 girls appeared in examination. How many students appeared in the examination?
- In a one day cricket match, 36,975 men and 24,876 women were present in stadium to see the match. What was the total number of spectators in stadium?

3. In our school library, there are 15,924 books in English, 9875 books in Hindi and 28158 books in other languages. How many books are there in library?
4. In our town, there are 38,975 men, 36,125 woman and 51, 980 children. What is the total population of the town?
5. The TATA company manufactured 50,760 vehicles in 1998,70,978 vehicles in 1999 and 75,979 vehicles in 2000. How many vehicles did it manufacture during these three years?
6. In an election, the loser got 13567 votes while the winner won by a margin of 59172 votes. How many votes did the winner get?
7. A number is 25676 more than 57290, find the number.
8. Among four towns the population of 3 towns are 39256; 370882 and 712930 respectively. If the population of the fourth town is 39190 more than the total population of the above three towns, find the population of the fourth town.
9. In a factory, 238375 electric bulbs were produced in a year. The production of tube light was 149500 more than the bulbs. Find the number of tubes produced and the total production of the year.
10. If 90254 is subtracted from a number, the result is 85439. Find the number.
11. Add 246 million 394 thousand 879 to 89 million 560 thousand 345 and write the sum in Indian system.
12. If forty-five lakh eighty-nine thousand seven hundred twenty-nine is added to fifty million three hundred seventeen thousand four hundred fifty-six, what will the sum be expressed in International numeral?
13. A number is eighty nine million one hundred five thousand six hundred forty-nine more than forty-eight lakh ninety-four thousand nine hundred seventeen. How will the number be expressed in either system of numeration.

**14. Fill in the blanks :**

- (a)  $8567 + 2893 + 761 + 284 = \dots\dots\dots$
- (b)  $189 \text{ thousands} + 811 \text{ thousands} = \dots\dots\dots \text{ million.}$
- (c)  $185 \text{ thousands} + 15 \text{ thousands} = \dots\dots\dots \text{ lakh.}$
- (d)  $19456 + 17345 = 36000 + \dots\dots\dots$       (e)  $20566 + 35125 = 55691 + \dots\dots\dots$

**15. Find the missing digits :**

$$\begin{array}{r}
 (a) \quad 2 \square 5 6 \square \\
 + \quad 8 7 \square 2 4 \\
 + \quad 4 5 \square 6 \\
 \quad \quad 8 3 1 \\
 \hline
 11 3 0 6 5
 \end{array}$$

$$\begin{array}{r}
 (b) \quad 6 6 \square 5 4 \\
 + \quad 4 0 8 1 \square \\
 + \quad \square \square 3 4 4 \\
 \quad \quad \quad 5 \square 7 \\
 \hline
 15 6 1 4 0
 \end{array}$$

*Jayant sir  
class-III*

### **EXERCISE 3(A)**

- + 1. 98978 2. 97777 3. 49989 4. 897889 5. 449878 6. 4567768 7.  
5488989 8. 7760089 9. (a) 1, 1, 4, 2, 3 (b) 5, 4, 3, 2, 6, 7 (c) 9, 4, 5, 4,  
6, 7, 7 10. 5557676 11. 199865918 12. 645555

### **EXERCISE 3(B)**

1. 1332657 2. 8014410 3. 360401 4. 53922726 5. 1076823 6.  
57746257.882168.164609.23062 10. 44634 11. (a) 8, 6, 2, 1, 4, 6  
(b) 7, 0, 7, 7, 4, 6, 2 12. 11731557 13. 47613216 14. 755566 15.  
18189262

### **EXERCISE 3(C)**

**1. 101481 2. 73334 3. 75647 4. 202265 5. 118858 6. 79376 7. 1135745 8. 567565 9. 994689 10. 1097991 11. 8306152 12. 514765 13. 3936148 14. 16906429 15. 3794860**

**16. (a) 127273 (b) 37441 (c) 61512 (d) 706519 (e) 858045 (f) 929274 (g) 424876 (h) 7932209**

**17. (a) 11097 (b) 104251 (c) 25588 (d) 28021 (e) 9872**

**18. (a) 2, 4, 7, 6, 0, 7 (b) 2, 8, 8, 5, 0, 7 (c) 4, 7, 2, 8, 5 (d) 7, 5, 2, 9 (e) 4, 0, 2, 1, 9, 4 (f) 5, 0, 9, 5, 3 (g) 5, 4, 7, 1, 3, 4 (h) 7, 1, 7, 7, 1, 0**

