Start With Maths

4

Mala Sinha
Ex-teacher, St Thomas School, Ranchi

Geeta Arora
Ex-teacher, Naval Public School, Delhi

Bharti Arya
Ex-teacher, D.A.V. Public School, Delhi

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Jaipur:

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Near Railway Station,
Jaipur - 302006
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Chennai:

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Preface

Start With Maths Introductory and **Parts 1–5** is a series of six books meant for pre-primary class and classes 1 to 5. This child-friendly series introduces children to the **fascinating world of mathematics** and creates an abiding interest in the mathematics subject. All mathematical concepts are introduced in a step-by-step manner, drawing examples from everyday life. A large number of examples have been given to make the understanding of concepts easier.

Some salient features of the series are :

- Completely based on the latest **NCERT syllabus**. The books are also suitable for various **State Boards**.
- Wherever required, **appropriate illustrations** have been given to help in visualization of abstract mathematical concepts.
- Every chapter begins with the **revision of the concepts learnt earlier**.
- **Points to Remember** enable the child to **recapitulate important points**.
- **Exercises** are **well graded** and contain an **ample number of questions**. Special emphasis has been laid on word problems.
- **Maths Lab Activities** focus on **hands-on learning** and **consolidation of mathematical concepts.**
- **Mental maths questions** develop the skill of doing **quick calculations.**
- **Worksheets** are **activity-based** and make learning of concepts an enjoyable experience.
- **Brain Teasers** contain questions which **challenge** as well as **broaden the mental horizons**.
- **Test Papers** are comprehensive and **test the level of understanding of the child.**

We are confident that this series will have a positive influence on children and encourage them to further explore the world of mathematics.

We look forward to your response to the series. Any suggestions for the improvement of the books are most welcome.

The Publishers

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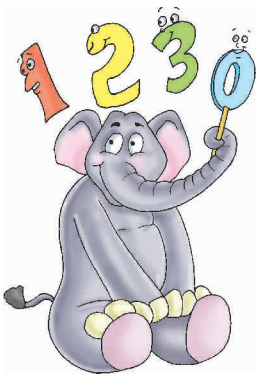
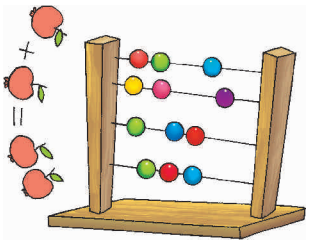




1 Review

Let us recall what we have learnt in class III.

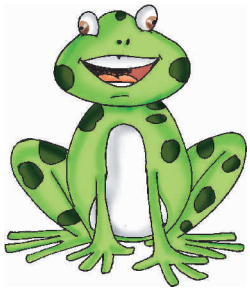
Number of Digits	Smallest Number	Largest Number
1	1	9
2	10	99
3	100	999
4	1000	9999

The digits 0, 1, 2, 3, ... 9 are used to write any whole number in the Hindu-Arabic Notation.

The 2-digit numbers are 10, 11, ..., 99.

The 3-digit numbers are 100, 101, ..., 999.

The 4-digit numbers are 1000, 1001, ..., 9999.



Fraction

A fraction is a part of the whole. It has two parts (i) numerator (ii) denominator, separated by a line.

Example In $\frac{3}{7}$ numerator is 3, denominator is 7 and the line is the division line or bar.

Numerator tells us the number of equal parts taken from the whole. The denominator tells us the number of equal parts into which the whole has been divided.

Money

100 paise = ₹ 1

30 rupees 5 paise in short form is written as ₹ 30.05. The digits to the left of the dot represent rupees and the digits to the right represent paise.

Length

Standard units are centimetre (cm) and metre (m).

100 centimetre (cm) = 1 metre (m)
1000 metre (m) = 1 kilometre (km)

Mass (Weight)

Standard units are gram (g) and kilogram (kg) .

1000 gram (g) = 1 kilogram (kg)

Capacity (Measure of Liquids)

Standard units are millilitre (*ml*) and litre (*l*).

1000 millilitre (*ml*) = 1 litre (*l*)

Time

Time is measured in hours, minutes and seconds.

60 seconds	=	1 minute	7 days	=	1 week
60 minutes	=	1 hour	30 days	=	1 month
24 hours	=	1 day	12 months	=	1 year
			365 days	=	1 year

Exercise 1.1

1. Write in words.

(a) 8723 .....

(b) 3003 .....

(c) 9195 .....

(d) 6263 .....

(e) 5289 .....

(f) 3254 .....

(g) 1248 .....

2. Write in figures.

(a) Seven thousand fifteen .....

(b) Two thousand four hundred seven .....

(c) Six thousand six hundred forty-eight .....

(d) Two hundred eighty-seven .....

(e) Eight thousand eight .....

3. Write each of the following in ascending and descending order.

(a) 1615, 1222, 1827, 1051, 986 .....

(b) 3013, 3116, 3087, 4156, 3899 .....

(c) 4251, 4106, 4601, 461, 641 .....

(d) 231, 213, 3012, 2301, 3210 .....

(e) 7209, 7720, 8139, 8093, 8903 .....

4. Write in expanded form.

(a) 3720 .....

(b) 6451 .....

(c) 9007 .....

(d) 9600 .....

(e) 4030 .....

(f) 5234 .....

(g) 1234 .....

