# OUR Devanagari Numerals Introduction and Exercises



# **Our Numerals**

Pihu's grandmother was doing some calculations on the table. Pihu looked her calculation but couldn't understand it, they seem to be some new digit to Pihu. She asked her grandmother about them.

9.	Sugar	9Kg.	३५ Rupees
૨.	Potato	₹Kg.	ξ∘Rupees
₹.	Onion	₹ Kg.	२४Rupees
8.	Soap	9 Pieces	9
<u>ن</u> .	Oil	9 Litter	ς ζ Rupees
६.	Dal/Pulses	9/ ₹ Kg.	₹ςRupees
७.	Salt	२ Packet	२० Rupees
		Total:	२८० Rupees

Grandmother said that these are also numerals, we learnt mathematics with these numerals. Grandmother also showed Pihu a calendar with these numerals.

Pihu wanted to ask more about the numerals, but grandmother was busy for her work. So, she told Pihu to asked more about them from her teacher.

Next day Pihu asked more about the numerals to her teacher in the class. Teacher said –

"These are the numerals of Devanagari script." These numerals are also used to write numbers.

These digits are like 0, 1, 2, 3, 4, 5, 6, 7, 8, & 9 which are just as to write numbers. In Devanagari digits these are written as 0, 9, 7, 3, 8, 4, 5, 9, 7, 8, 8

## **Numbers**

In order to write numbers we make use of numerals such as 0, 1, 2, 3,... These are known as international numerals. We can also write numbers in the Devanagari numerals. Let us see the numerals as they are written in both the scripts:

International numerals	0	1	2	3	4	5	6	7	8	9
Devanagari numerals	0	9	२	m	8	٢	ξ	9	ζ	Ę

The following table has numbers written in figures and in words. Learn to identify each number and read its name :

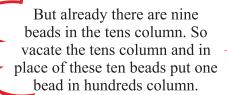
1	9	एक	26	२६	छब्बीस	51	५१	इक्यावन	76	७६	छिहत्तर
2	२	दो	27	२७	सत्ताईस	52	५२	बावन	77	<u> </u>	सतहत्तर
3	भ	तीन	28	२८	अट्ठाइस	53	५३	तिरपन	78	७८	अठहत्तर
4	8	चार	29	२६	उनतीस	54	५४	चौवन	79	૭૬	उन्यासी
5	ý	पाँच	30	३०	तीस	55	५५	पचपन	80	ς0	अस्सी
6	દ્	छ:	31	₹9	इकतीस	56	५६	छप्पन	81	ج9	इक्यासी
7	9	सात	32	३२	बत्तीस	57	<u> </u>	सत्तावन	82	८२	बयासी
8	ζ	आठ	33	३३	तैंतीस	58	ΣZ	अट्ठावन	83	<b>८३</b>	तिरासी
9	£	नौ	34	३४	चौंतीस	59	४६	उनसठ	84	<b>८</b> ४	चौरासी
10	90	दस	35	३५	पैंतीस	60	६०	साठ	85	<b>८</b> ५	पच्चासी
11	99	ग्यारह	36	३६	छत्तीस	61	६१	इकसठ	86	८६	छियासी
12	१२	बारह	37	३७	सैंतीस	62	६२	बासठ	87	50	सत्तासी
13	9३	तेरह	38	३८	अड़तीस	63	६३	तिरसठ	88	ςς	अठासी
14	98	चौदह	39	३६	उनचालीस	64	६४	चौंसठ	89	ςξ	नवासी
15	૧૪	पंद्रह	40	80	चालीस	65	६५	<u>पैंसठ</u>	90	ξo	नब्बे
16	9६	सोलह	41	89	इकतालीस	66	६६	छियासठ	91	€9	इक्यानवे
17	90	सत्रह	42	४२	बयालीस	67	६७	सड़सठ	92	६२	बानवे
18	95	अठारह	43	४३	तैंतालीस	68	६८	अड़सठ	93	<del>5</del> ३	तिरानवे
19	9€	उन्नीस	44	88	चौवालीस	69	६६	उनहत्तर	94	£8	चौरानवे
20	२०	बीस	45	४४	पैंतालीस	70	90	सत्तर	95	£	पंचानवे
21	२१	इक्कीस	46	४६	छियालीस	71	७१	इकहत्तर	96	६६	छियानवे
22	२२	बाईस	47	80	सैंतालीस	72	७२	बहत्तर	97	₹७	सत्तानवे
23	२३	तेईस	48	४८	अड़तालीस	73	७३	तिहत्तर	98	<b>£</b> 5	अट्ठानवे
24	२४	चौबीस	49	8€	उनचास	74	७४	चौहत्तर	99	55	निन्यानवे
25	२५	पच्चीस	50	५०	पचास	75	७५	पचहत्तर	100	900	सौ