**19. 1109997 20. 738574**

### **EXERCISE 3(D)**

**1. (a) 57893 (b) 42073 (c) 0 (d) 32967 (e) 47830; 27945 (f) 45932 (g) 183460; 329173 (h) 412985; 92173**

**2. (a) 16868 (b) 16868 (c) 16868 (d) 16868 (e) 16868 (f) 16868**

**3. (a) 61873 (b) 43620 (c) 106564**

**4. (a) 26,690 (b) 2,688 (c) 64,429 (d) 32,974 (e) 81,766 5. 17352**

### **EXERCISE 3(E)**

**1. 172352 students 2. 61851 spectators 3. 53957 books 4. 127080**

**5. 197717 vehicles 6. 194829 votes 7. 82966 8. 1162258 9. 387875**

**bulbs 10. 175603 11. 33,59,55,224 12. 54,907,185 or 3,40,00,566**

**13. 74,000,566 14. (a) 12505 (b) 1 (c) 2 (d) 801 (e) 0 15. (a) 0, 4, 1, 4 (b) 4, 3, 4, 8, 2**



# 2

Teacher's name - Jayant Kumar  
class - IV

## Number Notation

In this chapter, we shall learn about the number of more than 5 digits. Any numeral of any digit is written in two ways-one in Indian system and other in International system. To read or write numerals of large numbers without difficulty, we group the digit into periods in the place value chart as shown below :

### INDIAN SYSTEM

Periods	Crores		Lakhs		Thousands		Ones		
Places	Ten Crores 10,00,00,000	Crores 10,00,000	Ten Lakhs 10,00,000	Lakhs 1,00,000	Ten Thousands 10,000	Thousands 1,000	Hundreds 100	Ten 10	Ones 1

The above chart is used for grouping digits in India. Thus it is known as **The Indian Place Value Chart**.

In this chart the first block, from right to left, is known as **ONES PERIOD**. It contains three places ones or unit, tens and hundreds.

The second block is known as **THOUSANDS PERIOD**. It contains two places thousands and ten thousands.

The third block and the fourth blocks are known as **LAKHS** as **CRORES PERIODS** and each period contains two places lakhs and ten lakhs places as well as crores and ten crores places respectively. Every period is separated by a comma (,).

### To represent numbers on the abacus :

Numerals of any digit are also represented on the abacus.

Let's see the abacus given below :

Crores		Lakhs		Thousands		Ones		
TC	C	TL	L	TTh	Th	H	T	O
6	7	4	6	1	2	3	2	5

= 67,46,12,325

The above abacus shows 6 ten crores + 7 crores

= 60 crores + 7 crores = 67 crores in crores period.

4 ten lakhs + 6 lakhs = 40 lakhs = 6 lakhs = 46 lakhs in lakhs period.

1 ten thousand + 2 thousands

= 10 thousands + 2 thousands = 12 thousands in thousands period.

3 hundreds + 2 tens + 5 ones = 300 + 20 + 5 = 325 in ones period.

When we write altogether putting the period marks we get 67, 46, 12, 325 and read as sixty-seven crore forty-six lakh twelve thousand three hundred twenty-five.

### INTERNATIONAL SYSTEM

In International system, the digits are grouped differently from the Indian system. In this system the digits are grouped into different periods and each period contains three places. The first period (from right to left) is called ONES PERIOD. The second and the third period are called THOUSAND AND MILLION PERIOD respectively. Each period has ones, tens and hundreds places. See the chart given below :

Periods	Millions			Thousand			Ones		
	H	T	O	H	T	O	H	T	O
Places	100 Millions 100,000,000	10 Millions 10,000,000	Millions 1,000,000	100 Thousands 100,000	10 Thousands 10,000	Thousands 1,000	Hundreds 100	Tens 10	Ons 1
(a)		3	4	9	8	2	1	2	5
(b)	7	0	5	8	9	4	1	0	9

In the above chart, question (a) shows the numeral 34,982,125 which is read as thirty-four million nine hundred eighty-two thousand one hundred twenty-five.