(h) 2451 .....

(i) 3333 .....

5. Write in short form.

(a) 7000 + 300 + 40 + 6 .....

(b) 1000 + 700 + 10 .....

(c) 8000 + 50 + 7 .....

(d) 1000 + 800 + 80 + 8 .....

(e) 2000 + 500 + 40 + 3 .....

6. Add.

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

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

(c)
$$\begin{array}{r} 3\ 2\ 1\ 6 \\ +\ 4\ 3\ 2\ 1 \\ \hline \\ \hline \end{array}$$

(d)
$$\begin{array}{r} ₹\quad p \\ 73\quad 15 \\ 69\quad 08 \\ +\ 31\quad 51 \\ \hline \\ \hline \end{array}$$

(e)
$$\begin{array}{r} ₹\quad p \\ 79\quad 79 \\ 14\quad 34 \\ +\ 25\quad 48 \\ \hline \\ \hline \end{array}$$

(f)
$$\begin{array}{r} m\quad cm \\ 5\quad 16 \\ +\ 3\quad 21 \\ \hline \\ \hline \end{array}$$

(g)
$$\begin{array}{r} km\quad m \\ 5\quad 25 \\ 6\quad 162 \\ +\ 13\quad 281 \\ \hline \\ \hline \end{array}$$

(h)
$$\begin{array}{r} kg\quad g \\ 15\quad 600 \\ 17\quad 28 \\ +\ 2\quad 5 \\ \hline \\ \hline \end{array}$$

(i)
$$\begin{array}{r} l\quad ml \\ 13\quad 27 \\ +\ 17\quad 812 \\ \hline \\ \hline \end{array}$$

7. Convert.

(a) ₹ 27 5 p into paise

(b) 8 m 75 cm into cm

(c) 1005 p into ₹

(d) 8238 m into km and m

(e) 9 *l* 179 *ml* into *ml*

(f) 15 minutes into seconds

(g) 23 hours into minutes

(h) 6414 g into kg and g

(i) ₹ 103.50 into paise

(j) 3456 *ml* into litre and *ml*

8. Subtract.

(a) 4 1 3 7
− 2 8 5 2

(b) 9 6 0 0
− 7 9 9 7

(c) 3 5 8 3
− 3 4 5 7

(d)
₹	p
21	50
− 9	35

(e)
₹	p
105	15
− 61	87

(f)
m	cm
5	87
− 4	93

(g)
km	m
13	185
− 4	907

(h)
kg	g
5	241
− 2	871

(i)
l	*ml*
7	152
− 2	132

9. Multiply.

(a) 6 1 0 5
× 5

(b)
₹	p
8	50
×	3

(c)
m	cm
751	49
×	4

(d)
km	m
15	785
×	6

(e)
kg	g
18	186
×	7

(f)
l	*ml*
3	689
×	4

10. Divide. Do it in your notebook.

(a) 6515 ÷ 5

(b) 3724 ÷ 7

(c) ₹ 80.24 ÷ 4

(d) 196 kg 56 g ÷ 4

(e) 15 m 95 cm ÷ 5

(f) 15 *l* 123 *ml* ÷ 3

11. Convert the following in your notebook.

(a) 6 days into hours

(b) 3 months into days

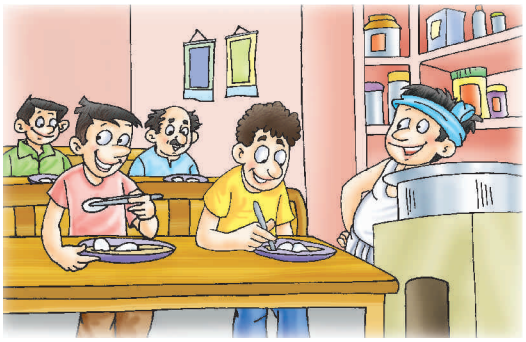
(c) 5 years into days (1 year = 365 days)

(d) 7 years 3 months into months

(e) 15 weeks into days

12. Find a number which is greater than 4236 by 2793.

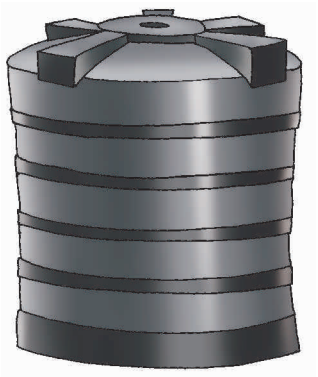
13. Mrs. Sehgal had ₹ 500. She purchased a book for ₹ 189.95, a pen for ₹ 21.75 and a notebook for ₹ 25.00. How much (i) did she spend ? (ii) money is still left with her?



14. In a hotel, 2765 eggs were consumed in a week. How many eggs were eaten per day?

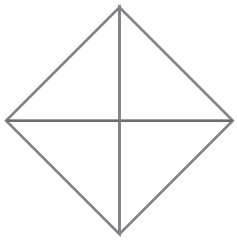
15. In a godown, there are 150 bags of flour each weighing 15 kg. What is the total weight of 150 bags?