#### Raju and Chanda are also trying to know

There are nine beads in the ones, tens and hundreds column of the abacus. In this way it exhibits the number nine hundred ninety nine. What will happen if one bead is increased in ones place.

If we try to put one more bead in the column of ones it will not come on it because only 9 beads can be there.

Then we have to vacate the ones columns, In place of these ten beads and put one bead in tens column.



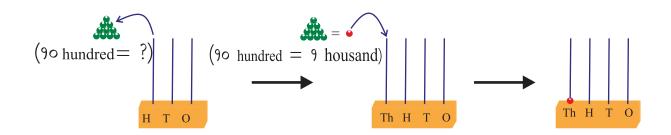


Oh, but already there are 9 beads in hundreds column. Now what to do?



Now tell what will Raju and Chanda do?

Vacate the hundreds column and in place of these nine beads we have to put one bead in next column. Thus we need a new column. This means a new place. This new place is called thousands. Therefore in place of ten beads of hundreds we put one bead in thousands column.



#### Now answer

What will be the number if you add 9 with  $\xi\xi\xi$ ? ......

#### In the same way

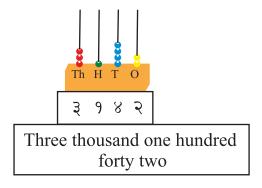
$$9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 = 90$$

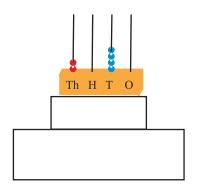
i.e. ten ones = ..... ten

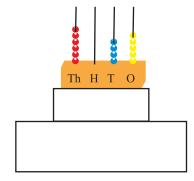
i.e. ten tens =.....hundreds

#### In the same way

$$900 + 900 + 900 + 900 + 900 + 900 + 900 + 900 + 900 = 9000$$
  
Ten hundreds = thousands







# Maths-4

# Write the numbers in figures and words.

9.	४३२१	
₹.	१२३४	
₹.	२२२२	
8.	•••••	six thousand nine hundred fifty
٧.	७०८६	
ξ.	•••••	eight thousand six hundred two
૭.	•••••	nine hundred ninety
ζ.	3000	
₹.	५६७१	
90.		six thousand seven hundred sixty one

# **Circle on the correct number**

Three thousand seven hundred fifty nine	७६६	३७५६	ર્ફ્યૂહ	३५७६
Five thousand three hundred twenty	५३०२	५२०३	५३२०	५०२३
One thousand two	१००२	१०२०	१२००	9000
Six thousand ten	६००१०	६०१०	६१००	६००१
Two thousand three hundred sixty nine	२३६६	२ <del>६</del> ६३	૨३७૬	२३००६६
Four thousand two hundred ten	४०२१०	४२१०	४०१२	४०१२०

#### **Match the columns**

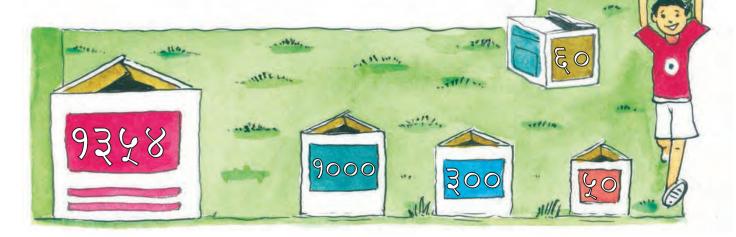
9. 
$$9238 = 976 +$$

$$8...$$
 =  $\xi_{Th}$  +  $\sigma_{H.}$  +  $\sigma_{Tens}$  +  $\sigma_{Tens}$  +  $\sigma_{Tens}$  +  $\sigma_{Tens}$  +  $\sigma_{Tens}$  +  $\sigma_{Tens}$  +  $\sigma_{Tens}$ 

$$\xi_{\text{...}} = (\xi_{\text{Th.}}) + (o_{\text{H.}}) + (o_{\text{Tens}}) + (o_{\text{Ones}}) =$$