In (b) the numeral 705, 894, 109 is read as seven hundred five million eight hundred ninety-four thousand one hundred nine.

#### How do we separate the periods?

To separate the periods, we use either of the two methods :

1. We use commas (,) or
2. We leave a short space between each of them.

## Exercise 2 (A) .....

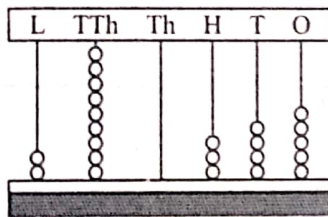
(Do in your book)

### 1. Fill in the blanks :

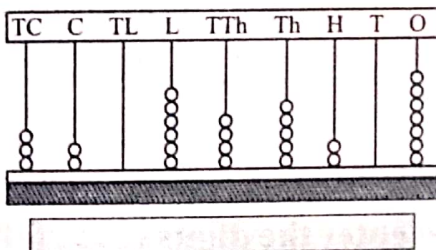
- (a) 1 more than 9999 is ..... (b) 10000 is the ..... 5 digit number.  
 (c) A hundred thousand is ..... lakh. (d) The largest 6 digits number is .....  
 (e) 1 thousand = ..... hundreds. (f) 2 ten thousands = ..... thousands  
 (g) 10 ten thousand = ..... lakh (h) 1000 = ..... tens.  
 (i) 1 lakh = ..... thousands. (j) 1 crore = ..... lakhs.

### 2. See the abacus. Write its numeral and the number name in the given space.

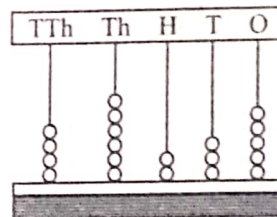
(a)



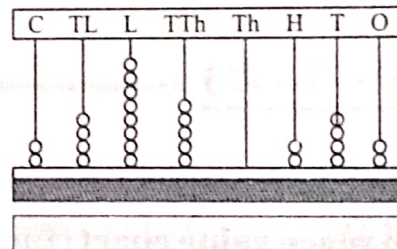
(c)



(b)



(d)



### 3. Write the number names:

- (a) 48,72,613 = .....  
 (b) 72,92,815 = .....  
 (c) 82,05,809 = .....  
 (d) 7,05,92,100 = .....  
 (e) 4,04,04,004 = .....

**4. Write the numerals :**

- (a) Forty-eight thousand nine hundred eighty-seven.  
 (b) Seventy-one lakh ninety-two thousand four hundred twenty-two.  
 (c) Four crore eight lakh eleven thousand three hundred thirty-five.  
 (d) Fifty-two crore sixty-one lakh ninety-four thousand eight hundred four.

- (e) Fifty-six crore two lakh seven thousand one hundred twenty-eight.

**5. Complete the blanks in the given place value charts :**

(i)	Crores		Lakhs		Thousands		Ones			Numerals
	TC	C	TL	L	TTH	TH	H	T	O	
(a)		2	6	3	7	8	1	4	5	2, 63, 78, 145
(b)	1	9	4	0	8	1	3	0	9	
(c)										7, 84, 20, 105
(d)	5	0	2	0	0	7	0	0	9	
(e)										70, 00, 70, 700

(ii)	Numbers names	Crores		Lakhs		Thousands		Ones		
		TC	C	TL	L	TTH	TH	H	T	O
(a)	Eight crore ten lakh twelve thousand fifty		8	1	0	1	2	0	5	0
(b)	Seven crore forty-seven lakh nine thousand four									
(c)				7	8	4	1	3	2	9
(d)	Ten crore ten									

**Exercise 2 (B) .....**

(Do in your notebook)

**1. Make a place value chart (Indian system) and enter the digits of the following numerals :**

- (a) 25,685                      (b) 9,76,304                      (c) 97,048                      (d) 5,85,375  
 (e) 89,070                      (f) 2,70,007                      (g) 4,24,65,362                      (h) 5,50,055  
 (i) 9,00,217                      (j) 59,22,07,082

2. According to the Indian system, leaving a short space between the periods, rewrite the following numerals :

e.g. 2576814 = 25 76 814

- (a) 812435                      (b) 920680                      (c) 749214                      (d) 9999999  
 (e) 287591                      (f) 8341576                      (g) 25681768                      (h) 9321473  
 (i) 8041732                      (j) 562763813

