ગુજરાત શૈક્ષણિક સંશોધન અને તાલીમ પરિષદ, ગાંધીનગરના પત્ર-ક્રમાંક
જીસીઈઆરટી/સી ઍન્ડ ઈ/૨૦૧૪/૨૨૨૨, તા. ૩-૨-૨૦૧૪–થી મંજૂર

A 'Teacher's book' has been prepared for teachers and parents (separately). Kindly use this.

MATHEMATICS

Standard 4

(Semester I - II)

PLEDGE

India is my country.

All Indians are my brothers and sisters.

I love my country and I am proud of its rich and varied heritage.

I shall always strive to be worthy of it.

I shall respect my parents, teachers and all my elders and treat everyone with courtesy.

I pledge my devotion to my country and its people.

My happiness lies in their well-being and prosperity.

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'Vidyayan', Sector 10-A, Gandhinagar-382010

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PREFACE

In keeping with the guidelines laid down under NCF-2005 and RTE-2009, structural pedagogical changes have come about in primary education, curriculum and syllabus design and textbooks across India. This change refers to our understanding of concerned subjects and teaching-learning procedure on the whole. The primary objective of this syllabus is to foster creativity, out-of-box thinking, logical and analytical skills among young children keeping this approach in mind, the Textbook Board of Gujarat takes pleasure in introducing the textbook of **Standard 4 Mathematics** to students, teachers and parents painstakingly prepared by G.C.E.R.T., Gandhinagar.

IGNUS-erg Team Members have provided vital inputs and guided the State Resource Group members in the entire process of framing new syllabus and designing the textbooks. UNICEF and the core-group members of the concerned subjects have been quite helpful at various junctures.

Before prescribing this textbook in the schools across Gujarat, Gujarati edition book had been introduced in selected schools on an experimental basis. Based on the feedback received from the stakeholders, necessary changes have been incorporated by Gujarat Council of Education and Research Training.

Gujarat State Board of School Textbooks convened a meeting of invited subject-experts and experts from GCERT to prepare the final draft of Gujarati edition textbook before prescribing it in the primary schools across Gujarat.

After that Gujarat State Board of School Textbooks has invited experienced teachers to translate it into english and subject expert teachers reviewed this book and then final edition is prepared.

Every effort has been made to maintain quality of the book and to cater to the taste of young students. We hope that young children will like the four-coloured form of this textbook and make the optimum use of this book. Efforts have been made to make this text book errorfree. Still we solicit suggestions from all the stakeholders.

Dr. Bharat Pandit
Director

Dr. Nitin Pethani
Executive President

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FUNDAMENTAL DUTIES

It shall be the duty of every citizen of India :

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage or our composite culture;

(g) to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement.

(k) to provide opportunities for education by the parent or the guardian, to his child or a ward between the age of 6 and 14 years as the case may be.

INDEX

Semester I

Semester II

About this Text-Book....

This text-book has been prepared with a view to developing expected skills among the students on the basis of Gujarat Curriculum Frame-work (GCF). Special emphasis has been put on acquaring the knowledge through principles by the students in such a way that, they may not resort to craming. The maximum efforts has been made so that the children learn the concepts of Mathematics, students can think logically. Solve the problems, understand the roll of Mathematics in the beauty of nature and can use Mathematics in day-to-day dealings.

Each chapter begins with the activities based on the experiences of the children. The objective is that the studetns may be inspired to think, may do similar experiments and finally; what they have learnt may be evaluated as per method of ERAC by themselves.

For the preparation of this new text-book the parameters decided are : syllabus according to the age-group of children, continuity and co-ordination of concepts of two standards, simple and short presentations, life-oriented concepts as per guidelines of RTE and utility of local objects. A group of Mathematics teachers directly teching in the primary schools who are selected in SRG have prepared and reviewed this text-book as per the parameters mention here. This final script has been prepared with appropriate correction after getting reviewed by the experts of mathematics and after three years introductory implimentation of Gujarati edition by the Gujarat State Board of School Textbooks.

Each chapter in the text-book is introduce with the titles : 'Let us recall', 'Let us learn Something new', 'Practice' and 'exercise'. The answers to the exercises are given at the end of the chatper. 'Revision' has been given at the end of every three or four chapters so that students may get practice.

The syllabus of this text-book is divided into two semesters. In first semester, 1st chapter contains the knowledge, place-value, ascending-descending order of numbers upto 9999. 2nd chapter includes addition of two or three numbers having four digits. Such that the sum will not exceed 9999. Chapter 3 includes subtraction of numbers without borrowing and with borrowing where the answer will not exceed 9999. Chapter 4 contains multiplication of numbers where product will not exceed 9999. Chapter 5 shows factors of numbers not greater then 100 and multiples of numbers upto 20. Chapter 6 includes the concept of reading the calander, mutual conversion of hours-minutes. Chapter 7 clears the concepts of a line, a line-segment and a ray.

In second semester chapter 8 shows the types of angles, construction and measurment of angles with the help of a protector. Chapter 9 shows the types of triangles on the basis of the angles and the sides. Chapter 10 includes division of two or three digit numbers by one or two digit numbers and practical problems. Chapter 11 explains like, unlike, proper, improper, equivalent, mixed fractions. Chapter 12 includes mutual conversion of simple and decimal fractions. Chapter 13 shows the mutual conversion of rupee-paisa. Chapter 14 shows the conversion of *cm* into meter, meter into *cm*, meter into kilometer and kilometer into meter. Chapter 15 shows the conversion of kilogram into gram and gram into kilogram, also practical problems. Chapter 16 shows mutual conversion of liter-ml. Explanation is given by using pictures, figures, educational games, project work and various activities.

It is hoped that the students, the teachers and the parents will like this text-book prepared for the students of standard IV.

1 Numbers : 1

Let us recall :

1. Write the following numbers in words :

(1) 246 : .....

(2) 357 : .....

(3) 509 : .....

(4) 749 : .....

2. Write the following numbers in figures :

(1) Three hundred and ninety : .....

(2) Six hundred and three : .....

(3) Eight hundred and seventy three : .....

(4) Nine hundred and fifty four : .....

3. Write missing numbers in the following table :

No.	Number	Hundreds	Tens	Units
(1)	379	.....	.....	.....
(2)	.....	5	6	0
(3)	64	.....	.....	4

4. Arrange the numbers in ascending and descending orders :

No.	Numbers	Ascending Order	Descending Order
(1)	219, 210, 216	....., ..., ...	....., ..., ...
(2)	300, 30, 3	....., ..., ...	....., ..., ...
(3)	505, 55, 555	....., ..., ...	....., ..., ...
(4)	960, 909, 903	....., ..., ...	....., ..., ...

5. Fill in the blanks :

No.	Number	Place value of 3	Place value of 7	Place value of 8
(1)	387			
(2)	378			
(3)	738			
(4)	873			

6. Fill in the blanks :

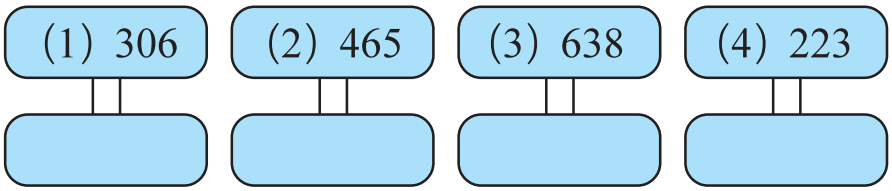
No.	Immediately preceding number	The number between two given numbers	Immediately succeeding number
(1)	.....	467	.....
(2)	720	.....	722
(3)	.....	890	.....
(4)	.....	600	.....

7. Fill in the blanks with appropriate symbol > or < :

(1) 213 ..... 231 (2) 400 49

(3) 594 ..... 495 (4) 390 309

8. Identify the given numbers as even or odd :



❑ **Let us learn something new :**

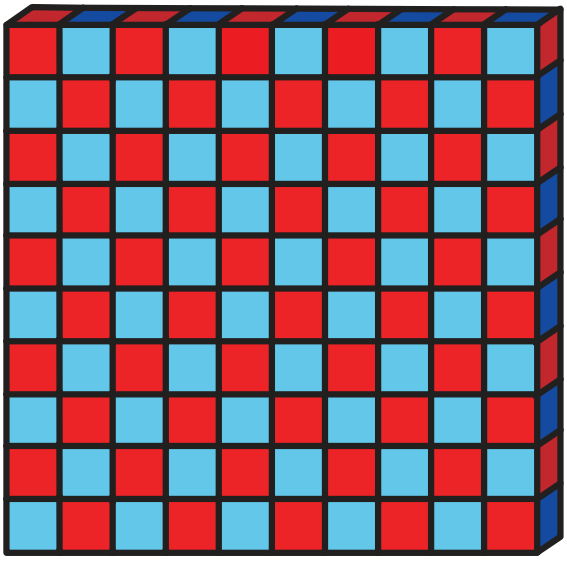
Identification of number upto 10,000 :

Number 1 is equal to 1 units, 10 units is equal to 1 tens, 10 tens is equal to 1 hundreds and 10 hundreds is equal to 1 thousands.

To consolidate your understanding about these numbers look at the figures below :

Here, 1 cube... 1 unit.

10 units is equal to 1 tens.

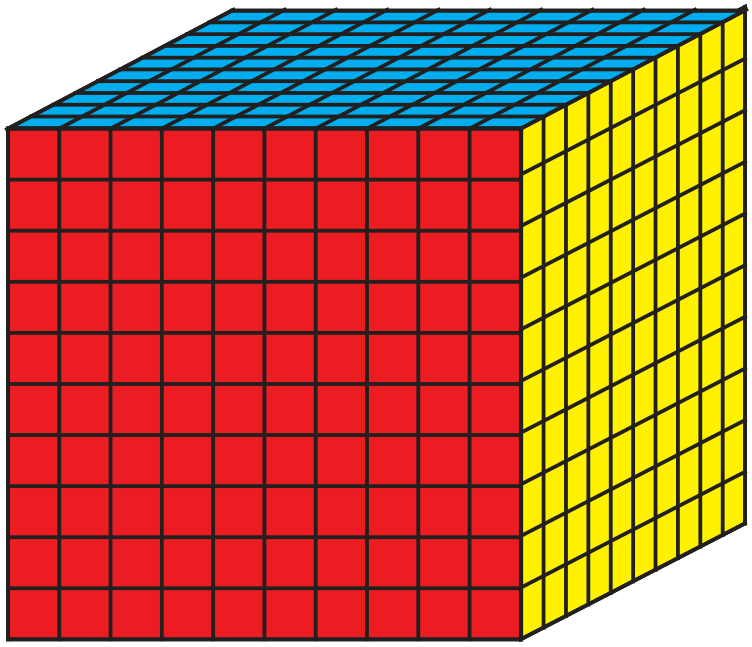


100 units is equal to 10 tens

10 tens is equal to 1 hundreds

If you make 10 piles of 100 cubes each you will get the arrangement as shown below. Its topmost pile has 100 cubes in this arrangement; in the same manner there are 100 cubes in all lower piles.

Tenth hundred →
Ninth hundred →
Eighth hundred →
Seventh hundred →
Sixth hundred →
Fifth hundred →
Fourth hundred →
Third hundred →
Second hundred →
First hundred →



1000 cubes...

10 hundreds means 1 thousands

All piles taken together make 10 hundreds. 10 hundreds is equal to 1 thousands. Thus, 1000 units = 100 tens = 10 hundreds = 1 thousands

- **Reading numbers upto 10,000.**

You have already learnt to read the numbers upto nine hundred and ninety nine in std. 3.

- **Writing numbers upto 10,000 in figures - words**

In 1000,

(1) Replacing the 'ZERO' at the place of unit by 1 to 9 respectively we get numbers from 1001 to 1009.

(2) If we put 10 to 99 at the place of tens-units, we get numbers from 1010 to 1099.

(3) If we put 100 to 999 at the place of hundreds-tens-units, we get numbers from 1100 to 1999.

Thus by placing numbers in every thousand, we can reach upto the number 9999.

- **Numbers : In figures and in words :**

In figures	In words	In figures	In words
1001	One thousand and one	6000	Six thousand
1099	One thousand and ninety nine	7892	Seven thousand eight
1200	One thousand and two hundred		hundred and ninety two
2000	Two thousand	9000	Nine thousand
5376	Five thousand three	9999	Nine thousand nine
	hundred and seventy six		hundred and ninety nine
		10,000	Ten thousand

Read :

(1) 4977 : Four thousand nine hundred and seventy seven.

(2) 3281 : Three thousand two hundred and eighty one.

(3) 5023 : Five thousand and twenty three.

(4) 4872 : Four thousand eight hundred and seventy two.

(5) 1341 : One thousand three hundred and forty one. It is also read as thirteen hundred and forty one.

◆ **Activity 1 : Let us play a game :**

Fill in the following boxes with your favourite number of four digits. Not a single box should remain empty and a number cannot be repeated.

9999									
							7896		
			2508						
	8020							4567	
						3672			
								←	1100

This game will be played by four players. Take a die to play this game and proceed as many boxes as the number obtained on die on throwing. Read the number in the box at which you have reached. Write this number in figure and in words in your notebook.

Like this, start the game; throw a die; write numbers in your notebook. So what are you waiting for ? Start !! Enjoy !!

Range of Numbers upto 9999

Activity 2 : Write the numbers you like :

Thousands	Hundreds	Tens	Units	Number in figure	Number in words
5	3	2	1	5321	Five thousand three hundred and twenty one

Now answer the following questions using above table :

(1) Which is the largest number ? .....

(2) Which digit is at the place of thousand in the largest number ? .....

(3) Expand any three numbers in thousand, hundred, ten and unit as shown in the following example :

Example : 5321 means 5 thousands 3 hundreds 2 tens 1 units

(4) ..... means ..... thousands ..... hundreds ..... tens ..... units.

(5) ..... means ..... thousands ..... hundreds ..... tens ..... units.

(6) ..... means ..... thousands ..... hundreds ..... tens ..... units.

Let us understand :

- 2637 means 26 groups of hundreds, 3 groups of tens and 7 units or 2 groups of thousands, 6 groups of hundreds, 3 groups of tens and 7 units.
- 3004 means 30 groups of hundreds, 0 group of tens and 4 units
- 5168 means 51 groups of hundreds, 6 groups of tens and 8 units

- 27 groups of hundreds, 5 groups of tens and 2 units means 2752
- 32 groups of hundreds, 3 groups of tens and 2 units means 3232
- 55 groups of hundreds, 2 groups of tens and 7 units means 5527

Reading of numbers :

- 3973 - Three thousand nine hundred and seventy three OR Thirty nine hundred and seventy three

Practice 1

1. Write the following numbers in words :

(1) 6594 : .....

(2) 8964 : .....

(3) 5089 : .....

(4) 6594 : .....

(5) 7401 : .....

2. Write the following numbers in figures :

(1) Five thousand three hundred and thirty eight : .....

(2) Four thousand and seven : .....

(3) Nine thousand five hundred and sixty nine : .....

(4) Two thousand and eighty nine : .....

(5) Three thousand seven hundred and nine : .....

3. Expand the following numbers in groups of thousand, hundred, ten and unit :

(1) 9032 means ..... thousands ..... hundreds ..... tens ..... units

(2) 4504 means ..... thousands ..... hundreds ..... tens ..... units

(3) 7368 means ..... thousands ..... hundreds ..... tens ..... units

(4) 8940 means ..... thousands ..... hundreds ..... tens ..... units

(5) 6549 means ..... thousands ..... hundreds ..... tens ..... units

4. Express the following numbers by expanding in group of hundreds, tens, units or express the expansion as a number :

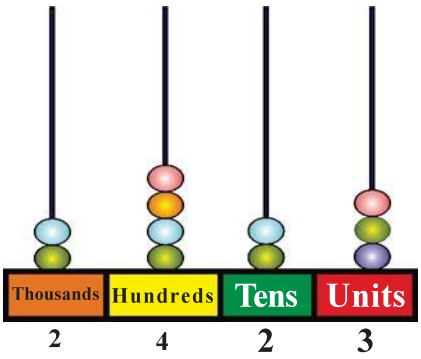
Sr.No.	Number	Groups of hundreds	Groups of tens	Units
Ex.	3467	34	6	7
(1)	6738	.....	.....	.....
(2)	.....	95	0	2
(3)	2047	.....	.....	.....
(4)	.....	67	3	4
(5)	4567	.....	.....	.....