#### Match the columns

$$3.8603$$
  $8000 + 300 + 0 + 6$ 



# Complete the series

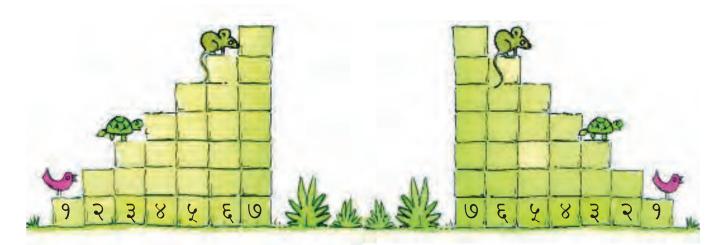
9. 9२०७, ....., 9२०<del>६</del>, ....., 9२११, .....

२. २०३, ३०३, ४०३, .....

३. २३६६, ....., २४०१, ....., ...., .....

৪. ৩১৬, ৩২৬, ৩২৬, ...., .....

٤. ₹₹₹, ८८८, ७७७, ....., ....., ....., .....



# Write the greater number

Greater number	How do you come to know
Of Cattle Hulliber	TION GO YOU COINC TO KNOW

9. ५३३६ and २३३६

२. २१३५ and २१५५

३. १५२३ and १३२३

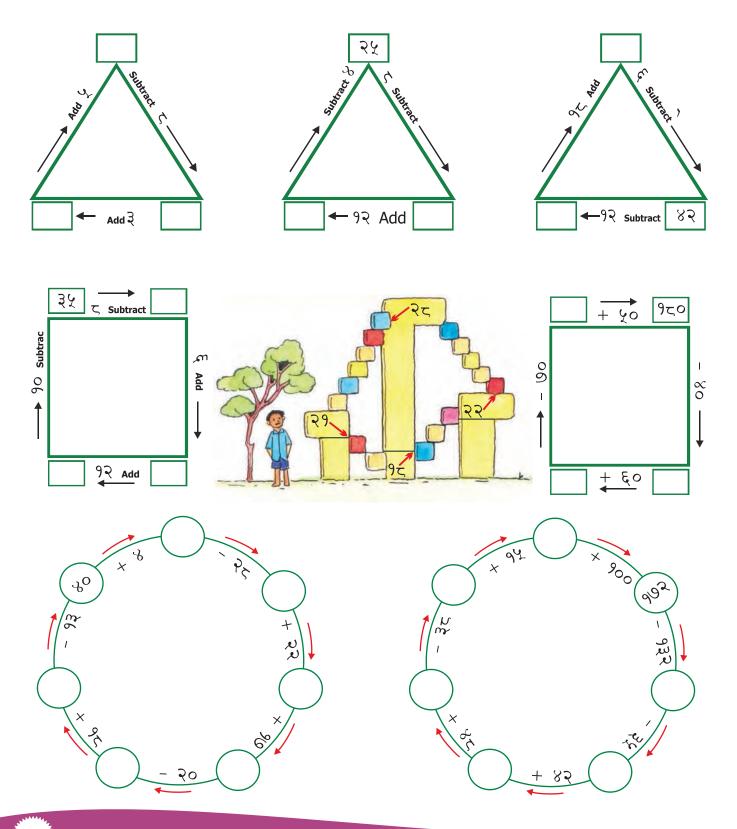
४. ३४२৩ and ३३४৩

# Find out the wrong statement and right statement. Correct the wrong statement

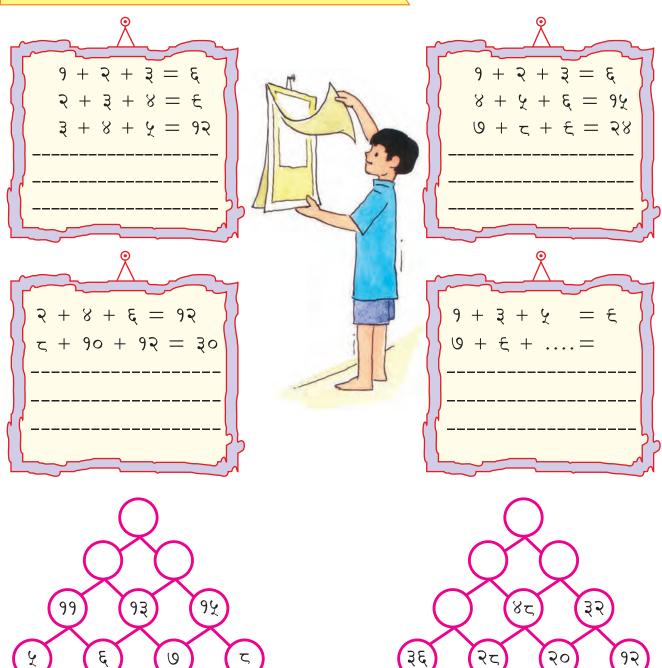
	For	example: $\xi \exists \xi \xi > 8 \exists 3 \exists \xi \exists \xi > 3 \xi \xi $ (right)
	9.	१५१५ < ५१५१ < ६३४५ < ७१३५ ( )
	₹.	१२३६ < १०४२ < १०४३ > १०५१ ( )
	₹.	$LEOE < LOEE > O329 > L832  ( \qquad )  \dots$
	8.	५६०१ < ६५१० ढ ७३४५ < ८३४२ ( )
	٤.	४२५६ < ५६४२ > ६७२४ > ६२४३ ( )
order		ect any five numbers. Arrange them in descending order first and then in ascending lesser than or greater than sign.
	ithou s you	ut repeating the numbers read and write as many numbers can
	9.	Make two digit numbers with ₹ and ¬ and read -
	₹.	Make two digit number with ₹ and 8 and read -
	₹.	Make three digit number with 9, 2 and 8 and read
	8.	Make three digit number with $\mathcal{L}$ , $\mathcal{L}$ and $\mathcal{L}$ and read -