3. Write the number names :

- (a) 78,42,512                      (b) 9,25,761                      (c) 88,379                      (d) 6,05,518  
 (e) 56,25,100                      (f) 92,704                      (g) 5,44,62,132                      (h) 5,65,219  
 (i) 24,10,217                      (j) 85,75,16,704

4. Putting the period marks according to the Indian place value chart, write the number names :

- (a) 18245                      (b) 62973                      (c) 458217                      (d) 9285320  
 (e) 1492176                      (f) 2928750                      (g) 83497607                      (h) 482570085

5. Write the numerals :

- (a) Eighty-four thousand three hundred twelve.  
 (b) Ninety-one thousand six hundred forty.  
 (c) Sixty thousand four hundred twenty-five.  
 (d) Four lakh seventy-one thousand three hundred five.  
 (e) Eight lakh nine thousand six hundred eleven.  
 (f) Seventy-four lakh fifteen thousand two hundred eighty-four.  
 (g) Ninety-one lakh sixty-two thousand eight hundred forty-five.  
 (h) Thirty-nine lakh seven thousand fifty-five.  
 (i) Four crore seventy-two lakh sixty-eight thousand nine hundred fifty-one.  
 (j) Ninety one crore seventy-two lakh three thousand two hundred.  
 (k) Eight crore eight.

### Exercise 2 (C) .....

(Do in your book)

1. In the given place value chart complete the blanks :

(a)	Millions			Thousands			Ones			Numerals
	H	T	O	H	T	O	H	T	O	
e.g.		2	4	6	2	3	4	1	6	24, 623, 416
(i)		4	5	9	2	1	5	0	8	
(ii)	8	4	3	6	7	0	4	6	7	
(iii)										90,423,612
(iv)										217,415,329
(v)										50,076,085

	Number names	Millions			Thousands			Ones		
		H	T	O	H	T	O	H	T	O
e.g.	Six hundred twelve million two hundred forty thousand eight hundred six	6	1	2	2	4	0	8	0	6
(i)	Seventy-two million four hundred fifteen thousand one hundred thirty.									
(ii)	Four hundred sixty million ninety thousand seventy-five.									
(iii)	Two hundred seventy-eight million one thousand five.									
(iv)	Six hundred million two hundred thousand five hundred.									

2. Using international place value, rewrite the following numerals with period marks and write their number names:

- (a) 89410567 = ..... = .....
- (b) 5691078 = ..... = .....
- (c) 57000050 = ..... = .....
- (d) 500416079 = ..... = .....

3. Write the numerals:

- (a) Sixty million eight hundred forty-four thousand seven hundred fifty-two.
- (b) Ninety-million seven hundred sixty-eight thousand four hundred fifty-six.
- (c) Six hundred forty-five million eight hundred fifteen thousand one hundred two.
- (d) Nine hundred million two hundred thirty-one thousand eight hundred seventy-nine.
- (e) Four hundred two million eighty thousand seven hundred five.

4. Write any four sentences on the numerals having 5 or 6 digits.

- e.g. The largest 5 digit numeral is 99999.
- (a) .....
- (b) .....
- (c) .....
- (d) .....

### Exercise 2 (B)

(Do in your notebook)

1. Make the international place value chart and enter the digits of the following numerals:

- (a) 71 426 876
- (b) 92 420 013
- (c) 9 256 147
- (d) 845 267 678
- (e) 20 004 921
- (f) 8 076 193
- (g) 346 289 564
- (h) 27 834 917

2. Using the International place value, write the number name:

- (a) 6856287
- (b) 48385609
- (c) 80701601
- (d) 405851668
- (e) 208706905
- (f) 245304196
- (g) 902140035
- (h) 200000006

3. Write the numerals:

- (a) Six million four hundred sixty thousand nine hundred fifty-four.
- (b) Eighty-six million three hundred twenty-five thousand five hundred sixty-one.
- (c) Ninety-million three hundred forty thousand one hundred twenty.
- (d) Six hundred seventy-two million nine hundred eighty-six thousand seven hundred fifty-four.
- (e) Four hundred seventy-two million six hundred five thousand three hundred eighty-one.