5. Express the following numbers in group of hundreds and in group of tens :

Sr. No.	Number	Groups of hundreds	Groups of tens
Ex.	1000	10 groups	100 groups
Ex.	2010	-	201 groups
(1)	3000	.....	.....
(2)	3060	-	.....

Sr. No.	Number	Groups of hundreds	Groups of tens
(3)	4100	.....	.....
(4)	8000	.....	.....
(5)	7350	-	.....
(6)	5900	.....	.....

❑ Place value :



2 thousands 4 hundreds 2 tens 3 units means **2423**

Place	Number of Beads	Place-value
Thousands	2	2000
Hundreds	4	400
Tens	2	20
Units	3	3
	Number	**2423**

Thus, in 2423,

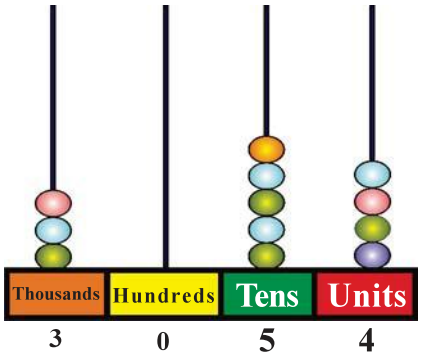
Place-value of 2 is 2000.

Place-value of 4 is 400.

Place-value of 2 is 20.

Place-value of 3 is 3.

Number 2423



3 thousands 0 hundreds 5 tens 4 units means **3054**

Place	Number of Beads	Place-value
Thousands	3	.....
Hundreds	0	0
Tens	.....	50
Units	4	4
	Number	**3054**

Thus, in 3054,

Place-value of 3 is 3000

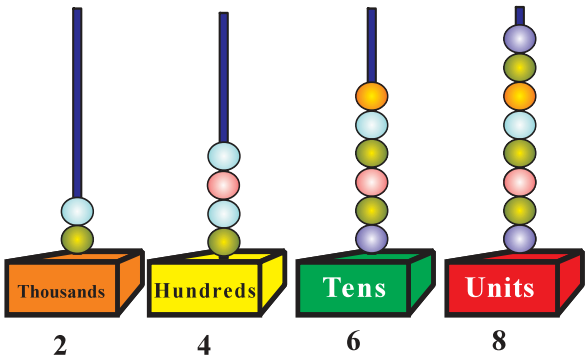
Place-value of 0 is 0

Place-value of 5 is 50

Place-value of 4 is 4

Number : 3054

If abacus are different having exactly one rod on each and if place value is written on it, let us see how to find out that number.



2 thousands 4 hundreds 6 tens 8 units means 2468.

In 2468, place-value of 2 is 2000

place-value of 4 is 400

place-value of 6 is 60

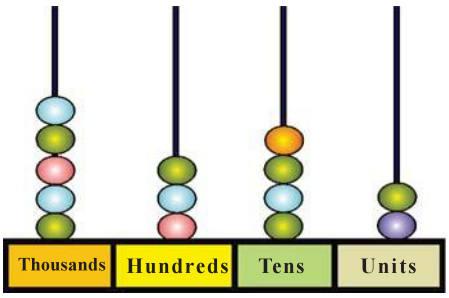
place-value of 8 is 8

Number : 2468

Practice 2

1. Fill in the blanks with the help of abacus :

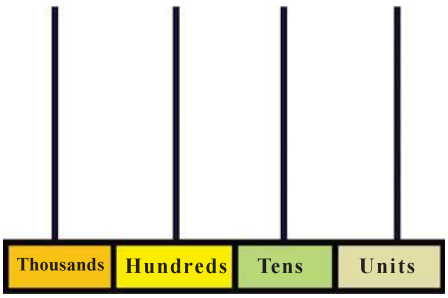
(1)



....Thousands ....hundreds ....tens ....units

means ____

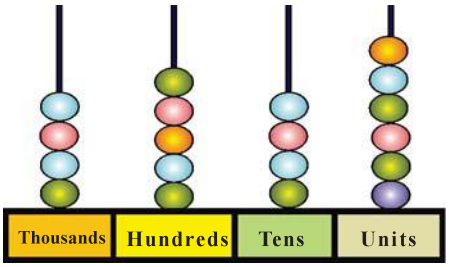
(2)



....Thousands ....hundreds ....tens ....units

means 6430

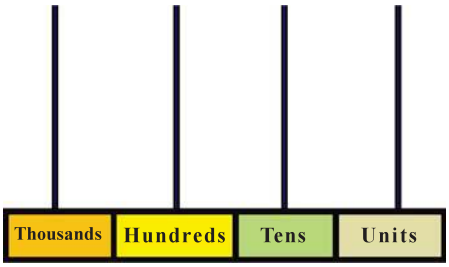
(3)



....Thousands ....hundreds ....tens ....units

means ____

(4)



....Thousands ....hundreds ....tens ....units

means 3252

2. Fill in the blanks in the table :

No.	Number	Place-value of digits			
		4	5	6	7
(1)	5746	.....	.....	.....	.....
(2)	6457	.....	.....	.....	.....
(3)	.....	400	5000	60	7
(4)	.....	40	5	6000	700
(5)	5674	.....	.....	.....	.....

3. Complete the table by marking the digit and place-value of the digit as shown in example :

No.	Figure	Thousands		Hundreds		Tens		Units	
		Digit	Place-value of digit	Digit	Place-value of digit	Digit	Place-value of digit	Digit	Place-value of digit
Ex.	**4501**	**4**	**4000**	**5**	**500**	**0**	**0**	**1**	**1**
(1)	9720	.....	.....	.....	700	2	.....	0	.....
(2)	8074	8	.....	.....	.....	.....	70	4	.....
(3)	.....	6	.....	.....	400	.....	10	6	.....
(4)	6533	.....	.....	.....	.....	.....	.....	.....	.....

4. Expand the following numbers as shown in the example and write place-value of each group below it :

Ex. 4351 means 4 thousands 3 hundreds 5 tens 1 units

4000	300	50	1

(1) 6302 means 6 thousands ..... hundreds ..... tens ..... units

	300		

(2) ....45.... means6 thousands ..... hundreds ..... tens ..... units

			3

(3) 7....2.... means..... thousands 5 hundreds ..... tens 0 units

(4) 3847 means ..... thousands ..... hundreds ..... tens ..... units

❑ Succeeding, Preceding and middle numbers :

◆ Observe and understand :

Immediately succeeding number

1349	1350	1351
2999	3000	3001
3998	3999	4000
4999	5000	5001
9432	9433	9434

Middle number

Immediately preceding number

1349	1350	1351
2999	3000	3001
3998	3999	4000
4999	5000	5001
9432	9433	9434

Middle number

By adding 1 to the given number we get the number immediately succeeding.

By subtracting 1 from the given number (other than 1) we get the number immediately preceding.

Understanding of smaller, greater, equal numbers upto 9999 :

(1) 46 210

Two digits Three digits

Therefore 46 < 210

(2) 345 and 672

3 < 6 (Comparing digits at hundreds place.)

Therefore 345 < 672

(3) 3597 and 3567

9 > 6

(Comparing digits at tens, as digits at thousands and hundreds are same)

Therefore 3597 > 3567

(4) 1497 and 1497

All digits are same

Therefore 1497 = 1497

(5) 413 402

1 > 0

(Comparing digits at tens as digits at hundreds are same)

Therefore, 413 > 402

(6) 5430 and 5431

0 < 1

(Comparing digits at units, as digits at thousands; hundreds and tens are same.)

Therefore, 5430 < 5431

Greater Number > Smaller Number
Smaller Number < Greater Number
Number = Same Number

Note : To compare numbers, first of all, check numbers from thousands place to units place successively.

Practice 3

1. Fill in the blanks :

(1) The number immediately preceding 4444 is ..... .

(2) The number immediately succeeding 6809 is ..... .

(3) The number immediately preceding the largest number of three digits is ..... .

(4) The number immediately preceding the smallest number of three digits is ..... .

(5) ..... is the middle number for 7563 and 7565.

(6) 3000 is the middle number for ..... and ..... .

(7) The number immediately succeeding the largest number of four digit is ..... .

2. Write 7 pairs of four digit numbers and show them with appropriate symbol =, < or > between them :

Ex. : 2040 > 1498

(1) ....

(2) ....

(3) ....

(4) ....

(5) ....

(6) ....

(7) ....

Ascending-descending order of numbers :

We have learnt how to arrange numbers upto 999 in ascending-descending order. Similarly numbers upto 9999 can also be arranged in ascending-descending order.

From given numbers we write the highest number. Then from remaining numbers we write the highest number at second order. Proceeding like this we get descending order of numbers.

Suppose we want to arrange numbers 3234, 4243, 4324, 5432 in descending order.

(1) By comparing the digits at the thousands place of numbers 3234, 4243, 4324, 5432, we can see that the largest number is 5432.

(2) From remaining three numbers 3234, 4243, 4324 the first digits of 4243 and 4324 are same. So, we compare their second digits; we get largest numbers 4324.

(3) From remaining two numbers 3234, 4243; we can see that 4243 is larger by comparing first digits. Therefore, 5432, 4324, 4243, 3234 are in descending order.

If we reverse the order in ascending order of numbers, we get descending order of the numbers and if we reverse the descending order of numbers, we get the ascending order of the numbers.

Thus, to decide the ascending order or the descending order, one should compare the digits at thousands and then compare the digits at hundreds, tens and units respectively to decide smaller-greater number.

Example 1 : Arrange the given numbers in ascending order : 4321, 8102, 1898

Solution : 4321, 8102, 1898

↓ ↓ ↓

4 8 1 (Place of thousands)

All the three digits at thousands are different and ascending order of them is 1, 4 and 8. Therefore, ascending order of given numbers is 1898, 4321, 8102.

Example 2 : Arrange the given numbers in descending order :

7198, 2364, 5078, 1590

Solution : 7198, 2364, 5078, 1590

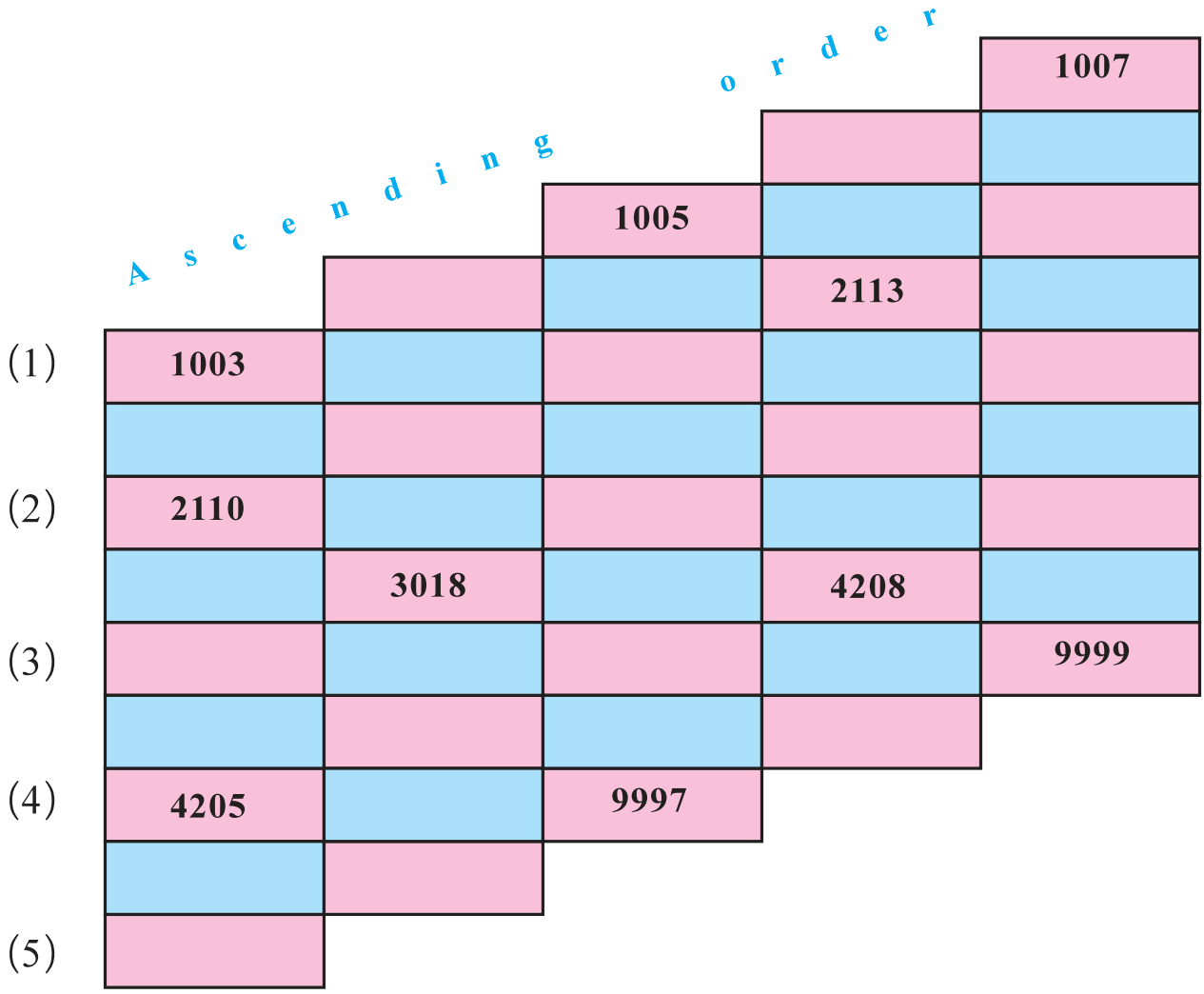
↓ ↓ ↓ ↓

7 2 5 1 (Place of thousands)

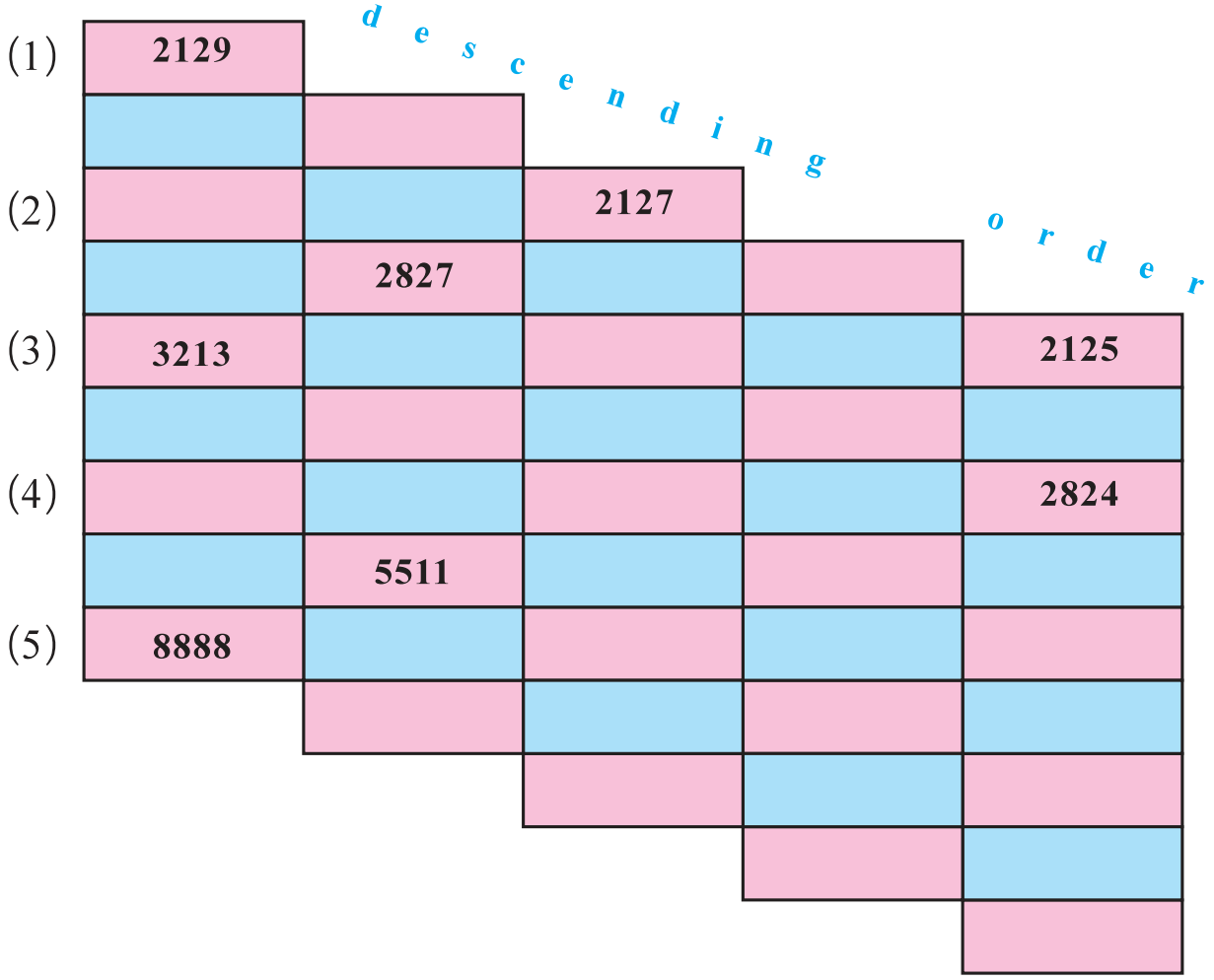
In the above numbers, the digits at thousands place are different and in descending order they are 7, 5, 2, 1. Therefore, descending order of given numbers is 7198, 5078, 2364, 1590.