		••••••
	٤.	Make four digit numbers with $3$ , $8$ , $9$ and $5$ and read-
		,,,,,,,,
		••••••, ••••••, •••••••, •••••••, ••••••
		••••••, •••••, •••••, •••••, •••••, •••••, •••••

# **Addition & Subtraction**

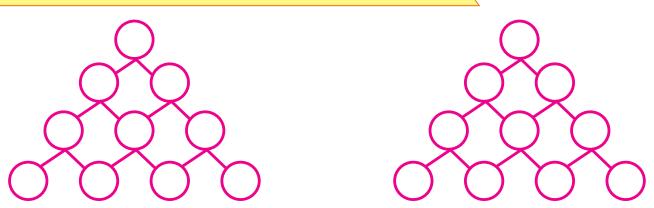
Write numbers in the boxes as shown.



# Understand the pattern and proceed



# In the same way you also make two patterns



#### Number game

Select any number from the table. Do calculation using other numbers from the table to get the number you have selected:

४३	१२	६६	Y	49	ζ
૨૪	४४	६४	85	æ भ	<del>४६</del>
9દ્દ	94	90	9€	७३	३४
98	لغر	9	२८	५२	<b>३</b> 9
३८	93	२9	४३	8	६०
ળ <del>દ</del>	£o	३२	90	£	80

By selecting the number  $\xi \delta$  you find the number in this way:

$$\xi \circ + \vartheta = \xi \vartheta,$$

$$0 \xi - \xi = \xi \vartheta,$$

$$\xi \xi - \psi = \xi \vartheta$$

- Add numbers the result of which will be ₹8.
- Subtract numbers the result of which will be 38.

#### Some answers are given below. Form questions from these numbers

- Answer is 34
- Answer is 88
- Answer is 39
- Answer is 92

If the answer is 95 then the question may be as follows

- What will you get by adding  $\xi$  to  $\xi$ ?
- One basket carries *₹* mangoes. How many mangoes will be there in such two baskets?
- What is the answer of 24-9?
- What is two times of  $\xi$ ?
- £ × ? = .....