- 4. The population of India was 95, 38, 82, 765 in 1990. Write the population, using the International system both in figures and words.
- 5. Indian Airways carry one million six hundred twenty-five thousand three hundred forty-seven people per year. Write the figure in the Indian system and write its number name.
- 6. Write any five sentences having 5, 6 or 7 digits on the numerals.
- 7. Using each digit only once write the numeral which represents the largest number.
- 8. Using each digit only once write the numeral which represents the smallest number.

#### PLACE VALUE AND FACE VALUE

The position of a digit (in the place value chart) in a number shows its **PLACE VALUE** while the numerical value of a digit is its **FACE VALUE**.

The place value of a digit changes according to its place but its face value always remains unchanged.

#### Place value of 0 is always 0

It is to be remembered that the place value of a digit is 10 times the value of the next place on its right. Observe the given examples carefully.

## Exercise 2 (E)

(Do in your book)

### 1. Write the place value of underlined digits :

(a) 6462813

Ans. ....

(b) 92375

Ans. ....

(c) 90278

Ans. ....

(d) 423479

Ans. ....

(e) 8035018

Ans. ....

(f) 58139216

Ans. ....

### 2. Write the names of the period in which the underlined digit fall :

(a) 8521683

Ans. ....

(b) 9075280

Ans. ....

(c) 56872194

Ans. ....

(d) 352876140

Ans. ....

(e) 800762

Ans. ....

(f) 95132

Ans. ....

### 3. Fill in the blanks :

(a) 45,262 = ..... ten thousands + 5 thousands + 6 hundreds + ..... tens + 6 ones.

(b) 61,278 = ..... ten thousands + ..... thousands + ..... hundreds + ..... tens + ..... ones.

(c) 53,906 =  $(5 \times 10,000) + (3 \times \dots) + (9 \times \dots) + (0 \times 10) + (6 \times 1)$

(d) 45,359 =  $(4 \times \dots) + (5 \times \dots) + (3 \times \dots) + (5 \times \dots) + (9 \times \dots)$

(e) 2,76,815 =  $(2 \times \dots) + (7 \times \dots) + (6 \times \dots) + (8 \times \dots) + (1 \times \dots) + (5 \times \dots)$

### 4. Write in short form :

(a) 5000 + 300 + 40 + 2

=

(b) 40000 + 3000 + 200 + 30 + 5

=

- (c)  $(7 \times 10000) + (8 \times 1000) + (9 \times 100) + 0 + (5 \times 1)$  =  
 (d) 3 ten thousands + 4 thousands + 6 hundreds + 8 tens + 5 ones. =  
 (e)  $4,00,000 + 50,000 + 5,000 + 200 + 40 + 7$  =



**5. Fill in the blanks :**

- (a) In 39174, 9 is at ..... place. (b) The place value of 5 in 85,076 is .....  
 (c) 39067 has ..... thousand in all. (d) 47598 has ..... ten thousands.  
 (e) In a 6-digit number the 6th digit falls in ..... period.

**Exercise 2 (F)** .....

(Do in your notebook)

**1. Fill in the blanks :**

- (a)  $85,679 =$  ..... ten thousand + ..... thousand + ..... hundred + ..... tens + ..... ones.  
 (b)  $92,076 = 9$  ..... +  $2$  ..... +  $0$  ..... +  $7$  ..... +  $6$  .....  
 (c)  $9,72,853 =$  ..... lakhs + ... ten thousand + ..... thousand + ..... hundreds + ..... tens + ..... ones.  
 (d)  $6,25,943 =$  .....  $(6 \times 1,00,000) + (2 \times \dots) + (5 \times \dots) + (9 \times \dots) + (4 \times \dots) + (3 \times \dots)$   
 (e)  $76091 =$  ..... + ..... + ..... + ..... + .....