16. A tailor purchases 12 m 50 cm of cloth to stitch 5 shirts. How many metres of cloth are required for 1 shirt?

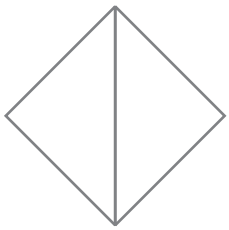


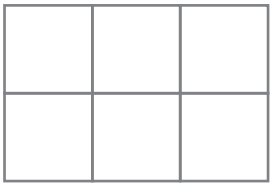
17. The capacity of a water tank is 325 *l* 500 *ml*. Find the capacity of 15 such tanks.

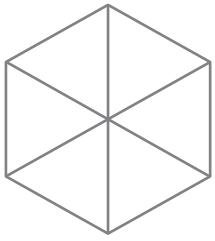
18. Colour to show the fractions.

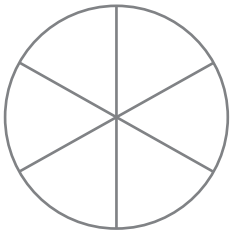
(a) $\frac{3}{4}$ 

(b) $\frac{1}{3}$ 

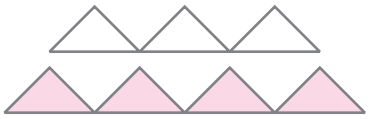
(c) $\frac{1}{2}$ 

(d) $\frac{5}{6}$ 

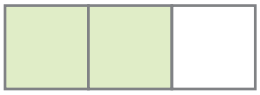
(e) $\frac{1}{6}$ 

(f) $\frac{3}{6}$ 

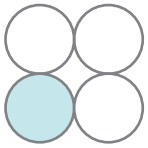
19. Write 'T' if the fraction is shaded correctly. If not, write 'F'.

(a) 

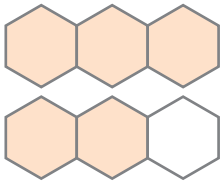
$\frac{4}{7}$ ____

(b) 

$\frac{1}{3}$ ____

(c) 

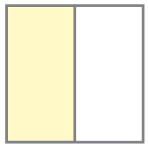
$\frac{1}{4}$ ____

(d) 

$\frac{2}{6}$ ____

(e) 

$\frac{3}{5}$ ____

(f) 

$\frac{1}{2}$ ____

20. Write true (T) or false (F).

(a) A book is a cuboid. ____

(b) A pipe is a cylinder. ____

(c) A marble is a cone. ____

(d) A cuboid has six faces. ____

(e) Sides of a square are equal. ____

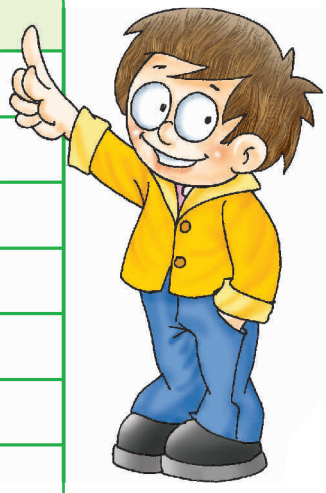
(f) A ball is a square. ____

(g) A brick is a cuboid. ____

2 Roman Numerals

In the previous class, we have learnt to write the counting numbers from 1 to 20 in Roman Numerals. Roman Numerals are written with the help of seven symbols depicting numbers in the Hindu-Arabic Numerals.

Symbol	Value
I	1
V	5
X	10
L	50
C	100
D	500
M	1000



Rules

Let us recall the rules.

1. The symbols I, X, C, M can be repeated maximum thrice only. Repetition means the sum of the numerals.

II = 1 + 1 = 2

III = 1 + 1 + 1 = 3

XX = 10 + 10 = 20

XXX = 10 + 10 + 10 = 30

XXXX is wrong.

CC = 100 + 100 = 200

CCC = 100 + 100 +100 = 300

MM = 1000 + 1000 = 2000

MMM = 1000 + 1000 + 1000 = 3000

2. If a smaller number (I, V, X, C) is written to the right of a greater number, it is added.

Example XI = 10 + 1 = 11

XV = 10 + 5 = 15

3. If a smaller number i.e. I, X or C is written to the left of a greater number, it is subtracted from the greater.

Example IV = 5 – 1 = 4

XL = 50 – 10 = 40

IX = 10 – 1 = 9

XC = 100 – 10 = 90

CD = 500 – 100 = 400

CM = 1000 – 100 = 900

You can subtract a number only once. IIX is wrong.

4. When a I, X or C is written between two numerals of greater value, it is subtracted from the number on its right.

Example XIV = 10 + (5 – 1) = 14

XIX = 10 + (10 – 1) = 19

Exercise 2.1

1. Write Hindu-Arabic numerals in the box.

(a)	XVII	(b)	XI	(c)	XVI	(d)	XX
(e)	XIII	(f)	XVIII	(g)	X	(h)	V
(i)	XV	(j)	XIX	(k)	XIV	(l)	IX

2. Write Roman numerals in the box.

(a)	15	(b)	11	(c)	7	(d)	18
(e)	12	(f)	19	(g)	4	(h)	8
(i)	13	(j)	16	(k)	10	(l)	14

Numbers from 1 to 50 in Roman Numerals

Numbers	Roman Numbers	Numbers	Roman Numbers
1	I	26	XXVI
2	II	27	XXVII
3	III	28	XXVIII
4	IV	29	XXIX
5	V	30	XXX
6	VI	31	XXXI
7	VII	32	XXXII
8	VIII	33	XXXIII
9	IX	34	XXXIV
10	X	35	XXXV
11	XI	36	XXXVI
12	XII	37	XXXVII
13	XIII	38	XXXVIII
14	XIV	39	XXXIX
15	XV	40	XL
16	XVI	41	XLI
17	XVII	42	XLII
18	XVIII	43	XLIII
19	XIX	44	XLIV
20	XX	45	XLV
21	XXI	46	XLVI
22	XXII	47	XLVII
23	XXIII	48	XLVIII
24	XXIV	49	XLIX
25	XXV	50	L

Place value system is not followed in Roman Numerals.