#### Add and subtract in the following boxes

+	७३१	६०५	६१५
२१०	€89		
₹9८			
६०५			

_	559	७००५	६३८२
६ १३		६३६२	
७८०			
१०३			

# Addition of numbers having 3 digits

#### Example:

Add 98৩, २५३ and २६८	Solve these					
н. т. о	9.					
9						
9 8 0	9 २ ७					

+ 2	ž	३			+	२	9	0
+ 2	६	5			+	२	8	२
		ζ						
Н.	T.	0		₹.				

9	9							
9	8	9				9	२	8
+ 7	٤	3			+	२	६	9
+ 7	६	ζ			+	O	9	३
	દ્	ζ						

	६	६	ζ		
+	2	દ્દ	ζ		+ 9
+	२	ý	3		+ २
	9	8	9		9
	9	9			
	Н.	T.	O	₹.	•

## **Brief form**



Y

६

२

Y

६

3

8

8

3

#### Solve these

$$9999 + 9966$$
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## The subtraction of 4 digit number

Example: Substract & \( \zeta \) from \( \zeta \) ?

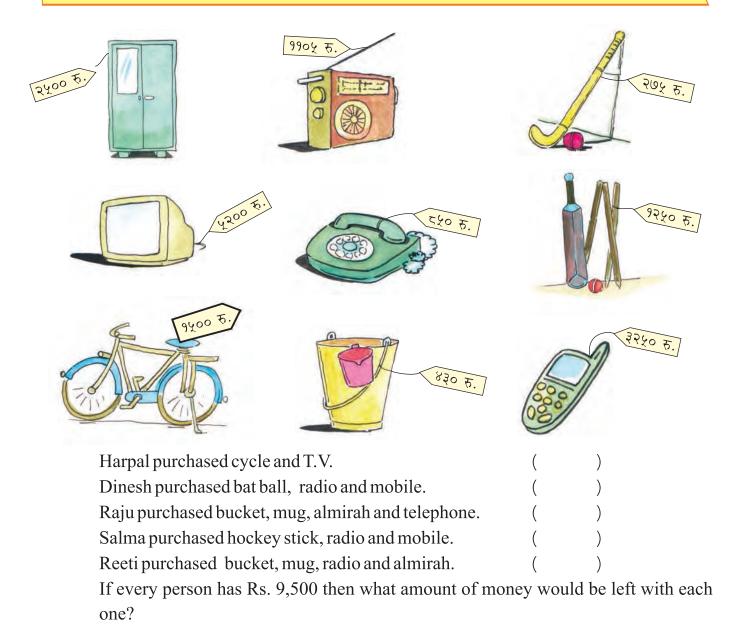


## Solve these

#### **Addition & Subtraction**

- 9. Government Primary School Bijarbhantha got ५३५ Hindi books, ४९२ Maths books and 138 books of English. How many total books the school got?
- R. From two farms of papaya, plucked 348 and 244 papayas respectively. Tell how many more papayas were plucked from first farm than second farm?
- 3. 933 children go to school from higher colony and ∠9 from lower colony. How many more kids go to school from higher colony as compared to lower colony?
- 8. 843, 335 and 854 fishes were caught from a pond of Temari. How many fishes were caught in all?
- 4. Population of Shankarpur is 599ξ. If 8233 of them are men, then how many are women?
- $\xi$ . A refrigerator costs  $\zeta \cup \xi \circ$  rupees, meanwhile the same refrigerator costs  $\cup \xi \in \xi \circ$  rupees in another shop. Tell the difference in the cost of fridge from the two shops?

# See the picture and say who has spent how much money to purchase things at the following price:



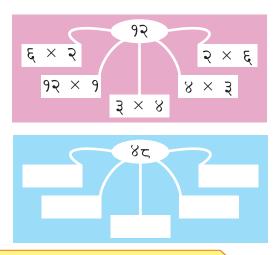
#### **Now tell**

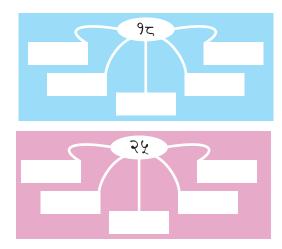
- 9. Who has spent more: Harpal or Dinesh?
- R. Who has spent more: Dinesh or Reeti? By how much?
- 3. What is the total amount spent by Raju and Salma both?
- 8. How much less was spent by Salma than Harpal?