Practice 4

1. Fill in the blanks with proper numbers by understanding ascending order :



2. Fill in the blanks with proper numbers by understanding descending order :



3. Fill in the blanks with proper understanding of ascending-descending order :

	Ascending order	Descending order
Ex.	**1001, 1002, 1003**	**1003, 1002, 1001**
(1)	....., ..., ...	2112, 2111, 2110
(2)	3204, 3205, 3206	....., ..., ...
(3)	....., ..., ...	6412, 6411, 6410
(4)	5588, 5589, 5590	....., ..., ...

Let us understand :

Type of number	How many numbers	Smallest number	Greatest number
1-digit numbers	9	1	9
2-digit numbers	90	10	99
3-digit numbers	900	100	999
4-digit numbers	9000	1000	9999

Exercise

1. Write the following numbers in figures :

(1) Two thousand and thirty seven .....

(2) Four thousand three hundred and twenty six .....

(3) Seven thousand and nine .....

(4) Eight thousand two hundred and fifty four .....

2. Write the following numbers in words :

(1) 3941 ..... (2) 4607 .....

(3) 5370 ..... (4) 8093 .....

3. Fill in the blanks :

	Number	Place-value of 3	Place-value of 7	Place-value of 4
(1)	3407			
(2)	7324			
(3)	6743			

4. Expand as required and write the number from the given expansion :

Number	Expansion according to place-value			
	Thousands	Hundreds	Tens	Units
1876	.....	.....	.....	.....
.....	2	9	0	3
8679	.....	.....	.....	.....

Number	Expansion according to place-value			
	Thousands	Hundreds	Tens	Units
4368	.....	.....	.....	.....
.....	8	5	2	6
.....	9	6	7	8

5. Fill in the following blanks :

(1) The number immediately preceding 1781 is ..... .

(2) The number immediately succeeding 3999 is ..... .

(3) 5999 is the number immediately preceding ..... .

(4) 7610 is the number immediately succeeding ..... .

(5) 8000 is the number between ..... and ..... .

6. Fill in the following blanks using appropriate symbol =, < or > :

(1) 2426 ..... 2388 (2) 1475 1478

(3) 666 ..... 4000 (4) 8915 8915

7. Arrange the following numbers in ascending order :

(1) 3048, 8043, 4083 (2) 6026, 6062, 6620, 6260

....., ..., ..., ..., ..., ...

8. Arrange the following numbers in descending order :

(1) 4289, 2894, 9824 (2) 2835, 2833, 2837, 2839

....., ..., ..., ..., ..., ...

Answers

Practice 1

1. (1) Six thousand five hundred and ninety four
(2) Eight thousand nine hundred and sixty four
(3) Five thousand and eighty nine
(4) Six thousand five hundred and ninety four
(5) Seven thousand four hundred and one

2. (1) 5338 (2) 4007 (3) 9569 (4) 2089 (5) 3709

3. (1) 9, 0, 3, 2 (2) 4, 5, 0, 4 (3) 7, 3, 6, 8 (4) 8, 9, 4, 0 (5) 6, 5, 4, 9

4. (1) 67, 3, 8 (2) 9502 (3) 20, 4, 7 (4) 6734 (5) 45, 6, 7

5. (1) 30, 300 (2) 306 (3) 41, 410 (4) 80, 800
(5) 735 (6) 59, 590

Practice 2

1. (1) 5 thousands 3 hundreds 4 tens 2 units means 5342
(2) 6 thousands 4 hundreds 3 tens 0 units
(3) 4 thousands 5 hundreds 4 tens 6 units means 4546
(4) 3 thousands 2 hundreds 5 tens 2 units

2. (1) 40, 5000, 6, 700 (2) 400, 50, 6000, 7
(3) 5467 (4) 6745 (5) 4, 5000, 600, 70

3. (1) 9, 9000, 7, 20, 0 (2) 8000, 0, 0, 7, 4
(3) 6416, 6000, 4, 1, 6 (4) 6, 6000, 5, 500, 3, 30, 3, 3

4. (1) 3, 0, 2

6000		0	2

(2) 4, 5, 3

6000	400	50	

(3) 7, 2

7000	500	20	0

(4) 3, 8, 4, 7

3000	800	40	7

Practice 3

1. (1) 4443 (2) 6810 (3) 998 (4) 99

(5) 7564 (6) 2999, 3001 (7) 10,000

Practice 4

3. (1) 2110, 2111, 2112 (2) 3206, 3205, 3204

(3) 6410, 6411, 6412 (4) 5590, 5589, 5588

Exercise

1. (1) 2037 (2) 4326 (3) 7009 (4) 8254

2. (1) Three thousand nine hundred and forty one

(2) Four thousand six hundred and seven

(3) Five thousand three hundred and seventy

(4) Eight thousand and ninety three

3. (1) 3000, 7, 400 (2) 300, 7000, 4 (3) 3, 700, 40

5. (1) 1780 (2) 4000 (3) 6000 (4) 7609

(5) 7999, 8001

6. (1) > (2) < (3) < (4) =

7. (1) 3048, 4083, 8043 (2) 6026, 6062, 6260, 6620

8. (1) 9824, 4289, 2894 (2) 2839, 2837, 2835, 2833

◆

2 Addition

Let us recall :

1. The following are the pictures of different objects with their prices. Answer the questions accordingly :

			
₹ 500	₹ 200	₹ 400	₹ 300
			
₹ 100	₹ 50	₹ 700	₹ 600

(1) What is the total price of the toy car and the camera ?.....

(2) What is the total price of the steel box and the table ?.....

(3) What is the total price of the iron and the shoes ?.....

(4) What is the total price of the chair and the steel box ?.....

(5) What is the total price of the table and the bat ? .....

2. Fill in the following blanks orally :

(1) 300 + 100 = ...

(2) 500 + 300 + 100 = ...

(3) 200 + 500 = ...

(4) 200 + 300 + 400 = ...

(5) 300 + 200 = ...

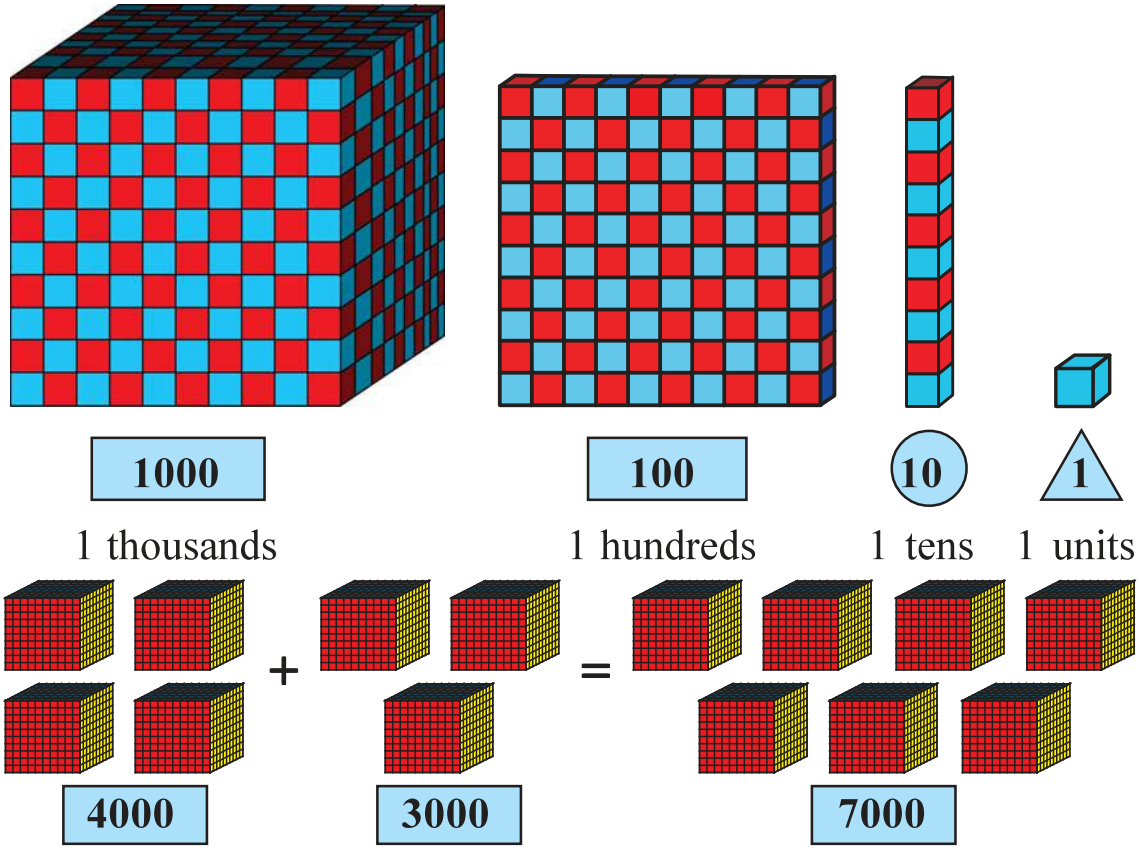
(6) 400 + 100 + 200 = ...

3. Add the following :

(1) 4 2 6 + 1 3 3	(2) 2 3 4 + 1 5 2	(3) 3 2 6 + 3 5 6	(4) 3 7 5 + 5 9 6
(5) 3 2 + 5 4 3 + 1 2 4	(6) 3 5 6 + 1 1 2 + 3 2 1	(7) 2 3 5 + 3 1 6 + 3 2 7	(8) 2 1 6 + 9 8 + 3 4

Let us learn something new :

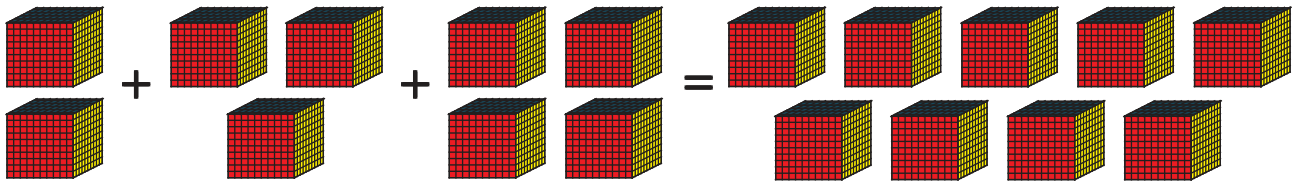
Oral addition :



4000 + 3000 = 7000

4 thousands + 3 thousands = 7 thousands

4 0 0 0
+ 3 0 0 0
7 0 0 0



2000 + 3000 + 4000 = 9000

2000 + 3000 + 4000 = 9000

2 thousands + 3 thousands + 4 thousands = 9 thousands

$$\begin{array}{r} 2000 \\ +\ 3000 \\ +\ 4000 \\ \hline 9000 \end{array}$$

Practice 1

1. Calculate orally and fill in the following blanks :

(1) 2000 + 1000 = ...

(2) 4000 + 2000 + 1000 = ...

(3) 3000 + 2000 = ...

(4) 3000 + 4000 + 2000 = ...

(5) 7000 + 2000 = ...

(6) 2000 + 2000 + 3000 = ...

(7) 3000 + 5000 = ...

(8) 1000 + 3000 + 1000 = ...

❑ **Look and understand :**

◆ **Addition of two or three numbers of four digits without carry forward :**

Example 1 : 2341 + 4032

	1000	100	10	1	1000	100	10	1
	2	3	4	1	1000 1000	100 100 100	10 10 10 10	1
+	4	0	3	2	1000 1000 1000 1000		10 10 10	1 1
	6	3	7	3	1000 1000 1000 1000 1000 1000	100 100 100	10 10 10 10 10 10 10	1 1 1

	Thousands	Hundreds	Tens	Units
	2	3	4	1
+	4	0	3	2
	6	3	7	3

Which can be written as follows :

$$\begin{array}{r} 2\ 3\ 4\ 1 \\ +\ 4\ 0\ 3\ 2 \\ \hline 6\ 3\ 7\ 3 \end{array}$$

Example 2 : 2312 + 2150 + 1523

	Thousands	Hundreds	Tens	Units
	2	3	1	2
+	2	1	5	0
+	1	5	2	3
	5	9	8	5

Which can be written as follows :

$$\begin{array}{r} 2\ 3\ 1\ 2 \\ +\ 2\ 1\ 5\ 0 \\ +\ 1\ 5\ 2\ 3 \\ \hline 5\ 9\ 8\ 5 \end{array}$$

Example 3 : 3251 + 2425 + 213

	Thousands	Hundreds	Tens	Units
	3	2	5	1
+	2	4	2	5
+		2	1	3
	5	8	8	9

Which can be written as follows :

$$\begin{array}{r} 3\ 2\ 5\ 1 \\ +\ 2\ 4\ 2\ 5 \\ +\ \ 2\ 1\ 3 \\ \hline 5\ 8\ 8\ 9 \end{array}$$

Example 4 : 7521 + 423 + 15

	Thousands	Hundreds	Tens	Units
	7	5	2	1
+		4	2	3
+			1	5
	7	9	5	9

Which can be written as follows :

$$\begin{array}{r} 7\ 5\ 2\ 1 \\ +\ \ 4\ 2\ 3 \\ +\ \ \ 1\ 5 \\ \hline 7\ 9\ 5\ 9 \end{array}$$