Exercise 2.2

1. Write the Hindu-Arabic Notation for the following.

(a) XL (b) XXIX (c) XV

(d) XLI (e) XLIX (f) XXIV

(g) XXX (h) XXXIX (i) XVII

(j) XXVII (k) XVI (l) XXII

(m) XXXVIII (n) XIX (o) L

2. Write the Roman Numerals for the following.

(a) 3 (b) 13

(c) 23 (d) 33

(e) 43 (f) 8

(g) 16 (h) 25

(i) 37 (j) 47

(k) 7 (l) 19

(m) 31 (n) 45

(o) 46 (p) 49

3. Fill in the blanks with >, < or =.

(a) XL ..... 40 (b) 35 XLI

(c) XVI ..... XVII (d) XXXI ..... 15 + 10 + 6

(e) XXV ..... 30 – 5 (f) 49 L

(g) XXV ..... XX (h) XXVII XXVIII

(i) 15 ..... XIV (j) XLV XV

4. Solve and write the answer in Roman Numerals.

(a) $18 \times 2 =$ _____

(b) XVI + XV = _____

(c) $96 \div 2 =$ _____

(d) XIII – VII = _____

(e) 10 + 7 + 5 = _____

(f) 45 – 18 = _____

(g) XXI + XXIX – XXX = _____

(h) XV + XV + XV = _____

(i) 29 – 28 + 10 = _____

(j) $23 \times 2 =$ _____

5. Correct the following.

(a) XXXX _____

(b) XXL _____

(c) VV _____

(d) XXXXIV _____

(e) IIV _____

(f) VIIII _____

6. Write the following Roman Numerals in ascending order.

(a) XL, XLI, XXXI, XXII, XIX .....

(b) XLIII, XXII, XXXIX, XL, L .....

(c) XLIII, XLV, XLVI, XXXV, XVI .....

7. Write the following in descending order.

(a) XXV, XIII, XXX, XXIX, XV .....

(b) XVI, III, XXIV, XI, IX .....

(c) XXXII, XXVII, XXV, XXXVI, XLV .....

8. In each pair, one is incorrect. Write the correct numeral.

(a) XXIIII, XXIV _____

(b) IXX, XIX _____

(c) XXX, XXL _____

(d) XXXX, XL _____

(e) XC, LXXXX _____

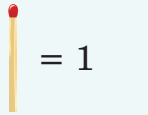
(f) VIIII, IX _____

Lab Activity

To write Roman Numerals with the help of matchsticks.

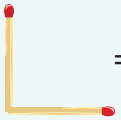
Material Required : Chart paper, matchsticks, fevicol.

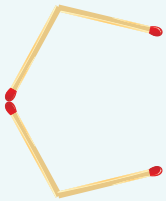
On the chart paper, with the help of matchsticks and fevicol write the Roman Numerals. Write their value in Hindu-Arabic numerals also.

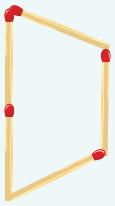
 = 1

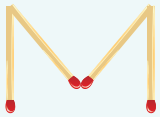
 = 5

 = 10

 = 50

 = 100

 = 500

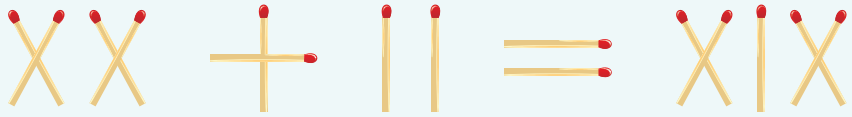
 = 1000

Also write the following in Roman Numerals with the help of matchsticks on the chart paper.

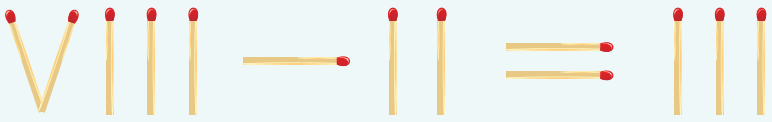
(a) 17 (b) 25 (c) 55 (d) 49 (e) 19

Try to solve the following.

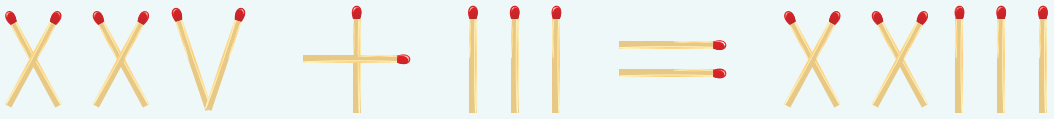
Correct the following by changing the place of one matchstick only.