**2. Write the following numbers in expanded form :**

- (a) 57,962 (b) 32,145 (c) 90,216 (d) 42,073 (e) 9,21,106  
 (f) 8,35,340 (g) 31,24,364 (h) 80,06,972 (i) 30,00,762 (j) 39,39,239

**3. Write the following in short forms :**

- (a)  $80,000 + 7,000 + 200 + 8 + 1$   
 (b)  $70,000 + 0 + 500 + 40 + 7$   
 (c)  $8,00,000 + 30,000 + 5000 + 400 + 0 + 6$   
 (d)  $2,00,000 + 10,000 + 6000 + 40 + 8$   
 (e)  $50,00,000 + 4,00,000 + 30,000 + 2,000 + 800 + 50 + 6$

**4. Write the place value of each digit in :**

- (a) 75,829 (b) 34,569 (c) 7,051 (d) 7,05,461 (e) 8,29,127

**5. Write the place value and the face value of the underlined digits in the given number :**

- (a) 35678 (b) 92135 (c) 65789 (d) 384251 (e) 607893  
 (f) 290240 (g) 5432106 (h) 8000760

**6. Draw the Indian place value chart and write the following numerals in the chart according to their places :**

- (a) 784573L (b) 80316 (c) 900451 (d) 1852203 (e) 6356291 (f) 59830742



- (iii) Digits at ten thousands place are same.
- (iv) Digits at thousands place are different.  
Here 4 > 0 at thousands place.  
∴ 8294061 > 8290942.

8	2	9	4	0	6
same	same	same	different	different	different
8	2	9	0	9	4
different	different	different	different	different	different

**Ascending and Descending Order:**

**Example 5.** Arrange 216256, 55623, 1026056, 29827, 252610 and 70576 ascending (increasing) order.

**SOLUTION:** If we compare the given numerals by putting the period marks, we find that 10, 26, 056, is the greatest and 29, 827 is the smallest number. Thus, the given numerals can be arranged in ascending order as: 29, 827; 55, 623; 70, 576; 2, 16, 256; 2, 52, 610 and 10, 26, 056. If we put the symbol (> or <) then these can be written as: 29827 < 55623 < 70576 < 216256 < 252610 < 1026056.

(And just the reverse of the given order is known as descending order.)  
**Example 6.** Arrange 61209; 50775; 127305; 9037; 29009 and 500073 descending order.

**SOLUTION:** By putting the period marks we find the 5,00,073 is the greatest and 9,037 is the smallest among the given numbers. Thus, in descending order, these numerals can be arranged as: 5,00,073; 127,305; 61,209; 50,775; 29,009; 9,037; By putting the symbol (> or <) these can be arranged as 500073 > 127305 > 61209 > 50775 > 29009 > 9037.

**Exercise 2 (G)** .....

(Do in your notebook)

1. Write the predecessor and the successor of the given numerals:

Predecessors	Numerals	Successor
(a) .....	43,450	.....
(b) .....	52,783	.....
(c) .....	24,896	.....
(d) .....	10,000	.....
(e) .....	2,45,625	.....
(f) .....	9,05,670	.....
(g) .....	32,27,500	.....

2. Fill in the blanks using '>', '<', '=':

(a) 5987 <input type="text"/> 6120	(b) 10000 <input type="text"/> 9999	(c) 30219 <input type="text"/> 30921
(d) 77707 <input type="text"/> 67770	(e) 152600 <input type="text"/> 201500	(f) 24621 <input type="text"/> 136289
(g) 76952 <input type="text"/> 76925	(h) 40002 <input type="text"/> 30985	

3. Write the numerals which come between:

Predecessor	Numerals	Successors
(a) 49278	<input type="text"/>	49280
(b) 10632	<input type="text"/>	10634
(c) 10000	<input type="text"/>	10002
(d) 125375	<input type="text"/>	125377
(e) 200009	<input type="text"/>	200011
(f) 500040	<input type="text"/>	500042

4. Encircle the smallest number:

- (a) 56, 262; 56, 162; 56, 261; 56, 162
- (b) 2, 40, 500; 4, 20, 005; 2, 04, 500; 5, 00, 004

5. Find the smallest and the largest numbers:

- (a) 25, 169; 52, 916; 52, 619; 29, 620      Smallest = .....      Largest = .....
- (b) 2, 05, 100; 5, 02, 100; 2, 10, 500; 2, 00, 012      Smallest = .....      Largest = .....

6. Using symbols, arrange the given numerals in ascending order:

- (a) 26, 255; 25, 652; 22, 565; 55, 622; 52, 652

Ans: .....

- (b) 7, 20, 465; 2, 70, 654; 6, 75, 200; 7, 04, 520; 4, 70, 650

Ans: .....

7. Using symbols, rewrite the numerals in descending order:

- (a) 31, 083; 31, 038; 33, 108; 18, 303; 83, 002

Ans: .....