Practice 2

1. Add the following :

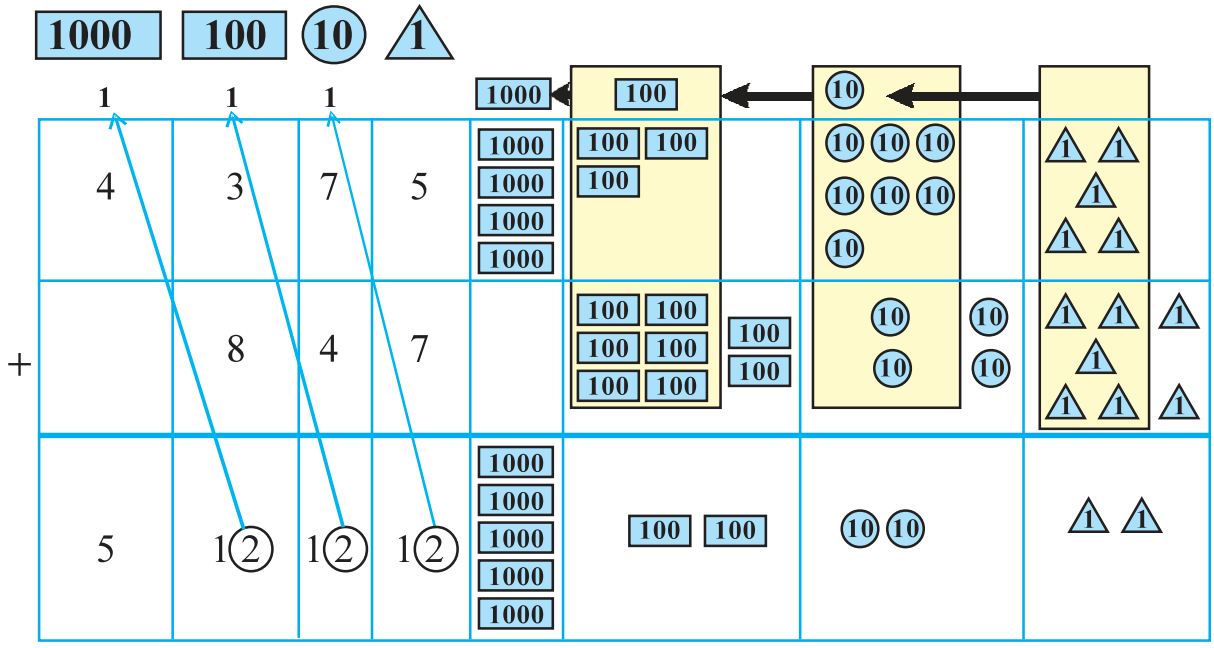
(1) 2532 + 5321	(2) 3581 + 4105	(3) 3264 + 312 + 1413	(4) 4030 + 47 + 2211
(5) 3407 + 6452	(6) 3120 + 432 + 2236	(7) 3177 + 312	(8) 13 + 173 + 4211

2. Add the following :

(1) 7309 + 2200 (2) 1206 + 1410 + 3021 (3) 6414 + 225
(4) 4400 + 235 + 1201 (5) 4301 + 438
(6) 2234 + 1200 + 165 (7) 327 + 2322 (8) 3020 + 2621

❑ **Addition of two numbers of four digits with carry forward :**

Example 5 : 4375 + 847



Thousands	Hundreds	Tens	Units
1	1	1	
4	3	7	5
+	8	4	7
5	2	2	2

Which can be written as follows :

```
  1 1 1
  4 3 7 5
+   8 4 7
  5 2 2 2
```

Example 6 : 4375 + 1858

	Thousands	Hundreds	Tens	Units
	1	1	1	
	4	3	7	5
+	1	8	5	8
	6	2	3	3

Which can be written as follows :

```
  1 1 1
  4 3 7 5
+ 1 8 5 8
  6 2 3 3
```

Example 7 : 5427 + 395

	Thousands	Hundreds	Tens	Units
		1	1	
	5	4	2	7
+		3	9	5
	5	8	2	2

Which can be written as follows :

```
    1 1
  5 4 2 7
+   3 9 5
  5 8 2 2
```

Example 8 : 5375 + 785

```
  1 1 1
  5 3 7 5
+   7 8 5
  6 1 6 0
```

Example 9 : 1368 + 189

```
    1 1
  1 3 6 8
+   1 8 9
  1 5 5 7
```

Practice 3

1. Add the following :

(1) 3515 + 5346

(2) 6383 + 3383

(3) 3798 + 275

(4) 7849 + 99

(5) 1327 + 3589

(6) 4327 + 3258

(7) 5256 + 199

(8) 7326 + 285

2. Add the following :

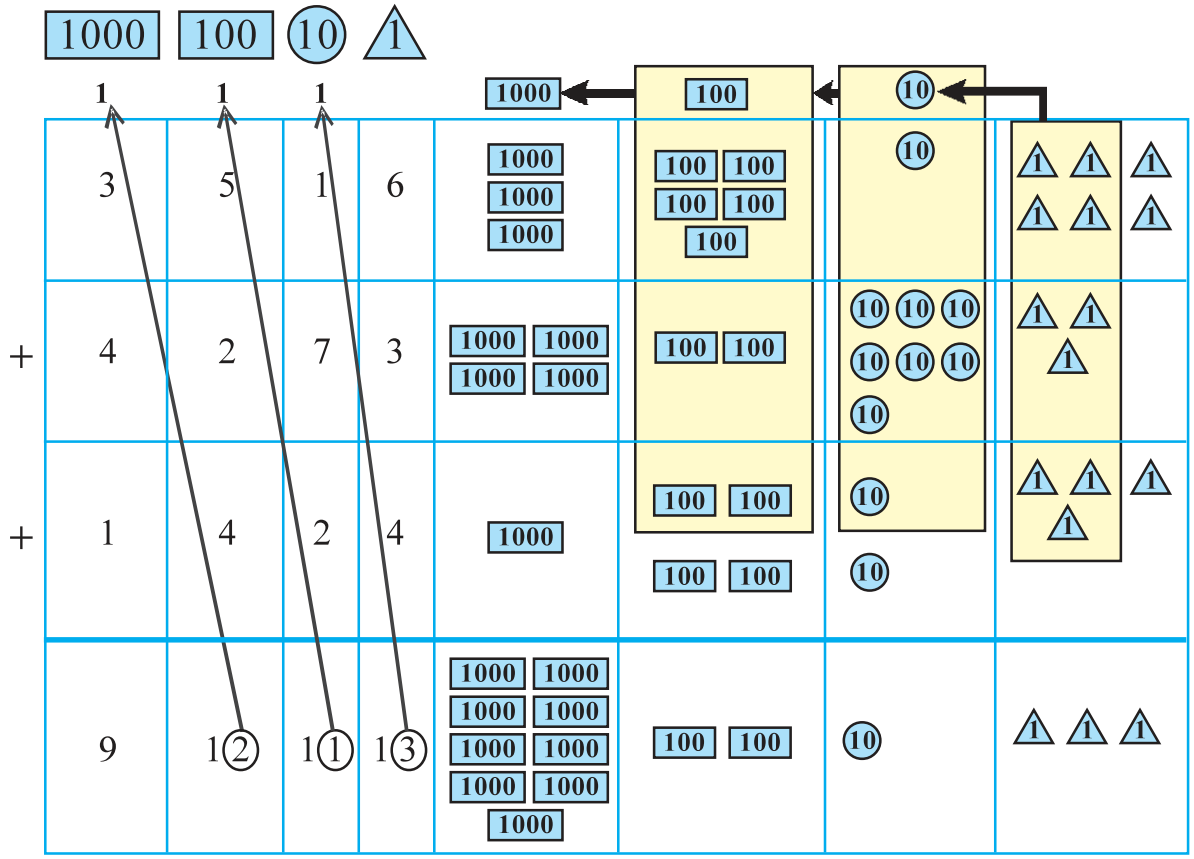
(1) 3635 + 2784 (2) 3498 + 4796 (3) 5181 + 999

(4) 3258 + 3479 (5) 5327 + 3259 (6) 4326 + 5125

(7) 4321 + 235

❑ Addition of three numbers of four digits with carry forward :

Example 10 : 3516 + 4273 + 1424



	Thousands	Hundreds	Tens	Units
	1	1	1	
	3	5	1	6
+	4	2	7	3
+	1	4	2	4
	9	**2**	**1**	**3**

Which can also be written as follows :

```
  1 1 1
  3 5 1 6
+ 4 2 7 3
+ 1 4 2 4
-------
  9 2 1 3
```

Example 11 : 4795 + 3887 + 719

	Thousands	Hundreds	Tens	Units
	2	2	2	
	4	7	9	5
+	3	8	8	7
		7	1	9
	9	4	0	1

Which can be written as follows :

```
  2 2 2
  4 7 9 5
+ 3 8 8 7
+   7 1 9
  9 4 0 1
```

Example 12 : 5325 + 3258 + 235

	Thousands	Hundreds	Tens	Units
		1	1	
	5	3	2	5
+	3	2	5	8
		2	3	5
	8	8	1	8

Which can be written as follows :

```
    1 1
  5 3 2 5
+ 3 2 5 8
+   2 3 5
  8 8 1 8
```

Example 13 : 4625 + 2876 + 389

```
  1 1 2
  4 6 2 5
+ 2 8 7 6
+   3 8 9
  7 8 9 0
```

Example 14 : 5729 + 3258 + 457

```
  1 1 2
  5 7 2 9
+ 3 2 5 8
+   4 5 7
  9 4 4 4
```

Practice 4

1. Add the following :

(1) 1080 + 2909 + 4456

(2) 768 + 1345 + 2789

(3) 1248 + 6645 + 64

(4) 597 + 4685 + 18

(5) 3219 + 2325 + 486

(6) 4251 + 2429 + 18

(7) 3257 + 325 + 18

2. Add the following :

(1) 1305 + 2523 + 1330

(2) 5256 + 3124 + 1219

(3) 2824 + 3250 + 1975

(4) 5276 + 3251 + 1289

(5) 2426 + 3528 + 251

(6) 4370 + 2352 + 326

(7) 3252 + 256 + 28

(8) 4598 + 3586 + 19

❑ **Explanation of practical examples :**

Example 15 : 1356 boys and 2385 girls visited a science fair at district level; how many children visited the science fair ?

(**Explanation :** If we want to find out total number of children, we have to add the number of boys and the number of girls.)

```
   11
 1356   boys
+2385   girls
 3741   Total children
```

Thus, total 3741 children visited science fair.

Example 16 : In a library there are 3247 story books; 4378 picture story books and 198 kids story books. How many total number of books are there in the library ?

(**Explanation :** To find out total number of books in library we have to add number of story books, number of picture story books and number of kids story books.)

```
   22
 3247   story books
+4378   picture story books
+ 198   kids story books
 7823   Total books
```

Thus, the library has total 7823 books.

Pictures showing cost of different items

			
₹ 4725	₹ 8729	₹ 3450	₹ 1325

		
₹ 5527	₹ 3187	₹ 750

			
₹ 287	₹ 330	₹ 50	₹ 450

Observe pictures and understand :

	1			
	4 7 2 5	price of a T.V.	3 4 5 0	price of a mobile
+	7 5 0	price of pants	+ 1 3 2 5	price of a fan
	5 4 7 5	total amount	+ 3 3 0	price of a shirt
			5 1 0 5	Total amount

Practice 5

1. See the picture given above, find the total amount of the following, also find the missing pictures and draw them :

(1) Price of a grinding machine and a shirt = ...

(2) Price of a cupboard and a sweater = ...

(3) Price of a mobile, price of pants and price of a towel = ...

(4) Price of a cupboard and price of a frock of young girl = ...

(5) Price of a grinding machine, price of a fan and price of a towel = ...

(6) Price of a T.V., price of a mobile and price of a shirt = ...

(7) Price of an electric motor, price of a sweater and price of pants = ...

(8) Price of a cupboard, price of a towel and price of a frock = ...

Exercise

1. Play a game :

3251	4321	3296	1385	4327
4258	4562	1004	2467	3251
3257	3251	2327	3504	4327
1324	4326	2591	1398	3421
1598	49	752	1089	324

Rules of game : Drop a match stick on this number box from some height. Add these two numbers where two ends of this match stick touch.

Note down :

(1) 1 3 2 5 7 + 4 5 6 2 7 8 1 9	(2)	(3)
(4)	(5)	(6)

2. Perform the following addition :

(1) 5783 + 1214 + 2013 | (2) 4328 + 2350 + 3251

(3) 99 + 875 + 6450 | (4) 4325 + 3529 + 1213

3. In an APMC (The Agricultural Produce Market Committee) market number of bags of grain noted in a day is as follows. Answer the following :

No.	Item	Number of bags	No.	Item	Number of bags
(1)	Wheat	4250	(6)	Sesame	1560
(2)	Millet	3254	(7)	Ground nut	3251
(3)	Corn	1329	(8)	cotton	1332
(4)	Mustard	3257	(9)	Sorghum	2350
(5)	Castor seeds	4325	(10)	*Toover*	3251

Questions :

(1) How many total bags of Millet and Groundnut are there ? .....

(2) How many total bags of Mustard, Castor seeds and Corn are there ?

.....

(3) How many total bags of Sesame, Mustard and Millet are there ?

.....

(4) How many total bags of Millet, Ground nut and Sorghum are there ?

.....

(5) How many total bags of Wheat; Ground nut and cotton are there ?

.....

4. Iqbalbhai has sold wheat worth ₹ 7251 and Millet worth ₹ 1435. Then what is the worth of total grain he has sold ?

5. Vishalbhai and Jitendrabhai have donated ₹ 5555 and ₹ 3509 respectively to make a water tank in a school. What is the total amount of donation given by both ?

6. In a rationing shop; in the month of January rice worth ₹ 1650, wheat worth ₹ 3256 and sugar worth ₹ 2436 were sold. What is the total revenue of shopkeeper in this month ?

7. 1560 males, 2288 females and 1357 kids visited a funfair. How many persons visited the funfair ?

8. Visit Mid-day meal centre nearby you and collect the following information :

Month	Beneficiaries of Mid-day meal plan	
	Boys	Girls
January		
February		
March		

Answer the following :

(1) What is the total number of beneficiaries in the month of January ?

.....

(2) What is the total number of beneficiaries in the month of February ?

.....

(3) What is the total number of beneficiaries in the month of March ?

.....

Practice 1

1. (1) 3000 (2) 7000 (3) 5000 (4) 9000
   (5) 9000 (6) 7000 (7) 8000 (8) 5000

Practice 2

1. (1) 7853 (2) 7686 (3) 4989 (4) 6288
   (5) 9859 (6) 5788 (7) 3489 (8) 4397
2. (1) 9509 (2) 5637 (3) 6639 (4) 5836
   (5) 4739 (6) 3599 (7) 2649 (8) 5641

Practice 3

1. (1) 8861 (2) 9766 (3) 4073 (4) 7948

(5) 4916 (6) 7585 (7) 5455 (8) 7611

2. (1) 6419 (2) 8294 (3) 6180 (4) 6737

(5) 8586 (6) 9451 (7) 4556

Practice 4

1. (1) 8445 (2) 4902 (3) 7957 (4) 5300

(5) 6030 (6) 6698 (7) 3600

2. (1) 5158 (2) 9599 (3) 8049 (4) 9816

(5) 6205 (6) 7048 (7) 3536 (8) 8203

Exercise

2. (1) 9010 (2) 9929 (3) 7424 (4) 9067

3. (1) 6505 (2) 8911 (3) 8071 (4) 8855 (5) 8833

4. 8686 **5.** ₹ 9064 **6.** ₹ 7342 **7.** 5205

◆

3 Subtraction

Let us recall :

Let us play :

Play this game with your friend.

300	427	475	429	400
633	700	555	867	786
325	568	100	146	900
362	200	246	425	800
111	732	500	367	600

Rules of game :

(1) Collect two stones from the ground and drop them on this number square.

(2) Subtract the smaller number from the greater number among two numbers on which these stones fall.

(3) If the answer is correct, the player will get 10 points and then it is the turn of the other player. Play like this for 7 times.

(4) The person who has the highest number of points will be the winner. So what are you waiting for ? Start the game.

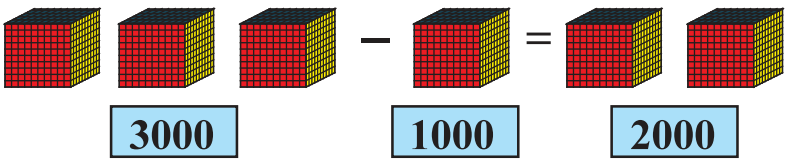
(5) Who is the winner ? By what margin ?