(a) 

(Hint : 21 – 2 = 19)

(b) 

(Hint : 8 – 2 = 6)

(c) 

(Hint : 26 – 3 = 23)

3 Extension of the Number System

In the previous class, we have learnt about 4-digit numbers. The smallest 4-digit number is 1000 and the largest is 9999. But in everyday life, we need numbers greater than 9999. So, in this class we shall study about numbers up to 6 digits.

Since every natural number has a successor, we can obtain the successor of 9999 by adding 1 to it.

9999 + 1 = 10,000

10,000 is read as **"ten thousand"** and it is the smallest 5-digit number and the greatest is 99999.

Continuing the process

99999 + 1 = 1,00,000 and is read as **"one lakh"**.

When the digits increase, the value of the number also increases.

1,00,000 > 10,000 > 1,000 > 100 > 10 > 1

Remember

10 ones = 1 ten

10 tens = 1 hundred

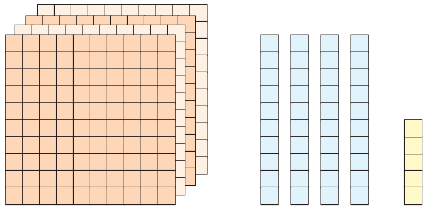
10 hundreds = 1 thousand

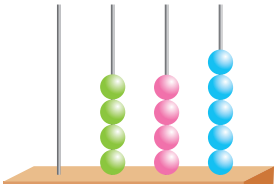
10 thousands = 1 ten thousand

10 ten thousands = 1 lakh

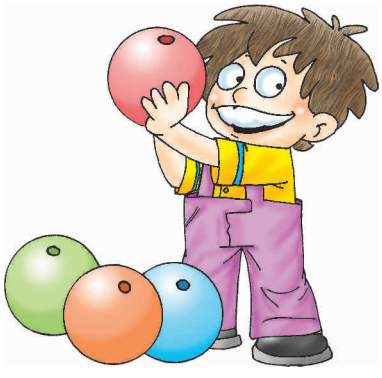
Numbers in Expanded Form

Example





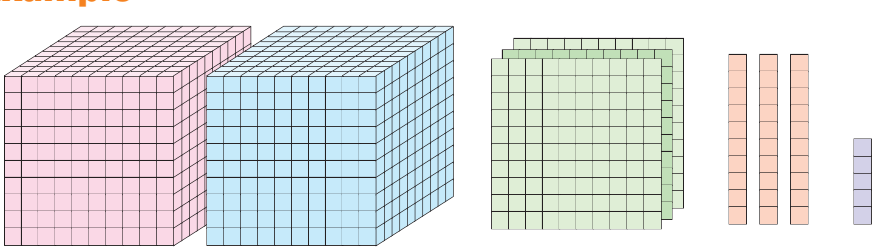
445

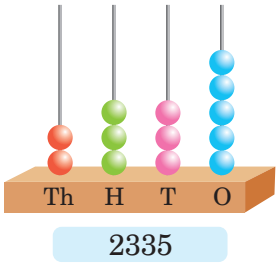


4 hundreds + 4 tens + 5 ones

(400 + 40 + 5 = 445)

Example

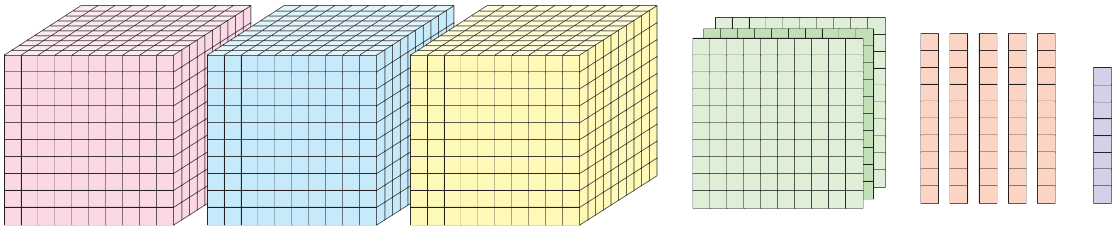


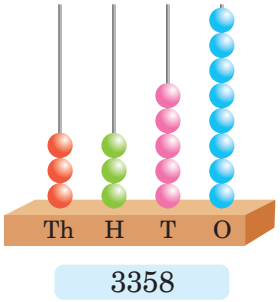


2 thousand + 3 hundreds + 3 tens + 5 ones

(2000 + 300 + 30 + 5 = 2335)

Example





3 thousand + 3 hundreds + 5 tens + 8 ones

(3000 + 300 + 50 + 8 = 3358)

Examples

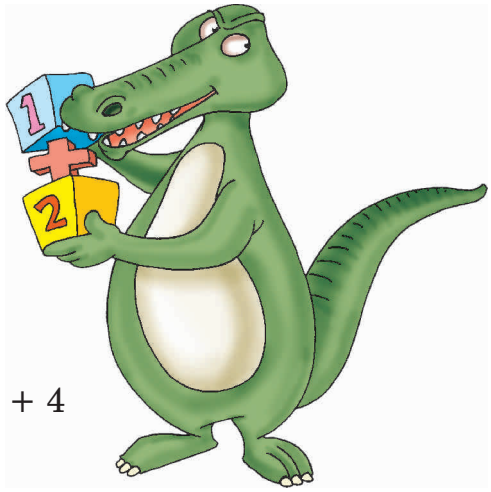
8568 = 8000 + 500 + 60 + 8

3568 = 3000 + 500 + 60 + 8

45297 = 40000 + 5000 + 200 + 90 + 7
(40 thousand)