8. Using the following digits only once, write the smallest and the largest numerals formed:

Digits	Smallest numbers	Largest numbers
(a) 4, 5, 6, 9, 1	.....	.....
(b) 2, 0, 9, 3, 5	.....	.....
(c) 1, 3, 9, 0, 7, 6	.....	.....
(d) 8, 2, 0, 0, 7, 4	.....	.....
(e) 4, 8, 7, 6, 9, 3, 1	.....	.....

9. Write any 5 numerals formed by 2, 8, 1, 7 and 9, using each digit only once.

Arrange them in decreasing order:  
Ans: .....

**10. Fill in the blanks :**

- (a) 456780 comes just after .....
- (b) The largest 5-digit number is ..... of 100000.
- (c) Successor of the largest 4 digit number is .....
- (d) The place value of 9 in 19, 25, 670 is .....
- (e) The number ..... is one less than 278000.

**Exercise 2 (H) .....**

(Do in your notebook)

1. Write the predecessor and the successor of the given numerals :  
(a) 49,200 (b) 50,000 (c) 1,00,000 (d) 2,90,000 (e) 56,73,385 (f) 99,99,999
2. Write the following numerals in increasing order :  
(a) 29,285; 28,672; 27,982; 98,527; 82,295  
(b) 5,50,500; 4,40,440; 55,555; 1,05,005; 50,00,000  
(c) 4,29,785; 94,256; 69,592; 89,235; 2,85,734  
(d) 40,285; 1,04,090; 30,905; 90,569; 88,888  
(e) 26,24,561; 62,50,007; 90,985; 2,95,768; 1,00,00,000
3. Using symbols, rewrite the following numerals in decreasing order :  
(a) 52,762; 57,622; 75,226; 62,752; 72,625  
(b) 40,469; 60,940; 50,564; 29,546; 54,926  
(c) 8,50,025; 7,80,520; 5,87,820; 87,75,805; 78,989  
(d) 18,20,451; 20,19,500; 19,70,100; 18,50,971; 19,80,975  
(e) 56,80,325; 65,70,523; 3,85,20,005; 68,75,760; 87,52,190
4. Put '>', '=' or '<' in the blanks to make the statements correct :  
(a) 35168  38156 (b) 192706  99999 (c) 24917  24907  
(d) 27685  100000 (e) 50005  50050 (f) 768321  687321  
(g) 120345  45231 (h) 259037  259437  
(i) Sixty thousand five hundred two  60205  
(j) 4060512  4000000 + 60000 + 500 + 10 + 4  
(k) Twenty-eight thousand nine hundred  28090  
(l) 1 million  ten lakhs.
5. Write 'true' or 'false' :  
(a) The predecessor of one lakh is the largest number of 5 digits.  
(b) The successor of 10 thousands is 9999.  
(c) Place value of 0 is always zero.  
(d) The number which is one more than the given number is called the predecessor of the number.

## MISCELLANEOUS PROBLEMS

### Exercise 2 (I) .....

(Do in your book)

1. Match group 'A' with 'B' :

- | Group 'A'         | Group 'B'            |
|-------------------|----------------------|
| (a) 1 million     | (i) 10 millions      |
| (b) 100 thousands | (ii) 10000 thousands |
| (c) 100 lakhs     | (iii) 1000 lakhs     |
| (d) 10 millions   | (iv) 10lakhs         |
| (e) 100 million   | (v) 1 lakhs          |

2. Complete the following columns :

	Numerals	100 more	1,000 more	5,000 more	1,00,000 more	1000 less
(a)	25,456					
(b)	63,995					
(c)	2,49,350					
(d)	36,45,400					
(e)	72,61,325					
(f)	99,00,000					

3. Putting the period marks (or short space between the periods), write the following numerals in both the systems :

Numerals	Indian system	International system
(a) 853216	.....	.....
(b) 189724	.....	.....
(c) 2576084	.....	.....
(d) 8976281	.....	.....
(e) 987623041	.....	.....
(f) 2005678	.....	.....

4. Write the smallest and the largest numerals of given digits :

Digits	Smallest numerals	Largest numerals
(a) 5 digits	.....	.....
(b) 6 digits	.....	.....
(c) 7 digits	.....	.....
(d) 4 digits	.....	.....
(e) 8 digits	.....	.....

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