Note :

(1) $\begin{array}{r} {\scriptstyle 9} \\ 6\,\not{0}\,\not{0} \\ 7\,\not{0}\,\not{0} \\ -\,5\,6\,8 \\ \hline 1\,3\,2 \end{array}$	(2)	(3)	(4)
(5)	(6)	(7)	(8)

❑ Let us learn something new :

◆ Oral subtraction :



$$\begin{array}{r} 3000 \\ -\ 1000 \\ \hline 2000 \end{array}$$

3000 – 1000 = 2000

3 thousands – 1 thousands = 2 thousands

Practice 1

1. Calculate orally and fill in the following blanks :

(1) 9000 – 3000 = ...

(2) 8000 – 1000 = ...

(3) 7000 – 2000 = ...

(4) 3000 – 2000 = ...

(5) 6000 – 1000 = ...

(6) 4000 – 4000 = ...

Let us learn something new :

Subtraction of two numbers of four digits without borrowing :

Example 1 : 4356 – 2134

1000 100 10 1

	4	3	5	6	1000 1000	100 100	10 10 10
					1000 1000	100	10 10
							1 1 1
							1 1 1
–	2	1	3	4	1000 1000	100	10 10 10
							1 1
							1 1
	2	2	2	2	1000 1000	100 100	10 10
							1 1

	Thousands	Hundreds	Tens	Units
	4	3	5	6
–	2	1	3	4
	2	2	2	2

This can also be written as :

4 3 5 6
– 2 1 3 4
2 2 2 2

Example 2 : 5431 – 2110

	Thousands	Hundreds	Tens	Units
	5	4	3	1
–	2	1	1	0
	3	3	2	1

This can also be written as :

5 4 3 1
– 2 1 1 0
3 3 2 1

Practice 2

1. Subtract :

(1) 8589 – 7358

(2) 7686 – 6660

(3) 5971 – 3860

(4) 9467 – 7054

2. Subtract :

(1) 8725 – 7514 | (2) 9815 – 3510

(3) 3419 – 2305 | (4) 7429 – 3118

❑ Subtraction of two numbers of four digits with borrowing :

Example 3 : 3252 – 1364

	Thousands	Hundreds	Tens	Units
		11	14	
	2	~~1~~	~~4~~	12
	~~3~~	~~2~~	~~5~~	~~2~~
–	1	3	6	4
	1	8	8	8

This can also be written as :

$$\begin{array}{r} {\scriptstyle 11\ 14} \\ 2\ \not{1}\ \not{4}\ 12 \\ \not{3}\ \not{2}\ \not{5}\ \not{2} \\ -\ 1\ 3\ 6\ 4 \\ \hline 1\ 8\ 8\ 8 \end{array}$$

Example 4 : 8765 – 2873

	Thousands	Hundreds	Tens	Units
		16		
	7	~~6~~	16	
	~~8~~	~~7~~	~~6~~	5
–	2	8	7	3
	5	8	9	2

This can also be written as :

$$\begin{array}{r} {\scriptstyle 16} \\ 7\ \not{6}\ 16 \\ \not{8}\ \not{7}\ \not{6}\ 5 \\ -\ 2\ 8\ 7\ 3 \\ \hline 5\ 8\ 9\ 2 \end{array}$$

Example 5 : 9000 – 4685

	Thousands	Hundreds	Tens	Units
		9	9	
	8	~~10~~	~~10~~	10
	~~9~~	0	0	0
–	4	6	8	5
	4	3	1	5

This can also be written as :

$$\begin{array}{r} {\scriptstyle 9\ \ 9} \\ 8\ \not{10}\ \not{10}\ 10 \\ \not{9}\ 0\ 0\ 0 \\ -\ 4\ 6\ 8\ 5 \\ \hline 4\ 3\ 1\ 5 \end{array}$$

Think and write :

Form a four digit number using digits from 1 to 9. Obtain the number by interchanging the positions of digits at tens and units place, write them in the table and subtract the smaller number from the greater number.

No.	The number of 4 digits that you have formed	The number obtained by interchanging the position of digits at tens and units	The answer obtained on subtracting the smaller number from the larger number
(1)	5639	5693	
(2)			
(3)			
(4)			
(5)			
(6)			

Practice 3

1. Subtract :

(1) 3256 − 1876 (2) 5345 − 2786 (3) 8405 − 3765 (4) 5325 − 1489 (5) 8385 − 2778

2. Subtract :

(1) 3635 − 2784 (2) 7498 − 1809 (3) 5181 − 999

(4) 7285 − 95 (5) 9375 − 7287 (6) 4524 − 3518

❑ Practical examples :

Example 6 : On Tushar's birthday, his father went to a T.V. shop to purchase a T.V. with ₹ 8654 in his wallet. Having paid ₹ 7436 for the T.V. he was left with ₹ 1218. Is this the correct amount ?

[**Understanding :** Answer can be confirmed by subtracting ₹ 7436 from total ₹ 8654. If we get answer ₹ 1218 then the answer is correct.]

```
    4 14
  8 6 5 4   Total amount with Tushar's father
- 7 4 3 6   Price of the T.V.
-------
  1 2 1 8   Remaining amount
```

The amount ₹ 1218 remaining with Tushar's father is correct.

Example 7 : 8328 pupils participated in district sports festival. Among these 4517 were girls, find the number of boys.

```
    7 13
  8 3 2 8   Total number of pupils participated
- 4 5 1 7   Total number of girls participated
-------
  3 8 1 1   Total number of boys
```

3811 boys participated in sports festival.

◆ Observe, understand and write :

The list of items purchased by Jagrutiben for yearly household usage is as follows. Using this information answer the following questions :

No.	Items	Amount
(1)	Clothings	₹ 2233
(2)	Grocery	₹ 5674
(3)	Vegetables	₹ 978
(4)	Household things	₹ 3573
(5)	Jewellery	₹ 7678
(6)	Mixer	₹ 3434

(1) For which item has Jagrutiben spent maximum amount ? How much ?
(2) For which item has Jagrutiben spent minimum amount ? How much ?
(3) Subtract the minimum amount spent from the maximum amount spent by Jagrutiben.
(4) Of household things and vegetables, where is the maximum amount spent ? How much ?
(5) Subtract the amount spent for clothings from the amount spent for jwellery.

❑ Do it yourself :

Similar to Jagrutiben list, make a list of any six items purchased for your home and list its price against it in the following table :

No.	Items	Amount

Answer the questions :

(1) For which item has the maximum amount been spent ? How much ?
(2) For which item has the minimum amount been spent ? How much ?
(3) Subtract the minimum amount from the maximum amount that has been spent in your home.
(4) Find the difference in the amount of first item and the amount of last item.

Example 8 : Utsav enters a shop with ₹ 7321. He wants to buy different items. If he purchases a fan worth ₹ 1325, how much amount will he be left with ?

```
   12 11
  6 2 X X 11
  7 3 2 X   ₹ he had
- 1 3 2 5   Price of Fan
  5 9 9 6   ₹ left
```

Practice 4

Answer the following questions from given pictures :

₹ 8524

₹ 9528

₹ 3250

₹ 1325

₹ 5640

₹ 3178

₹ 1486

(1) Which item's price is more; the T.V.'s or the cupboard's ? How much ?

(2) Which item's price is less; the mobile's or the grinding machine's ? How much ?

(3) What is the total amount of the Iron and the Fan ?

(4) Which item's price is more; the electric motor's or the fan's ? How much ?

(5) Which item's price is more; the T.V.'s or the mobile's ? How much ?

(6) Find the difference between the cost of the highest priced item and that of the lowest priced item.

Example 9 : Simplify : 3560 + 2856 − 4725

$$\begin{array}{r} {\scriptstyle 1\ \ 1\ \ \ \ } \\ 3560 \\ +\ 2856 \\ \hline 6416 \end{array} \qquad \begin{array}{r} {\scriptstyle \ \ \ 13\ \ } \\ {\scriptstyle 5\not{6}\ 11\ \ } \\ \not{6}\not{4}\not{1}6 \\ -\ 4725 \\ \hline 1691 \end{array}$$

Example 10 : Simplify: 7435 − 5326 + 1326

$$\begin{array}{r} {\scriptstyle \ \ \ \ 2\ 15} \\ 74\not{3}\not{5} \\ -\ 5326 \\ \hline 2109 \end{array} \qquad \begin{array}{r} {\scriptstyle \ \ \ \ \ 1\ \ \ } \\ 2109 \\ +\ 1326 \\ \hline 3435 \end{array}$$

Practice 5

1. Evaluate the following :

(1) 3425 + 2527 − 3259 (2) 4257 − 3251 + 3250

(3) 4527 − 3215 + 4327 (4) 8427 − 4325 − 1324

(5) 5927 − 3257 + 1268 (6) 4529 + 3258 − 3540

❑ **Let us understand :**

Example 11 : Mahi has ₹ 8520. If she purchases a mobile phone worth ₹ 3250 and a fan worth ₹ 1325; how many rupees will be left with her ?

[**Understanding :** Subtract the price of the mobile phone from the amount Mahi has, then subtract the price of the fan from the remaining amount.]

$$\begin{array}{rl} {\scriptstyle \ \ \ 4\ 12\ \ } & \\ 8\not{5}\not{2}0 & \text{Rupees with Maahi} \\ -\ 3250 & \text{Mobile price} \\ \hline 5270 & \text{Rupees left} \end{array} \qquad \begin{array}{rl} {\scriptstyle 4\ \ 12\ 6\ 10} & \\ \not{5}\not{2}\not{7}0 & \text{Rupees were left} \\ -\ 1325 & \text{Fan price} \\ \hline 3945 & \text{Rupees left now.} \end{array}$$

Now Maahi has 3945.

Example 12 : Manojbhai has ₹ 4529. His father gave him ₹ 3258. Then Manojbhai purchased a bicycle worth ₹ 5429. How much amount is left with him ?

[**Understanding :** We have to add rupees with Manojbhai and rupees given by his father and then we have to subtract the price of bicycle from it.]

1		7 17	
4 5 2 9	amount with Manojbhai	7 7 ~~8~~ ~~7~~	Total amount
+ 3 2 5 8	amount given by his father	− 5 4 2 9	Price of bicycle
7 7 8 7	Total amount	2 3 5 8	

Now, ₹ 2358 is left with Manojbhai.

Practice 6

1. A merchant has 4526 oil tins and he purchased 3256 more oil tins. Out of these, he sold 3580 oil tins. How many oil tins are left with him ?
2. Ramjibhai purchased fertilizer worth ₹ 5680 and seeds worth ₹ 1785 from the amount ₹ 9000 that he had. How much amount will be left with him ?
3. Rahimbhai has 4645 kg paddy and 3485 kg wheat of which he sold 5985 kg grain. How much grain will be left with him ?
4. There are 3585 male voters and 3540 female voters in a village. 4975 voters have voted in an election. Then how many voters did not vote ?
5. Pareshbhai's monthly income is ₹ 6530. His wife's monthly income is ₹ 3412. Their monthly expense is ₹ 3196. Find out their monthly savings.

Exercise

1. Write 4 digit numbers of your choice in the following table in all empty boxes :

	2325				

- Read all the numbers.
- Fill in yellow colour in the boxes containing odd numbers.
- Fill in blue colour in the boxes containing even numbers.
- Select any two numbers, subtract the smaller number from greater number and note here.

(1)	(2)	(3)	(4)

2. Subtract :

(1) 6452 – 1640 (2) 3216 – 1527

(3) 9375 – 4852 (4) 4658 – 1779

3. There are 8975 persons in a village. 6997 of them are literate. How many of them are illiterate in this village ?

4. Meena purchased grain worth ₹ 3475 and for that she paid ₹ 4000 to the merchant. How much money will the merchant return to Meena ?

5. 7500 students appeared in an exam at an examination centre. 6845 of them passed the examination. How many of them got failed in the examination ?

6. 9436 plants were grown in a nursery. 6385 plants were planted at different places during *Van mahotsav*. From the remaining plants, 785 plants were donated to a school. How many plants were left in the nursery ?

7. Maheshbhai had got ₹ 9325. He purchased a cot worth ₹ 5790 from it, he also purchased a sofa set worth ₹ 3251. How much amount will be left with him ?

8. In a primary school, *Sarpanch* has donated ₹ 4551 to construct a water-tank. Teachers collected a contribution of ₹ 3565. Total expense of constructing water-tank was ₹ 7425. How much money was left ?

9. Under programme of '*Vanche Gujarat*', 2425 books were given to a primary school library with the help of villagers. 1285 books were given to children and other villagers for reading. How many books are left in the library?

Practice 1

1. (1) 6000 (2) 7000 (3) 5000 (4) 1000 (5) 5000 (6) 0

Practice 2

1. (1) 1231 (2) 1026 (3) 2111 (4) 2413

2. (1) 1211 (2) 6305 (3) 1114 (4) 4311

Practice 3

1. (1) 1380 (2) 2559 (3) 4640 (4) 3836 (5) 5607

2. (1) 851 (2) 5689 (3) 4182 (4) 7190 (5) 2088 (6) 1006

Practice 4

1. (1) Cupboard - 1004 (2) Mobile - 2390 (3) 2811
   (4) Electric motor - 1853 (5) T.V. - 5274 (6) 8203

Practice 5

1. (1) 2693 (2) 4256 (3) 5639 (4) 2778 (5) 3938 (6) 4247

Practice 6

1. (1) 4202 (2) 1535 (3) 2145 (4) 2150 (5) 6746

Exercise

2. (1) 4812 (2) 1689 (3) 4523 (4) 2879

3. 1978 4. 525 5. 655 6. 2266

7. 284 8. 691 9. 1140

◆

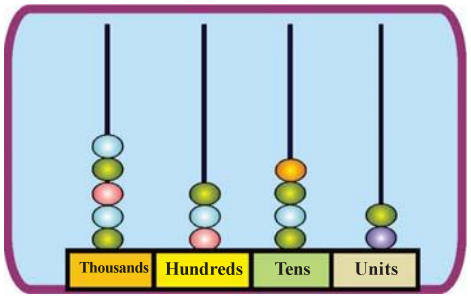
Revision : 1

1. Complete the following table :

No.	Number in figure	Number in words
(1)	8047	.....
(2)	.....	Six thousand five hundred and twenty three
(3)	5002	.....
(4)	.....	Nine thousand two hundred and fifty four

2. Find number from the beads placed in the abacus :

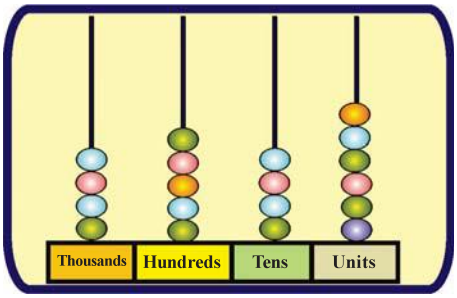
(1)



....thousands ....hundreds ....tens ....units

means

(2)



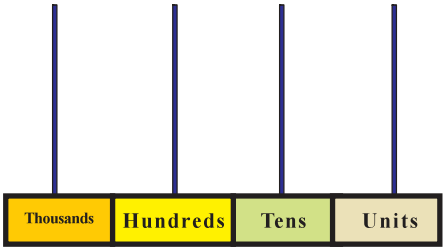
....thousands ....hundreds ....tens ....units

means

3. Write four digit numbers of your choice in the given boxes and expand by drawing beads in abacus :

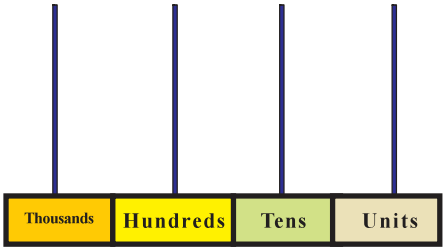
....thousands ....hundreds ....tens ....units

means



....thousands ....hundreds ....tens ....units

means



4. Fill in the blanks with the appropriate symbol =, < or > :

(1) 3000 ☐ 999 (2) 4305 ☐ 3504

(3) 5911 ☐ 5911 (4) 9999 ☐ 10000

5. Arrange the following numbers in ascending order and then in descending order :

(1) 5374, 5344, 5394 (2) 4295, 4280, 4287, 4292

6. Find place-value of underlined digit :

(1) 4$\underline{7}$02 (2) $\underline{5}$913 (3) 40$\underline{2}$3 (4) 691$\underline{9}$

7. Fill in the following blanks :

(1) The number immediately preceding 3979 is ..... .