56328 = 50000 + 6000 + 300 + 20 + 8
(50 thousand)

437424 = 400000 + 30000 + 7000 + 400 + 20 + 4
(4 lakh) (30 thousand)



Exercise 3.1

1. Write the expanded form of the following numbers.

(a) 389 = 300 + 80 + 9

(b) 486 =

(c) 6216 =

(d) 2154 =

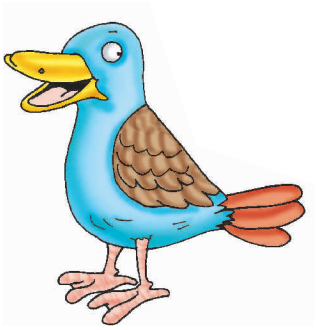
(e) 61324 =

(f) 53278 =

(g) 85697 =

(h) 29254 =

(i) 48855 =



2. Write number names of the following numbers.

(a) 353 = Three hundred fifty-three

(b) 578 =

(c) 7124 =

(d) 1245 =

(e) 63245 =

(f) 55421 =

(g) 46325 =

(h) 71718 =

(i) 81478 =

3. Write in the short form.

(a) 500 + 90 + 8 = 598

(b) 200 + 10 + 1 =

(c) 3000 + 600 + 40 + 3 =

(d) 2000 + 40 + 5 =

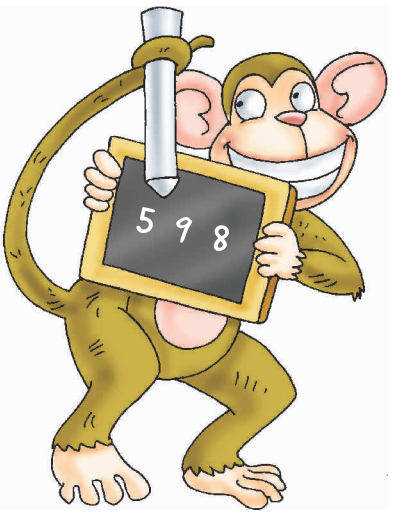
(e) 30000 + 9000 + 200 + 10 =

(f) 40000 + 8000 + 700 + 2 =

(g) 70000 + 7000 + 400 + 30 + 3 =

(h) 80000 + 1000 + 300 + 80 + 5 =

(i) 20000 + 4000 + 900 + 10 + 4 =



Place Value Chart

A place value chart shows the ones, tens, hundreds, etc., in a number. It is divided into periods. There are two types of place value charts.

(i) Indian Place Value Chart (ii) International Place Value Chart

Indian Place Value Chart

In this system, the ones period has 3 places : – ones, tens, hundreds and the other periods have 2 places only.

Lakhs		Thousands		Ones		
Ten Lakhs	Lakhs	Ten Thousands	Thousands	Hundreds	Tens	Ones

Writing Large Numbers

Write in figures – Twenty-five lakh eighty-seven thousand one hundred thirty-two.

TL	L	TTh	Th	H	T	O
2	5	8	7	1	3	2
Place Value	**Place Value**	**Place Value**	**Place Value**	**Place Value**	**Place Value**	**Place Value**
2000000	500000	80000	7000	100	30	2

We put commas, or gaps to group the digits into periods. Starting from the right, we put a comma after the first 3 digits and then after every two digits.

Example 632519

6,32,519

Read as six lakh thirty-two thousand five hundred nineteen.

Example 102756

1 02 756

One lakh two thousand seven hundred fifty-six.

Examples Rewrite the number with commas separating the periods and write the number name.

(a) 15099

(b) 340707

(a) 15,099 – Fifteen thousand ninety-nine

(b) 3,40,707 – Three lakh forty thousand seven hundred seven.

International Place Value Chart

In this system, all periods have three places.

Thousands			Ones		
Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
2	1	3	5	6	7

The number shown in the chart is 213, 567 read as
two hundred thirteen thousand, five hundred sixty-seven.
Comparing the Indian and International Place Value charts, we see that
100 thousand = 1 lakh

Exercise 3.2

1. Rewrite the given numbers with commas separating the periods according to the Indian Place Value System.

(a) 1415 ..... (b) 36207 .....

(c) 20202 ..... (d) 54514 .....

(e) 718268 ..... (f) 636176 .....

(g) 134521 ..... (h) 25321 .....

(i) 381346 ..... (j) 325681 .....

(k) 727568 ..... (l) 689870 .....

2. Group the following numbers into periods by putting commas according to the International Place Value System.

(a) 636414 ..... (b) 818224 .....

(c) 38289 ..... (d) 821265 .....

(e) 926358 ..... (f) 123468 .....

(g) 276391 ..... (h) 768512 .....

(i) 100010 ..... (j) 125296 .....

(k) 239258 ..... (l) 345868 .....

3. Write in words.

(a) 2,39,500 .....

(b) 2,02,002 .....

(c) 53,719 .....

(d) 428,835 .....

(e) 7,16,275 .....

(f) 639,738 .....

(g) 428,561 .....

(h) 231,123 .....

(i) 215,152 .....

(j) 23,480 .....

(k) 5,43,268 .....

(l) 2,46,829 .....