Now you ask your friends about their favourite things and find out their cost.

# Multiplication

## Form question from the given answer





# Game of tables (Tables game)

If you know the tables from one to ten then you can form tables beyond ten: Let us develop table of 93:-

Table of 90	90	२०	३०	80	५०	६०	७०	ζΟ	ξo	900
Table of ₹	३	ધ	₹	9२	95	9८	૨૧	२४	२७	३०
Table of 93	93	२६	३€	५२	६५	७८	€9	१०४	990	१३०

To form table of 93 first we wrote table of 90 and then table of 31 then added them and we get the table of 93,  $9 + \xi = 93$  what will happen if we add tables of 93 and 33?

Let us do and observe:

Table of 9	9	98	૨૧	२८	३५	४२	૪૬	५६	६२	७०
Table of ξ	હ	१२	95	२४	३०	३६	४२	४८	५४	६०
Table of 93	93	* * * *	• • • •	* * * *	* * * *	* * * *	* * * *	* * * *	* * * *	• • • •

Do you get the table of 93?

Can you develop the table of 93 by u	sing other numbers? Which are those numbers??
9	₹
<b>3</b> ,	8
You have already formed table of 9	₹ In the same way develop tables of 99, 97, 98.
२०.	

#### Some more sums

- 9. In a garden there are 9 rows. In each row 94 rose plants are planted. How many total rose plants are there?
- R. There are Ry oranges in a basket. How many oranges will come in such y baskets?
- A tailor stiches 92 shirts in one day. How many shirts does he stitch in 8 days?

You should try some more such problems and solve it in different ways. Try at least & & \( \frac{1}{2} \) processes for each problem.

#### How to solve?

In previous class you solved problems like  $38 \times 9$ ,  $926 \times 3$ 

Now we will see  $32 \times 9\xi$ 

9 Whenever you multiply a number with some two digits number,

३२ first you multiply ones number.

In this number ones digit is 6 therefore  $32 \times \xi = 9\xi 2$ × 98

 $9\xi$ ?  $(32 \times \xi)$  Now the second digit, 9 tens i.e. 90 is multiplied by 32?

+ 320 (32 × 90) 32 × 90= 320 Now you add both (952 +320). The answer 492 will be 492.

There is one more process for multiplication

We can write it  $32 = 30 + 2 & 9\xi = 90 + \xi$ 

×	३०	૨
90	₹0 × 90	२ × 90
	300	२०
દ્	ąο× ξ	$2 \times \xi$
	950	१२

Now add all the four numbers.

$$300 + 950 + 70 + 97 = -----$$

Is the answer the same as it was in previous process?

Now solve the sums given below in both the processes:

9. 84 × 23

 $\mathbf{R}$ .  $\mathbf{E}\mathbf{Y} \times \mathbf{E}\mathbf{E}$ 

 $3. \ \xi 0 \times 0 7$ 

8. 40 × £ £

4. 30 × 2£ E. 94 × 8£

#### **Observe and understand**

$$+ \xi \in \{0, (38\xi \times 90)\}$$

८६५०

$38\xi \times 3\xi = ?$ other process to solve it
386 = 300 + 80 + 6 & 29 = 20 + 9

×	३००	80	६
२०	३०० × २०	४० × २०	६ × २०
	६०००	ζ00	१२०
Ž	300 × У	80 × 7	ξ×ý
	9400	२००	३०

Thus 
$$38\xi \times 3\xi = \xi 000 + 9\xi 00 + \zeta 00 + 300 + 30$$

Or 
$$38\xi \times 39 = \xi$$

#### Solve these

$$2.8$$
  $8$   $4$   $4$   $4$   $4$ 

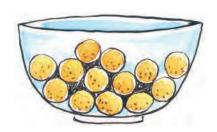
#### **Problem Sums**

- There are & \( \chi \) students in a school. Each deposited Rs 9\( \chi \) for picnic. What is the total amount deposited?
- Radha is in need of 98 copies. If each copy costs Rs. 9\xi. How much money does Radha require?
- In a small box 9? ice cream cups can be kept. In a big box 9? times more icecream cups can be kept. Answer how many icecreams can be kept in big box?
- A saree has २५ different designs. Every design has १६ colours. A shopkeeper wants to purchase one piece of each type of saree for his shop. How many sarees the shopkeeper has to purchase for shop?
- One chair costs Rs.  $83\xi$ . What will be the cost of  $3\xi$  chairs?
- Ramesh went to the market with Rs. 3000. He purchased 97 sets of books at the rate of Rs. 904. How much money is left with him?