(2) The number immediately succeeding 4579 is ..... .

(3) The number immediately succeeding the greatest number of three digits is ..... .

8. Evaluate the following sums :

(1)	(2)	(3)	(4)
2415	3516	4478	3251
+ 3592	+ 2189	+ 2609	+ 2518
	+ 3932	+ 1871	+ 2054

9. Evaluate the following sums :

(1)	(2)	(3)	(4)
9843	7622	9605	7000
− 4376	− 2337	− 3515	− 1328

(5) 5420 − 1675

(6) 3251 − 2985

(7) 8704 − 5518

(8) 6600 − 1671

10. Evaluate :

(1) 5236 + 1256 − 3251

(2) 4258 − 1325 + 90

(3) 4325 + 226 − 35

(4) 3250 − 1567 + 456

11. Monthly income of Rekha's father is ₹ 5840. Her mother's monthly income is ₹ 3425. Her grandmother earns ₹ 325 per month through home production business. What is the total monthly income of Rekha's family ?

12. Het has ₹ 9544. He bought DVD player worth ₹ 3256. How much money will be left with him ?

13. Total population of a village is 5231 among them, 2024 are male and 1938 are female. Find out the number of children in the village ?

14. Muskan had ₹ 3524. She got ₹ 5952 as salary. She purchased grain worth ₹ 2238. How much money will be left with her ?

1. (1) Eight thousand and forty seven (2) 6523

(3) Five thousand and two (4) 9254

2. (1) 5342 (2) 4546 **4.** (1) > (2) > (3) = (4) <

5. (1) In ascending order : 5344, 5374, 5394

In descending order : 5394, 5374, 5344

(2) In ascending order : 4280, 4287, 4292, 4295

In descending order : 4295, 4292, 4287, 4280

6. (1) 700 (2) 5000 (3) 20 (4) 9 **7.** (1) 3978 (2) 4580 (3) 1000

8. (1) 6007 (2) 9637 (3) 8958 (4) 7823

9. (1) 5467 (2) 5285 (3) 6090 (4) 5672

(5) 3745 (6) 266 (7) 3186 (8) 4929

10. (1) 3241 (2) 3023 (3) 4516 (4) 2139

11. ₹ 9590

12. ₹ 6288

13. 1269 children

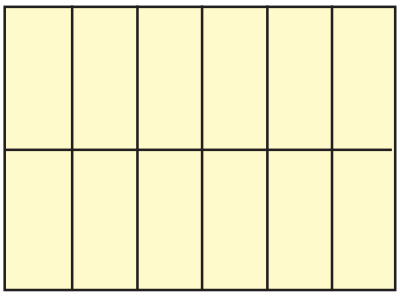
14. ₹ 7238

4 Multiplication

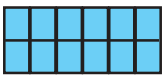
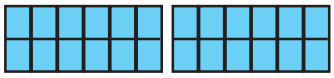
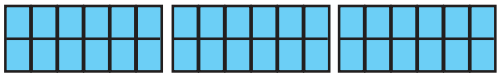
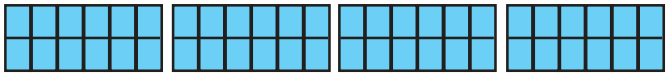
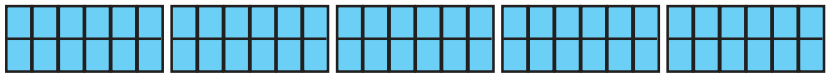
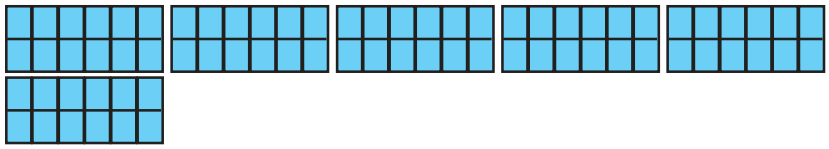
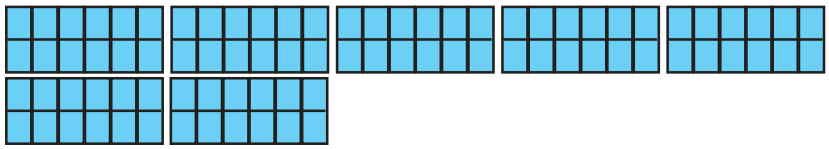
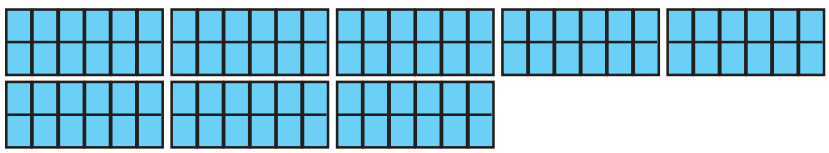
Let us learn something new :

Construction of multiplication tables :

Construction of multiplication table of 12 :



- Cut a chart paper of a size of a match box.
- Draw twelve equal sized boxes on it.
- Prepare 55 checkscards like this.
- Arrange in the following manner and construct the tables.

(1)		12 × 1 = 12
(2)		12 × 2 = 24
(3)		12 × 3 = 36
(4)		12 × 4 = 48
(5)		12 × 5 = 60
(6)		12 × 6 = 72
(7)		12 × 7 = 84
(8)		12 × 8 = 96

Construction of multiplication table of 13 :

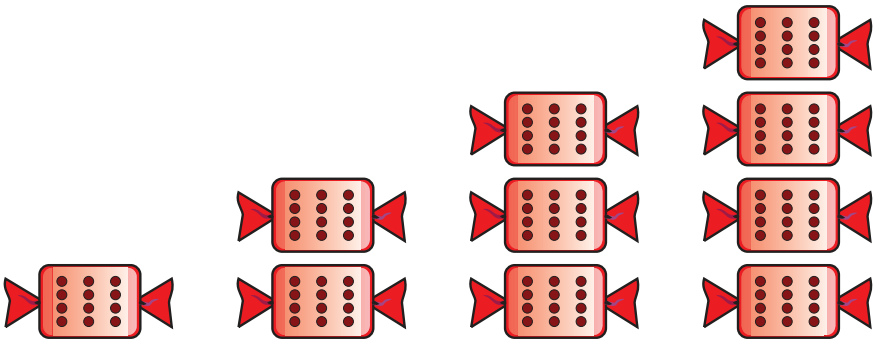
(1)	13 one time = 13	13 × 1 = 13
(2)	13 + 13 = 26	13 × 2 = 26
(3)	13 + 13 + 13 = 39	13 × 3 = 39
(4)	13 + 13 + 13 + 13 = 52	13 × 4 = 52
(5)	13 + 13 + 13 + 13 + 13 = 65	13 × 5 = 65

Following the above method, construct multiplication tables of 11 to 20 and write the tables in your note-book.

Practice 1

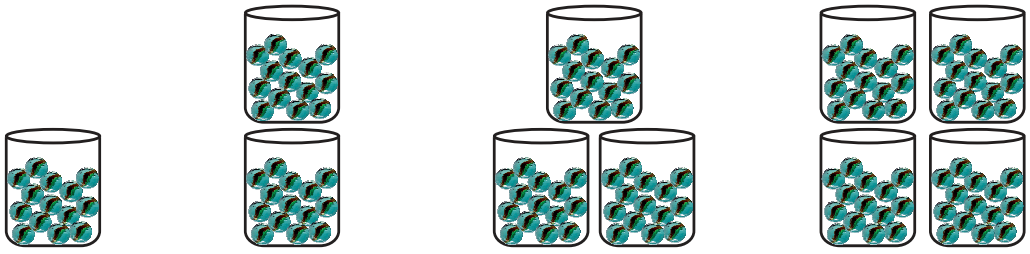
1. Answer the following with the help of tables :

(1)



12 dots ..... dots ..... dots ..... dots

(2)



14 marbles ..... marbles ..... marbles ..... marbles

(3) 17 × 6 = ... 17 × 7 = ... 17 × 8 = ...

(4) Fifteen sixes are = ... Sixteen fours are = ...

Eighteen sevens are = ...

- **If there are ten chocolates in a box, then**

there are 120 chocolates in 12 boxes | $12 \times 10 = 12 \times 1$ tens
there are ..... chocolates in 14 boxes | $= 12$ tens
there are ..... chocolates in 180 boxes | $= 120$

- **If there are hundred biscuits in a jar, then**

there are ..... biscuits in 4 jars | $4 \times 100 = 4 \times 1$ hundreds
there are ..... biscuits in 7 jars | $= 4$ hundreds
there are ..... biscuits in 10 jars | $= 400$

- **If there are 1000 pages in a book, then**

there are ..... pages in 2 books | $2 \times 1000 = 2 \times 1$ thousands
there are ..... pages in 7 books | $= 2$ thousands
$= 2000$

- **If a number is multiplied by zero, the answer is zero.**

e.g. $15 \times 0 = 0$

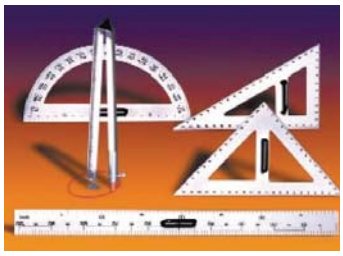
Practice 2

1. Multiply orally and fill in the blanks :

(1) 5×10 = ...	(2) 100×8 = ...
(3) 1000×3 = ...	(4) 7×10 = ...
(5) 15×100 = ...	(6) 1000×6 = ...
(7) 10×335 = ...	(8) 27×100 = ...
(9) 9×1000 = ...	(10) 35×200 = ...

Multiplication of a two digit number with a two digit number :

Cost of the set of instruments shown in adjoining figure is ₹ 25.



(1) What will be the cost of 10 such sets at the rate of ₹ 25 ?

$$\begin{array}{rl} 25 & \text{(Multiplicand)} \\ \times\ 10 & \text{(Multiplier)} \\ \hline 250 & \text{(Product)} \end{array}$$

Cost of 10 sets is ₹ 250.

(2) What will be the cost of 23 such sets ?

Cost of 20 sets :

$$\begin{array}{rl} 25 & \text{(Multiplicand)} \\ \times\ 20 & \text{(Multiplier)} \\ \hline 500 & \text{(Product)} \end{array}$$

Cost of 3 sets :

$$\begin{array}{rl} 25 & \text{(Multiplicand)} \\ \times\ 3 & \text{(Multiplier)} \\ \hline 75 & \text{(Product)} \end{array}$$

$\therefore$ 500 + 75 = 575

$$\begin{array}{rl} 25 & \\ \times\ 23 & \\ \hline 500 & (25 \times 20) \\ +\ 75 & (25 \times 3) \\ \hline 575 & \text{(Product)} \end{array}$$

$\therefore$ Cost of 23 sets is ₹ 575.

Explanation :

23 = 20 + 3

Here, to multiply by 23; first multiply by 20, then multiply by 3 and add both the results.

- **Keep in mind :**

If the multiplier is a two digit number :

- **Place zero at units place of the product.**
- **Multiply by the tens digit.**
- **Multiply by the units digit.**

Practice 3

1. Do multiplication :

(1)	(2)	(3)	(4)	(5)	(6)
32	18	56	50	68	85
× 12	× 46	× 30	× 32	× 22	× 78

2. Multiply the following :

(1) 32×15 (2) 35×14 (3) 64×64 (4) 63×52

3. Multiply the following :

12	14	22	32	52
12	42	27	18	26
33	44	19	10	29
50	40	21	36	45

Your friend and you select a number each. Multiply the selected two numbers with each other.

◆ **Activity 1 :**

(1) How many currency notes of denomination of 100 rupees are there ?

(2) What is the total amount ?

(3) What did you do to find the total amount ?

(4) How many currency notes of denomination of 10 rupees are there ?

(5) What is the total amount of both kinds of currency notes ?

- $100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 + 100 = 1000$
- $10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 = 100$
- $1000 + 100 = 1100$ (Eleven hundred rupees)

$100 \times 10 = 1000$

$10 \times 10 = 100$

1100

(Eleven hundred rupees)

Observe and understand :

15 currency notes of ₹ 100 + 15 currency notes of ₹ 50 + 15 currency notes of ₹ 5 = How much money in all ?

15 currency notes of ₹ 100 = 100 × 15 = ₹ 1500

15 currency notes of ₹ 50 = 50 × 15 = ₹ 750

15 currency notes of ₹ 5 = 5 × 15 = ₹ 75

Now, 1500 + 750 + 75 = **₹ 2325**

Example 1 : Multiply : 823 × 12

Solution :

$$\begin{array}{rl} 8\,2\,3 & \\ \times\ 1\,2 & (10+2) \\ \hline 8\,2\,3\,0 & (823\times 10) \\ +\ 1\,6\,4\,6 & (823\times 2) \\ \hline 9\,8\,7\,6 & \end{array}$$

823 × 12 = 9876

Practice 4

1. Multiply :

(1) 412 × 13 (2) 584 × 16 (3) 342 × 18 (4) 282 × 18 (5) 196 × 15

(6) 713 × 12 (7) 403 × 21 (8) 315 × 22 (9) 123 × 70 (10) 304 × 27

2. Test your mind :

A	B	C	D	E	F	G	H	I	J
0	1	2	3	4	5	6	7	8	9

BFG × BC DIA × BG BED × CD CEH × EA BAC × DB

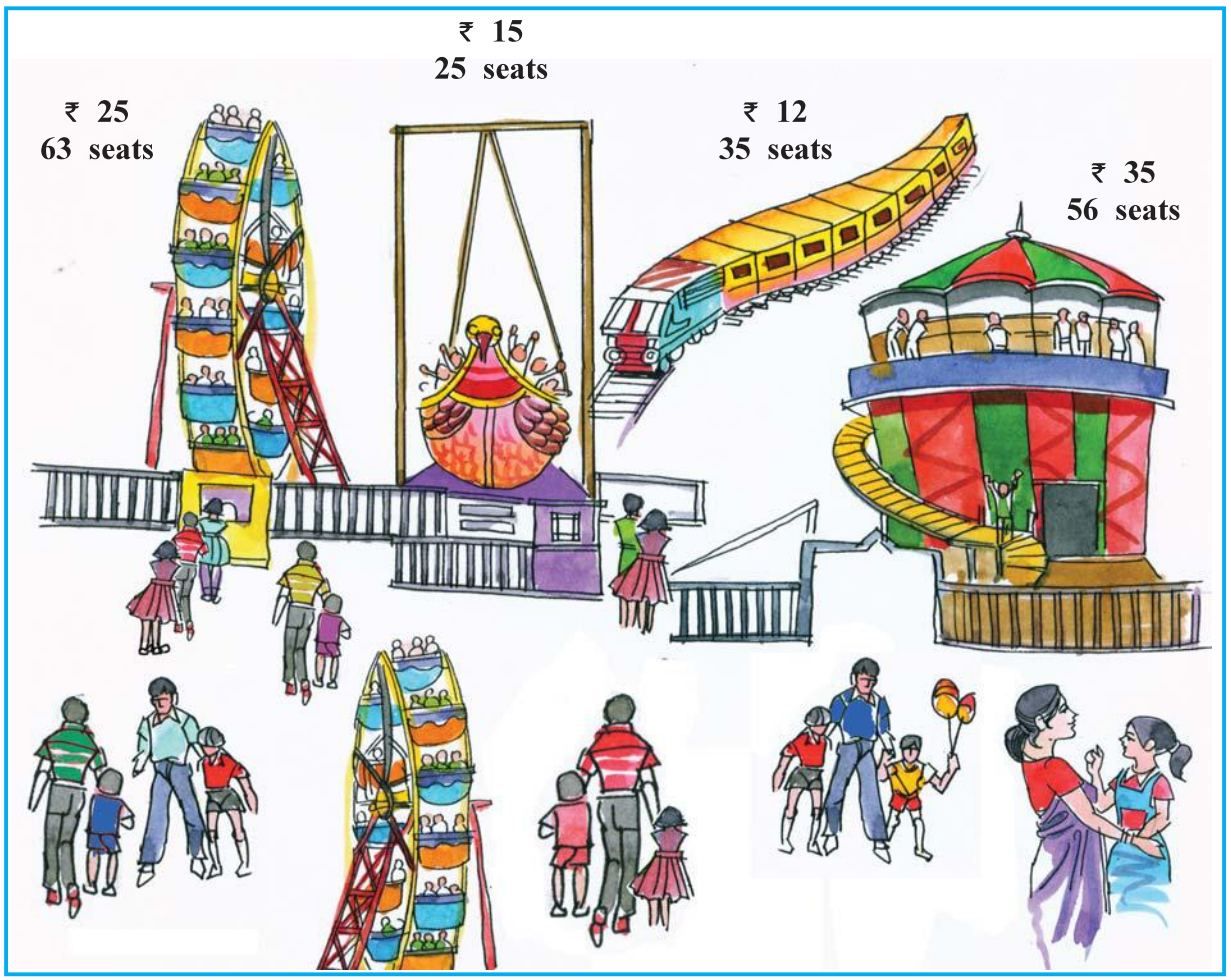
3. Find mistake and correct it :

(1)	(2)	(3)	(4)
345	308	528	109
× 12	× 18	× 16	× 50
3450	3080	528	1090
+ 680	+ 2544	+ 3228	+ 109
4030	5624	3646	1199

❑ Practical problems :

Practice 5

1.