4. Write in figures.

(a) Eight lakh fifty-three thousand three hundred twenty-seven

.....

(b) Eight lakh three thousand twenty

.....

(c) Nine lakh nineteen

.....

(d) Five lakh seven thousand two

.....

(e) Three lakh seventeen thousand three hundred seventeen

.....

(f) One lakh

.....

(g) Three hundred thousand six hundred sixty

.....

(h) Four hundred sixteen thousand two hundred twenty-three

.....

(i) Three hundred seventy-three thousand four hundred sixty-seven

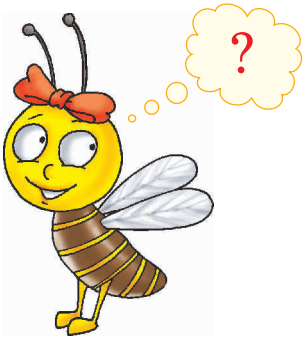
.....

(j) Two hundred thirty-seven thousand three hundred five

.....

5. Mark the period according to the Indian Place Value System and write the place value of the underlined digits.

Example 7 8 1 4 2 9



7, 8 1, 4 2 9	
Digit	Place Value
7	7 lakhs or 7,00,000
1	1 thousand or 1,000
9	9 ones or 9

(a) 5 0 5 0 0

Digit	Place Value

(b) 1 0 1 9 2 4

Digit	Place Value

(c) 4 2 0 6 3 3

Digit	Place Value

(d) 5 8 5 4 9

Digit	Place Value

(e) 7 2 7 2 7 7

Digit	Place Value

(f) 7 5 3 8 9 0

Digit	Place Value

6. Find the difference between the 2 place values of the underlined digits in the given numbers.

(a) 3 1 0 0 1 ☐ − ☐ = ☐

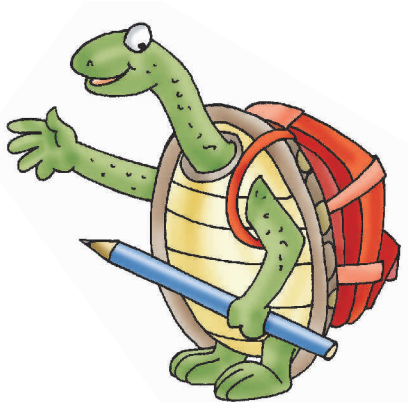
(b) 6 3 6 2 0 ☐ − ☐ = ☐

(c) 1 7 0 7 0 ☐ − ☐ = ☐

(d) 1, 0 1, 0 0 0 ☐ − ☐ = ☐

(e) 2, 4 3, 4 1 2 ☐ − ☐ = ☐

(f) 2 3 5 2 6 ☐ − ☐ = ☐



Expanded Notation

We are already familiar with writing 3-digit and 4-digit numbers in expanded form. Now we shall write the larger numbers in expanded form.

Any number can be written in expanded form in 3 ways.

Examples 278 = 2 hundreds + 7 tens + 8 ones

= 2 × 100 + 7 × 10 + 8 × 1

= 200 + 70 + 8

5212 = 5 thousands + 2 hundreds + one ten + 2 ones

= 5 × 1000 + 2 × 100 + 1 × 10 + 2 × 1

= 5000 + 200 + 10 + 2

86,402 = 8 ten thousands + 6 thousands + 4 hundreds + 2 ones

= 8 × 10000 + 6 × 1000 + 4 × 100 + 2 × 1

= 80000 + 6000 + 400 + 2

6,75,299 = 6 lakhs + 7 ten thousands + 5 thousands + 2 hundreds + 9 tens + 9 ones

= 6 × 1,00,000 + 7 × 10,000 + 5 × 1000 + 2 × 100 + 9 × 10 + 9 × 1

= 6,00,000 + 70,000 + 5,000 + 200 + 90 + 9

6,55,444 = 6 lakhs + 5 ten thousands + 5 thousands + 4 hundreds + 4 tens + 4 ones

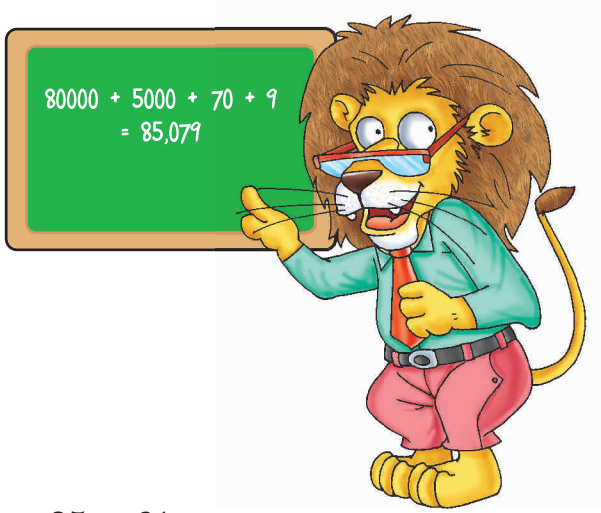
= 6 × 1,00,000 + 5 × 10,000 + 5 × 1000 + 4 × 100 + 4 × 10 + 4 × 1

= 6,00,000 + 50,000 + 5,000 + 400 + 40 + 4

Write in short form.