# **Division**

#### Remainder

Can 93 sweets be divided equally among 8 children.



You know:

Here 8 divisor

93 dividend

3 quotient and

This means that when 93 sweets were distributed equally among 8 children then each child got 3 sweets and one sweet was left. Here remainder = 9.

Remainder = 9

Now solve the questions given below.

$$9.58 \div 8$$

$$z \cdot 8z \div 6$$

Write the divisor, dividend, quotient and remainder separately. Write the questions, which have a remainder of 'O' in your copy and make a problem sum of these question. Two problem sums are given here –

The teacher took out 34 books and distributed them equally among 8 children. Tell how many books each child would get and how many books would be left.

The cost of 3 chairs is Rs & \( \frac{1}{2} \text{8} \). Then what is the cost of one chair?

#### Make questions and solve

$$8 + 8 \div 8$$

The cost of  $\delta$  sarees .....

#### How to solve

You have already done division in previous classes. Can you tell  $302 \div 92 = ?$ 

$$92)\frac{3}{302}$$

$$-3\frac{\xi}{92} (92 \times = 3\xi)$$

$$-\frac{92}{9}$$

Here 397 is to be divided by 97. You can not distribute

3 hundreds into 92 parts. So convert 3 hundreds into tens

In this way 30 tens + 9 Tens makes 39 tens.

What will be the divisor of 30 by 97 Let us read

$$92 \times 9 = 92$$

$$92 \times 2 = 28$$

$$92 \times 3 = 3\xi$$

$$92 \times 8 = 85$$

४८, is greater than ३७. So we read table of १२ only three times and subtract 35 from 30. 9 tens will be remainder which we convert into ones. In this way 90 + 2 = 92 Ones

Now dividing 97 by 97 is equal to 9.

This can also be done in this way:

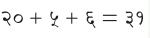
$$\begin{array}{r}
30 + \cancel{\xi} + \cancel{\xi} \\
9\cancel{\xi})300 + \cancel{9}\cancel{\xi}$$

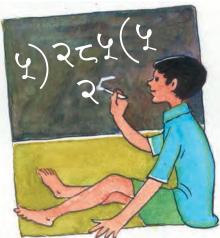
$$-\frac{280}{\cancel{\xi}0} \qquad (9\cancel{\xi} \times 20)$$

$$-\frac{\cancel{\xi}0}{\cancel{0}0} \qquad (9\cancel{\xi} \times 5)$$

$$-\frac{\cancel{9}\cancel{\xi}}{\cancel{0}0} \qquad (9\cancel{\xi} \times 6)$$

$$-\frac{\cancel{9}\cancel{\xi}}{\cancel{0}0} \qquad (9\cancel{\xi} \times 6)$$





#### Now solve these questions

- 9. One rope is 93? m long. If we cut the rope into pieces of 9? meter each. How many pieces can be cut?
- $\mathbb{R}$ . One box contains 99 bottles. Then how many bottles will be there in 9 $\mathbb{R}$  boxes?

#### **Multiplication & Division**

- 9. A halwai takes out 9₹ Jalebis at a time. How many Jalebis will he takes out in € times?
- R. Abowl has R Jamun. How many Jamuns will have in ₹ such bowls?
- 3. A fisherman makes  $\xi$  nets in a month. So how many nets he will make in 8 months.
- 8. One shop have different 28 designs of caps. Each design has 94 colours. A shopkeeper wants to buy cap of every design. How many number of caps he has to buy.
- 4. ξ8 students are there in Primary Government School Dongripali. Each student deposit 98 rupees for picnic. Tell the total amount deposited.
- ξ. A basket has ₹₹₹ berries. These berries has to divide among 9ς people. How many berries each people get?
- 9. 9? girls of Primary Government School gets Rs. ξοο in total, as the scholarship. Now calculate how much amount each girl get?
- ς. From a pond, ξο fisherman collected 92ξο fishes. So how many fishes each fisherman get?