If 29 children sit in one trip of the train, how much does the owner of the train earn in that trip ?

Solution : If the cost of a ticket is ₹ 12,

then the cost of 29 tickets = (29 × 12)

$$\begin{array}{r} 29 \\ \times\ 12 \\ \hline 290 \\ +\ 58 \\ \hline 348 \end{array}$$

₹ 348 earned.

(1) If two persons sit in the train, then how much do they pay ?

(2) How much does the boat keeper earn at the most in a single trip ?

(3) How much does the merry-go-round keeper earn at the most in a single trip ?

(4) How much does the train keeper earn at the most in a single trip ?

(5) If 49 persons watch the death-well show, then how much does the owner earn ?

2. Tell the price from price-list :

Price-list	1 kilogram : Price (₹)
Oil	85
Ghee	280
Wheat	25
Sugar	38
Jaggery	45
Black gram	36

(1) What is the cost of 15 kilogram of Ghee ?

(2) How much money do we need to purchase 140 kilogram of wheat ?

(3) How much money do we need to purchase 108 kilogram of jaggery ?

(4) Maitri has purchased 12 kilogram of black gram. What amount should she pay ?

Exercise

1. Answer with the help of multiplication tables :

(1) $12 \times 7 =$ .....

(2) $18 \times 6 =$ .....

(3) $15 \times 9 =$ .....

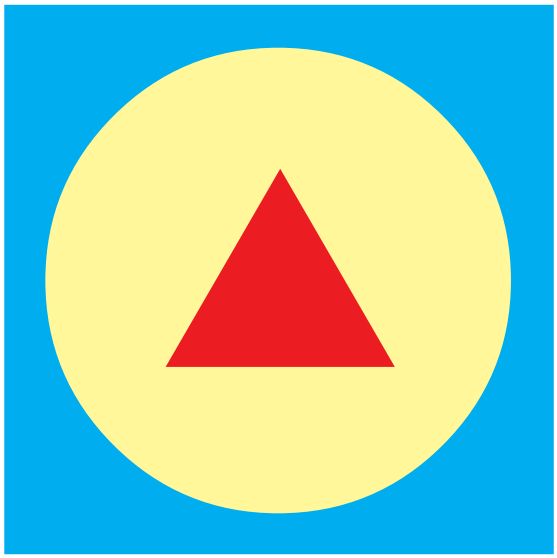
(4) Fourteen sixes are = ...

(5) Thirteen eights are = ...

(6) Nineteen fives are = ...

2. Multiply orally :

Take 9 tiny pebbles and drop them gently on the following figure :



If the place-value □ box is 1000

the place-value ◯ box is 100

the place-value △ box is 10, then obtain the number according to the possition of tiny pebbles.

3. In a toy shop, one day sale is as follows. From this, answer the following questions :

Price of toys / Day	Doll (₹ 55)	Motor car (₹ 80)	Hockey-stick (₹ 75)
Monday	32	18	33
Tuesday	46	35	48
Wednesday	38	26	55

Questions :

(1) How much amount is made from the sale of Hockey-stick on Monday ?

(2) How much amount is made from the sale of Dolls on Wednesday ?

(3) How much amount is made from the sale of Toys on Tuesday?

(4) How much amount is made from the sale of Motor-cars on Monday ?

4. Look at the table and answer the questions :

No.	Worker	Income per day (in rupees)
(1)	Carpenter	500
(2)	Cobbler	250
(3)	Blacksmith	300
(4)	Mason	600
(5)	Tailor	720

Questions :

(1) If the carpenter does not work for three days in the month of January, then how much income does he lose for these three days ?

(2) If the black-smith works for all the days of July, then how much does he earn ?

(3) If the cobbler does not work for seven days in the month of April, then what would be his income ?

(4) Who earns the highest in a day ? If he does not work for four Sundays in the month of June, then what would be his loss in that month ?

Practice 1

1. (1) 24, 36, 48 (2) 28, 42, 56

(3) 102, 119, 136 (4) Ninety, Sixty four, One hundred and twenty six

Practice 2

1. (1) 50 (2) 800 (3) 3000 (4) 70 (5) 1500

(6) 6000 (7) 3350 (8) 2700 (9) 9000 (10) 7000

Practice 3

1. (1) 384 (2) 828 (3) 1680 (4) 1600 (5) 1496 (6) 6630

2. (1) 480 (2) 490 (3) 4096 (4) 3276

Practice 4

1. (1) 5356 (2) 9344 (3) 6156 (4) 5076 (5) 2940

(6) 8556 (7) 8463 (8) 6930 (9) 8610 (10) 8208

2. **Test your mind :** (1) BIHC (1872) (2) GAIA (6080) (3) DCIJ (3289)

(4) JIIA (9880) (5) DBGC (3162)

Practice 5

1. (1) 24 (2) 375 (3) 1575 (4) 420 (5) 1715

2. (1) 4200 (2) 3500 (3) 4860 (4) 432

Exercise

1. (1) 84 (2) 108 (3) 135 (4) Eighty four (5) One hundred and four (6) Ninety five

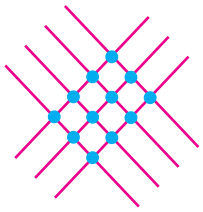
3. (1) 2475 (2) 2090 (3) 8930 (4) 1440

4. (1) 1500 (2) 9300 (3) 5750 (4) Tailor, 2880

◆

Let us know more :

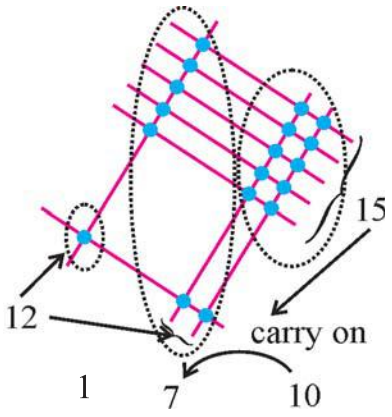
☞ **Example :** 4×3



Total 12 dots.

Therefore, $4 \times 3 = 12$

☞ **Example :** 12×15



$= 180$

5 Numbers : 2

Activity 1 :

See, Priyanshi arranges 8 tamarind seeds in different types of groups. Now, you make different types of groups of 8 tamarind seeds similarly. How many different types of groups can you form ?

(1) How many groups of one tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

(2) How many groups of two tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

(3) How many groups of three tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

(4) How many groups of four tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

(5) How many groups of five tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

(6) How many groups of six tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

(7) How many groups of seven tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

(8) How many groups of eight tamarind seeds are formed ? .....
How many tamarind seeds remain ? .....

Do the following division from preceding activity :

(1) $1\overline{)8}$	(2) $2\overline{)8}$	(3) $3\overline{)8}$	(4) $4\overline{)8}$
(5) $5\overline{)8}$	(6) $6\overline{)8}$	(7) $7\overline{)8}$	(8) $8\overline{)8}$

Understand from Activity 1 :

- When groups of 1's, 2's, 4's and 8's are formed, not a single tamarind seed remains. This type of division is called 'division without leaving a remainder'.
- In (1), (2), (4) and (8) there are divisions without leaving a remainder.
- When groups of 3's, 5's, 6's and 7's are formed, some tamarind seeds remain. The number which remains at the end of division is called the remainder.
- In (3), (5), (6) and (7) we get remainders.
  Thus, 8 is exactly divisible (without a remainder) by 1, 2, 4 and 8. Therefore, 1, 2, 4 and 8 are said to be factors of 8.

If certain numbers divide a given number, without leaving any remainder, then those certain numbers are said to be the factors of the given number.

Example 1 : Give factors of 24.

$24 \div 1 = 24$, $24 \div 2 = 12$, $24 \div 3 = 8$, $24 \div 4 = 6$,

$24 \div 6 = 4$, $24 \div 8 = 3$, $24 \div 12 = 2$, $24 \div 24 = 1$

Thus, 24 is exactly divisible by 1, 2, 3, 4, 6, 8, 12 and 24.

Therefore, 1, 2, 3, 4, 6, 8, 12 and 24 are factors of 24.

❑ Explanation of factors by multiplication :

◆ Activity 2 :

You have a chart of multiplication tables by multiplication from 1 to 20. In which multiplication tables do the following numbers given in the first column occur ? Find this by making a pair with friends and write down in the table :

Sr. No.	Multiplicative format	In which tables ? (Factors)	No. of factors
1	1×1	1	1
2	$1 \times 2, 2 \times 1$	1, 2	2
3	$1 \times 3, 3 \times 1$	1, 3	2
4	$1 \times 4, 2 \times 2, 4 \times 1$	1, 2, 4	3
5			
12			
14			
15			
18			
20	$1 \times 20, 2 \times 10, 4 \times 5, 5 \times 4,$ $10 \times 2, 20 \times 1$	1, 2, 4, 5, 10, 20	6

Activity 3 : Complete the table by multiplying as explained in the example :

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3				12				24				
4			12							40		
5												
6		12										
7												
8									72			
9												
10												
11						66						
12	12											

Look at the pink boxes in the table. 12 can be obtained by multiplying different numbers. e.g.,

$1 \times 12 = 12$, $2 \times 6 = 12$, $3 \times 4 = 12$, $4 \times 3 = 12$, $6 \times 2 = 12$, $12 \times 1 = 12$

- **From this, we can say that 1, 2, 3, 4, 6 and 12 are the factors of 12.**

Answer the follwoing from above table :

(1) What are the factors of 10 ?

(2) Which is the greatest number, of which factors can be obtained from this chart ?

(3) What can be done to obtain factors of a number greater than 12 ?

- **The smallest factor of every number is 1.**
- **The largest factor of any number is the number itself.**
- **1 is the factor of every number.**

Practice 1

1. Fill in the blanks :

(1) For any number, the smallest factor is ..... .

(2) The largest factor of 15 is ..... .

(3) Number of factors of 16 is ..... .

(4) If the largest factor of a number is 72, then the number is ..... .

(5) Write all the factors of 18 : .....

(6) Write all the factors of 24 : .....

(7) Write all the factors of 30 : .....

(8) Write all the factors of 37 : .....

(9) Since $9 \times 5 = 45$, ... and ..... are factors of 45.

(10) Since $8 \times 7 = 56$, ... and ..... are factors of 56.

2. Write down all the factors of the given numbers :

No.	Numbers	Factors of number
1.	12	
2.	36	
3.	42	
4.	66	
5.	84	

❑ Multiples :

◆ Activity 4 : "*Mew-game*"

All students make a circle to play this game. A player says 'one', the next player says 'two' and in this way the game goes on. In turn, the player has to utter *mew* instead of a number divisible by 3. If someone misses to utter 'mew', he is out of the game. The one who remains till last is the winner.

For which numbers, did you utter '*mew*' ?

3, 6, 9, ...

We call these numbers multiples of 3.

Play this game again by changing to number 4 in place of number 3. Now, for which numbers did you utter '*mew*' ?

These numbers are multiples of 4.

Now, let us understand :

We obtain multiples of 9 :

$9 \times 1 = 9$, therefore 9 is a multiple of 9.

$9 \times 2 = 18$, therefore 18 is a multiple of 9.

$9 \times 3 = 27$, therefore 27 is a multiple of 9.

In the same way, 9, 18, 27, 36, ..., ..., 63, ..., 81, ... etc. are the multiples of 9.

Answer the following :

(1) How many multiples of 9 are there ? .....

(2) Number of multiples of any number are ..... .

(3) The smallest multiple of any number is ..... .

Write the multiples of the given numbers in the given box :

4 →	4, 8, 12, 16, 20, 24, 28,...
5 →	
6 →	
7 →	

- **The number of multiples of any number are endless.**
- **The smallest multiple of any number is the number itself.**
- **A number has no largest multiple.**
- **Each number is a multiple of 1.**
- Write any five multiples of 5 :
- Write any five multiples of 7 :

Multiple : If a number is exactly divisible by a given number, then the number is called a multiple of the given number.

Practice 2

1. Write first five multiples of each number given below :

Example : Multiples of 2 : 2, 4, 6, 8, 10

(1) Multiples of 12 = ..., ..., ..., ..., ...

(2) Multiples of 15 = ..., ..., ..., ..., ...

(3) Multiples of 17 = ..., ..., ..., ..., ...

(4) Multiples of 19 = ..., ..., ..., ..., ...

2. Write missing multiples of the given numbers :

(1) Multiples of 13 = 13, 26, ..., ..., 65, ..., 91

(2) Multiples of 14 = 14, ..., ..., ..., ..., 84, ...

(3) Multiples of 16 = 16, ..., ..., ..., 80, ..., ...

(4) Multiples of 18 = 18, ..., ..., 72, ..., ..., ...

◆ **Comparison :**

Factor	Multiple
(1) If certain numbers divide a given number, without leaving any remainder, then those certain numbers are said to be the factors of the given number.	(1) If a number is exactly divisible by a given number, then the number is said to be a multiple of the given number.
(2) A number is exactly divisible by each of its factors.	(2) Each multiple of a given number is exactly divisible by the given number.
(3) 1 is a factor of all the numbers.	(3) All numbers are multiples of 1.
(4) A factor of any number is not larger than that number.	(4) Multiple of any number is not smaller than that number.

The largest factor of a number = The smallest multiple of the number = The number itself.

◆ Prime and composite numbers :

Classify the numbers in the first column of the chart given on page 67. Write in the following table :

Numbers having only one factor	Numbers having only two factors	Numbers having more than two factors
1 is neither a prime nor a composite number.	Prime numbers	Composite numbers

- A number which has more than 2 factors is called a **composite number**. If a number is exactly divisible by 1, itself and atleast one more other number, then that number is called a composite number.
- Now, let us think about 18, then $18 \div 1 = 18$, $18 \div 18 = 1$, $18 \div 3 = 6$. This means that, 18 is exactly divisible by 1 and 18, moreover, also by 3 and 6. Therefore, 18 is a composite number.
- The number which has only 2 factors is called a **prime number**. This means a number which can only be divided by 1 and the number itself is a prime number.
- Now, we know that 19 has only two factors, 1 and 19. So, 19 is a prime number.
- 2 is the only number which is prime as well as even.
- Number of factors of 1 is only 1, this means that 1 is exactly divisible by only 1. So, 1 is neither a prime number nor a composite number.