80000 + 5000 + 70 + 9 = 85,079

70000 + 3000 + 200 + 60 + 5 = 73,265



Comparison of Numbers

Given any two numbers, 3 cases arise :

(a) they are equal (=)

(b) one is greater than the other (>)

(c) one is smaller than the other (<)

Examples 43 = 40 + 3, 45 > 29, 35 < 61

How to compare

(a) The number with greater number of digits is always greater than the number with lesser digits.

43 < 101 159 < 1059 etc.

(b) If the number of digits are the same, then compare the first digits from the left. The number having the greater digit is greater.

76,389 82,130

8 > 7 ∴ 82,130 > 76,389 or 76,389 < 82,130

(c) If the first digits are the same, then compare the digits in the 2nd place. If they are also the same, compare the digits in the 3rd place and so on.

23156, 24156

2 = 2, 4 > 3

∴ 24156 > 23156 or 23156 < 24156

Consider

23651, 23247

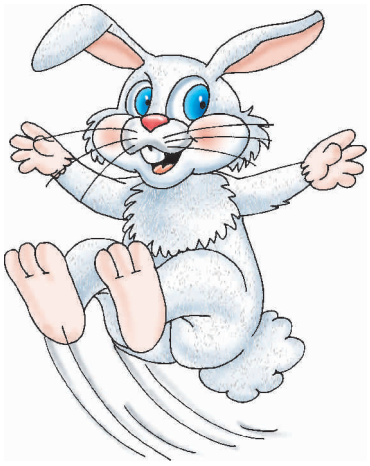
23 = 23, 6 > 2

∴ 23651 > 23247 or 23247 < 23651

Consider

423106, 423107

∵ 7 > 6 ∴ 423107 > 423106 or 423106 < 423107



Ascending Order

Ascending order means arranging the given numbers in increasing order (i.e. from the smallest to the greatest).

Examples

(a) 4321, 5260, 231, 9

Answer: 9, 231, 4321, 5260

(b) 15,631; 1,15,231; 16,231; 15,423; 5068

Answer: 5068; 15,423; 15,631; 16,231; 1,15,231

Descending Order

Descending order means arranging the given numbers in decreasing order (i.e. from the greatest to the smallest).

Examples

(a) 9876, 8678, 888, 7654, 19, 2843

Answer: 9876, 8678, 7654, 2843, 888; 19

(b) 68,890; 81,076; 1,89,809; 756; 8; 2481

Answer: 1,89,809; 81,076; 68,890; 2481; 756; 8

Successor and Predecessor of a Number

Successor of a number is the number which comes just after the given number. It is obtained by adding 1 to the given number.

Examples

Write the successor of

(a) 43 (b) 8263 (c) 59360

(a) 43 + 1 = 44 **Answer:** 44

(b) 8263 + 1 = 8264 **Answer:** 8264

(c) 259360 + 1 = 259361 **Answer:** 259361

Predecessor of a number is the number which comes before the number. It is obtained by subtracting 1 from the given number.

Examples

Write the predecessor of

(a) 100 (b) 1288 (c) 315632

(a) 100 – 1 = 99 **Answer:** 99

(b) 1288 – 1 = 1287 **Answer:** 1287

(c) 315632 – 1 = 315631 **Answer:** 315631

Exercise 3.3

1. Write in expanded form.

(a) 68,425 .....

(b) 8,74,295 .....

(c) 2,97,872 .....

(d) 4,40,004 .....

(e) 78,356 .....

(f) 4,50,678 .....

(g) 1,52,083 .....

(h) 1,80,516 .....

(i) 1,40,231 .....

2. Write in short form.

(a) 40000 + 5000 + 200 + 20 + 2

(b) 90000 + 8000 + 500 + 60 + 8

(c) 500000 + 20000 + 5000 + 400 + 30 + 3

(d) 800000 + 7000 + 30

(e) 50000 + 500 + 5

(f) 700000 + 40000 + 2000 + 500 + 10 + 1

3. Fill in the box with >, < or =.

(a) 836 ☐ 8360

(b) 7000 + 50 ☐ 7500

(c) 19612 ☐ 19602

(d) 732516 ☐ 732515

(e) 198765 ☐ 198599

(f) 83850 ☐ 80000 + 3000 + 800 + 50

(g) 54321 ☐ 99911

(h) 465789 ☐ 456879

(i) 39116 ☐ 20058

(j) 340123 ☐ 521221

4. Arrange in ascending order.

(a) 43265, 2512, 234567, 241 .....

(b) 1122, 13426, 510, 871003 .....

(c) 34344, 1122, 31211, 50102 .....

(d) 23578, 54321, 32145, 135791 .....

5. Arrange in descending order.

(a) 4567, 1980, 32981, 34121 .....

(b) 100019, 100011, 11999, 110019 .....

(c) 300000, 22349, 200645, 17890 .....

(d) 66666, 666666, 666, 6666 .....

6. Write the successor of

(a) 51632 .....

(b) 22499 .....

(c) 312769 .....

(d) 72898 .....

(e) 64346 .....

(f) 58964 .....

7. Write the predecessor of

(a) 1,00,000

(b) 6790

(c) 83100

(d) 56275

(e) 15000

(f) 55195

8. Write the smallest number of 5 digits.

.....

9. Write the biggest number of 6 digits.

.....

10. Write the smallest and the biggest number made by the digits 0, 3, 2, 5, 6, 4. No digit should be repeated.

....