Practice 3

Write as directed :

Sr. No.	Number	Factors	Total number of factors	Prime or composite ?
(1)	21			
(2)	25			
(3)	31			
(4)	37			
(5)	44			
(6)	47			
(7)	50			

Exercise

1. Give all the factors of the following numbers :

(1) 8 (2) 20 (3) 28 (4) 43

2. Encircle the multiples of the given numbers :

No.	Number	Is it a multiple ?
(1)	11	17, 22, 28, 33, 40, 44
(2)	15	70, 75, 80, 85, 90, 105
(3)	17	85, 111, 119, 125, 136, 140
(4)	18	103, 108, 116, 126, 127, 144
(5)	20	100, 110, 120, 130, 140, 150

3. Classify the following numbers into prime numbers and composite numbers :

3, 4, 5, 6, 8, 9, 11, 14, 17, 19, 20, 22, 25, 29, 32, 33, 36, 37, 43, 49

Answers

Practice 1

1. (1) 1 (2) 15 (3) 5 (4) 72 (5) 1, 2, 3, 6, 9, 18
(6) 1, 2, 3, 4, 6, 8, 12, 24 (7) 1, 2, 3, 5, 6, 10, 15, 30
(8) 1, 37 (9) 9, 5 (10) 8, 7

2. (1) 1, 2, 3, 4, 6, 12 (2) 1, 2, 3, 4, 6, 9, 12, 18, 36
(3) 1, 2, 3, 6, 7, 14, 21, 42 (4) 1, 2, 3, 6, 11, 22, 33, 66
(5) 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84

Practice 2

1. (1) 12, 24, 36, 48, 60 (2) 15, 30, 45, 60, 75
(3) 17, 34, 51, 68, 85 (4) 19, 38, 57, 76, 95

2. (1) 39, 52, 78 (2) 28, 42, 56, 70, 98
(3) 32, 48, 64, 96, 112 (4) 36, 54, 90, 108, 126

Practice 3

Factors	Numbers of factors	Prime or Composite
(1) 1, 3, 7, 21	4	Composite
(2) 1, 5, 25	3	Composite
(3) 1, 31	2	Prime
(4) 1, 37	2	Prime
(5) 1, 2, 4, 11, 22, 44	6	Composite
(6) 1, 47	2	Prime
(7) 1, 2, 5, 10, 25, 50	6	Composite

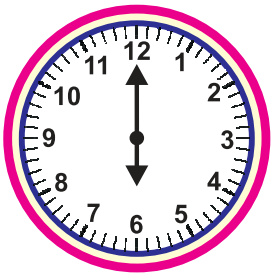
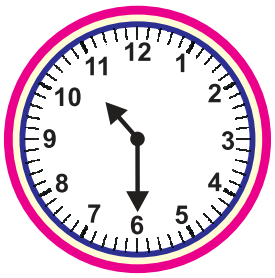
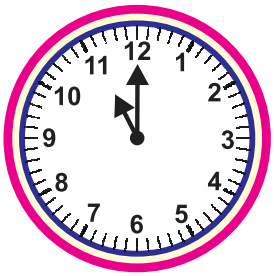
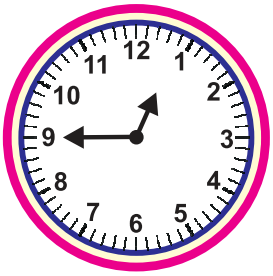
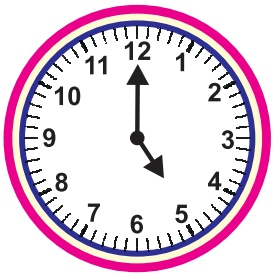
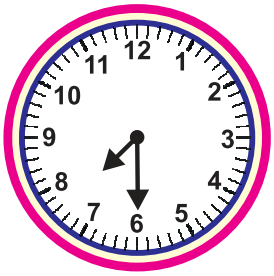
Exercise

1. (1) 1, 2, 4, 8 (2) 1, 2, 4, 5, 10, 20
   (3) 1, 2, 4, 7, 14, 28 (4) 1, 43
2. (1) 22, 33, 44 (2) 75, 90, 105 (3) 85, 119, 136
   (4) 108, 126, 144 (5) 100, 120, 140
3. **Composite numbers** : 4, 6, 8, 9, 14, 20, 22, 25, 32, 33, 36, 49
   Prime numbers : 3, 5, 11, 17, 19, 29, 37, 43

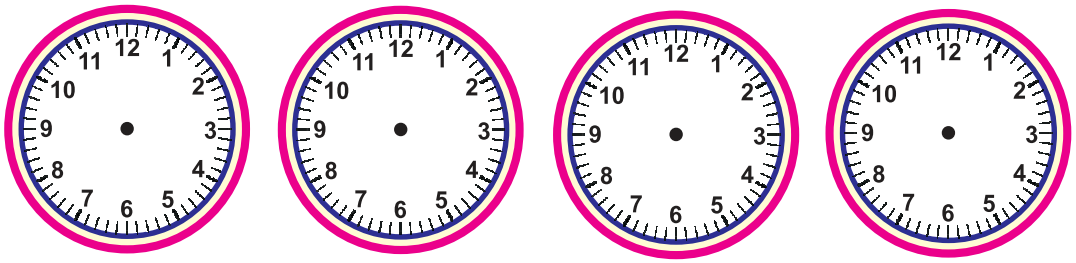
6 Time

Let us recall :

Activity 1 : Look at the pictures and fill in the blanks :

 At what time does Jay wake up ?	 At what time does Aneri go to school ?	 When is prayer held in Jay and Aneri's school? .....
 What is the time of long recess ?	 At what time does the school get over ?	 When do Jay and Aneri do their homework ? .....

Activity 2 : Draw minute-hand and hour-hand in the clock face (dial) according to the time given below :



2 : 00	5 : 25	8 : 15	10 : 35

❑ Let us learn something new :

◆ Second

Activity 3 :

Observe the second-hand of a clock placed in front of you.

What do you say :

(1) When the second-hand of a clock moves from number 12 to 1, how many marks does it move ? .....

(2) When the second-hand of a clock starts from 12 and returns back to 12, how many marks does it move ? .....

When the second-hand moves from one mark to another, it is known as moving by 1 second. When second-hand starts from 12 and returns back to 12, its movement is known as 1 minute. Hence, 60 seconds = 1 minute.

◆ Minute :

What do you say :

(1) When the minute-hand of a clock moves from number 12 to 1, how many marks does it move ? .....

(2) When the minute-hand of a clock starts from 12 and returns back to 12, how many marks does it move ? .....

When the minute-hand moves from one mark to another, its movement is known as 1 minute. When minute-hand starts from 12 and returns back to 12, time consumed is known as 1 hour. Hence, 60 minutes = 1 hour.

◆ Day :

What do you say :

(1) When the hour-hand moves from number 12 to 1, time is one hour. When it moves from number 12 to 2, time is 2 hours.

(2) If the hour-hand starts from 12 and returns back to 12, how many hours is it ? .....

From 12 O'clock midnight to 12 O'clock noon and 12 O'clock noon to 12 O'clock midnight there are total 24 hours.

Duration between one sunrise to another sunrise is called a day.

Hence, 24 hours = 1 day.

- Generally the duration of 24 hours is denoted in two ways :

  (1) System of 12 hours (2) System of 24 hours

Starting from 12 O'clock Midnight		Starting from 12 O'clock Noon	
System of 12 hours	System of 24 hours	System of 12 hours	System of 24 hours
12:00	00:00	12:00	12:00
1:00	1:00	1:00	13:00
2:00	2:00	2:00	14:00
3:00	3:00	3:00	15:00
4:00	4:00	4:00	16:00
5:00	5:00	5:00	17:00
6:00	6:00	6:00	18:00
7:00	7:00	7:00	19:00
8:00	8:00	8:00	20:00
9:00	9:00	9:00	21:00
10:00	10:00	10:00	22:00
11:00	11:00	11:00	23:00
12:00	12:00	12:00	00:00

- **Week :**

Write the names of the days of a week in your note-book.

Count the days and say how many days are there ? .....

Seven days = 1 week

- **Month :**

Answer the following questions by examining the calendar in your class-room :

(1) How many days are there in the month of March ? .....

(2) How many days are there in the month of February ? .....

(3) How many days are there in the month of November ? .....

- **Calendar**

One can know the date of any day of any month from calendar :

September 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

September 2012

Sunday		2	9	16	23	30
Monday		3	10	17	24	
Tuesday		4	11	18	25	
Wednesday		5	12	19	25	
Thursday		6	13	20	27	
Friday		7	14	21	28	
Saturday	1	8	15	22	29	

- Names of the days are written in horizontal or vertical rows in the calendar.
- Usually, red ink is used to indicate Sundays and also the dates falling on Sundays.

- Usually, the dates of public holidays are also printed with red ink.
- In many calendars, the months and days (*Tithi*) of *Vikramsamvat* are also mentioned with the date.
- Names of the main festivals are also written with the respective dates.

Study the month of September in the given calendar of 2012 and answer the following questions :

(1) How many Sundays are there ? .....

(2) How many Thursdays are there ? .....

(3) Which days occur four times ? .....

(4) Which days occur five times ? .....

◆ **Let us understand :**

If there is Saturday on 1st, then by adding 7 successively, we get the dates of Saturdays. that is 1 + 7 = 8, 8 + 7 = 15, 15 + 7 = 22, 22 + 7 = 29, so, 1, 8, 15, 22 and 29 dates occur on Saturday.

In the same way, if there is a Monday on date 3, then 3 + 7 = 10, 10 + 7 = 17, 17 + 7 = 24 and 24 + 7 = 31 occur on Mondays.

The same day occurs if 7 is subtracted from the date of any given day.

Think and write :

(1) If there is a Tuesday on 2nd of October, then on which other dates will there be Tuesdays ?

....., ..., ..., ..., ...

(2) If there is a Sunday on 27th of April, then on which other dates will there be Sundays in the same month ?

....., ..., ..., ...

(3) If there is a Wednesday on 8th of January, then on which other dates will there be Wednesdays in the same month ?

....., ..., ..., ...

◆ **Activity 4 :**

Study the current year calendar of your classroom and answer the following questions :

(1) On which dates do Sundays occur in the month of January ?

....., ..., ..., ..., ...

(2) How many days are there in the month of February ? .....

(3) Count and write the total number of days of this year. .....

(4) How many months begin with Mondays ?

.....

Understand :

(1) 60 seconds = 1 Minute (2) 60 Minutes = 1 Hour

(3) 24 hours = 1 Day (4) 7 Days = 1 Week

(5) 52 Weeks = 1 Year (+1 day or +2 days) (6) 12 Months = 1 Year

There are 365 or 366 days in a year.

A leap year has 366 days.

Oh, Krency! this minute-hand of the clock has completed one full rotation but this hour-hand has moved only one number. Wow, what a magic !

Oh! Not like that. Let me explain. Count all the marks starting from number 12 to 12 drawn on the clock. Tell me, how many marks are there ?

There are 60 marks.

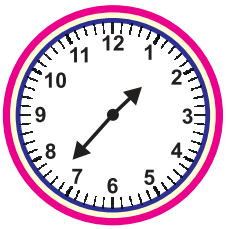
When a minute-hand moves 1 mark, it means 1 minute. Similarly when it moves 60 marks, it means 60 minutes and when minute-hand moves 60 marks then hour-hand moves 5 marks.

Daksh, look at the clock and tell what time is it ?

1 hour and 30 minutes.

Daksh, your answer is wrong. You have forgotten to count marks after 1 O'clock and 30 minutes. Minute-hand is on third marks ahead of six, so 30 + 3 = 33 minutes. Hence, it is 1 O'clock and 33 minutes. Understood?

Yes, I have understood. Look, now there is 1 hour and 37 minutes in the clock.



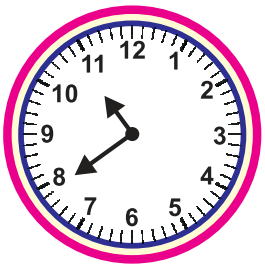
What do you say :

(1) When minute-hand moves 60 marks, how many marks the hour-hand move ? .....

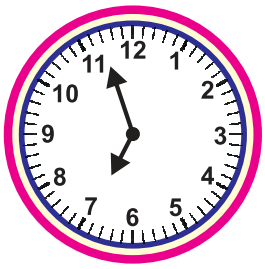
(2) How many marks has the minute-hand to move for the hour-hand to move one mark ? .....

(3) The hour-hand is on 9:00. When the hour-hand moves from 9:00 to 10:00, where does the minute hand reach ? .....

Write the time, shown by picture of each clock, in ☐ given below :

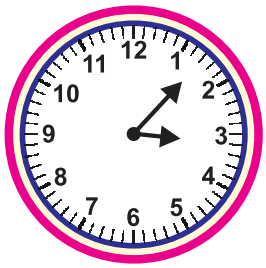


☐ Hours ☐ Minutes



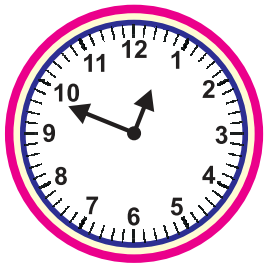
☐ Hours ☐ Minutes

☐ Hours ☐ Minutes



☐ Hours ☐ Minutes

☐ Hours ☐ Minutes



☐ Hours ☐ Minutes

◆ **Activity 5 :**

Help Daksh to convert hours into minutes and vice-versa :

Hours	Minutes
1 hour	60 minutes
2 hours	..... minutes
..... hours	60 × 3 = 180 minutes
4 hours	60 × 4 = ... minutes
5 hours	..... minutes
9 hours	..... minutes
1 hour 10 minutes	60 × 1 + 10 = 70 minutes
3 hours 20 minutes	..... × ..... + ... = ... minutes
2 hours 40 minutes	..... × ..... + ... = ... minutes
5 hours 15 minutes	..... × ..... + ... = ... minutes

Practice 1

1. Answer the following questions :

(1) Convert 90 minutes into hour and minutes.

(2) Convert 2 hours and 30 minutes into minutes.

(3) For how many minutes does the prayer assembly of your school last ?

(4) How many minutes does the long recess of your school have ?

(5) It takes half an hour for Daksh to reach railway station from his home, it means he takes ..... minutes to reach.

2. Answer the following questions :

(1) 160 minutes = ... hours ..... minutes

(2) 210 minutes = ... hours ..... minutes

(3) 255 minutes = ... hours ..... minutes

(4) 3 hours 20 minutes = ... minutes

(5) 5 hours 40 minutes = ... minutes

(6) 2 hours 30 minutes = ... minutes

◆ **Activity 6 :**

Read the bus timetable and write the answers in the given table :

Name of the bus	Departure Time	Time to reach	Duration		Duration (minutes)
			Hr.	Min.	
Ahmedabad to Junagadh	8:00	14:00	6	00	360
Ahmedabad to Surat	7:00	12:00			
Ahmedabad to Vadodara	9:00	11:10			
Ahmedabad to Khedbrahma	13:00	18:50			
Ahmedabad to Vijapur	12:00	13:30			
Ahmedabad to Bhuj	10:00	19:30			
Ahmedabad to Palanpur	12:30	18:30			
Ahmedabad to Jamnagar	10:30	20:30			

Write the answers of the following by oral calculations :

(1) Add : 1 hour 10 minutes and 2 hours 30 minutes : .....

(2) Add : 2 hours 25 minutes and 3 hours 20 minutes : .....

(3) Add : 5 hours 20 minutes and 2 hours 30 minutes : .....

◆ **Activity 7 : Match the following :**

	Clock	Digital clock	Answers
A		(1) 10:35	A : .....
B		(2) 07:30	B : .....
C		(3) 11:30	C : .....
D		(4) 10:00	D : .....
E		(5) 04:07	E : .....