# My Mathematics

## Grade 2

**Publisher**
Government of Nepal
Ministry of Education
**Curriculum Development Centre**

**Publisher:** Government of Nepal
Ministry of Education
**Curriculum Development Centre**
Sanothimi, Bhaktapur

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**First edition : 2050 BS**

**Revised Edition: 2074 Bs**

**Price : 50/-**

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# Preface

With the aim of making school level education more purposeful, behavioral and contextual, a process of continuous revision and reform is adopted by the Curriculum Development Centre (CDC). It is obvious that the curriculum is the core part of teaching-learning process, and the textbooks are major means of implementing school curricula at grassroots level. In accordance with the school curricula, the text books keep on changing with a view to addressing societal needs, demands of learners and modern technology in the field of teaching and learning, especially to foster knowledge, skills and positive attitudes in the students so that we can produce skilful, moral, obedient and globally competent citizens. To accomplish this purpose, an attempt is made to bring this book in the present form.

The contents of "My Mathematics" of grade 2 are presented in two page spread system with clear teaching instructions, pictures and activities. This book (Nepali version) was originally written by Mr. Shambhu Narayan Baidhya and Sungma Tuladhar. Likewise, in accordance with the revised curriculum of primary level, it was revised by Mr. Bhoj Raj Sharma, Mr. Shalik Ram Bhusal, Ms. Christine Stone, Ms. Nirmala Gautam, Mr. Tanka Lal Gaire, Mr. Narayan Prasad Wagley, Mr. Shyam Prasad Acharya, Mr. Maheshwor Nyaupane, and Mr. Surendra KC. Moreover, Dr. Siddhi Prasad Koirala, Dr. Shiva Ram Nyaupane, Mr. Dandapani Sharma, Mr. Dillishwor Pradhan and Mr. Mukund Raj Sharma have also contributed significantly. Art editing and layout concept of this book was done by Shreehari Shrestha by making it four colour. CDC would like to thank all those who contributed in developing this book.

Finally, a textbook is a vital tool of effective teaching learning process in the schools. However, both experienced teachers and inquisitive students can use a number of reference materials and various other resources available in the market to teach and learn a variety of subject matters respectively. Due to lack of different types of reference materials in all schools throughout the country, most of the teaching-learning activities highly depend on the textbooks. In this context, it is expected that the experienced teachers are capable enough to design additional activities as per the demands that usually emerge in the classroom. Moreover, an attempt is made to make this book child friendly by including several motivating teaching-learning activities. Despite our sincere efforts, there may be some mistakes and errors in terms of subject matter, language, presentation style and graphics. In this regard, we definitely expect the constructive suggestions from the teachers, students, parents, readers and other concerned stakeholders to improve the book in its future editions.

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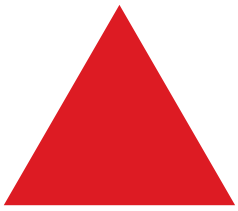
# CONTENTS

# 1 Geometrical Shapes

## Look, read and recognise:

Triangle



Triangles

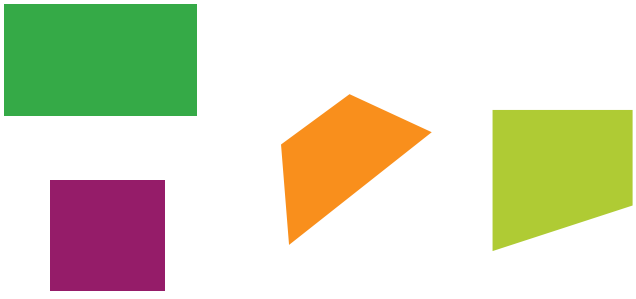
The figures above are three sided. These figures are called triangles.

How many straight lines are there in a triangle? Find

How many corners are there in a triangle? Find.

Quadrilateral

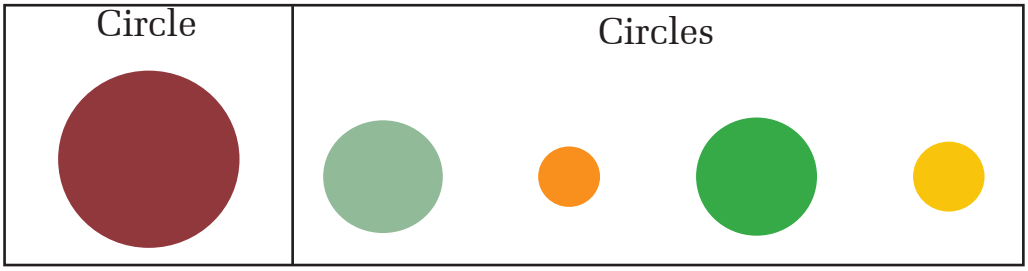
Quadrilaterals



The figures above are four sided. These figures are called quadrilaterals.

How many straight lines are there in a quadrilateral?Find.

How many corners are there in a quadrilateral? Find.

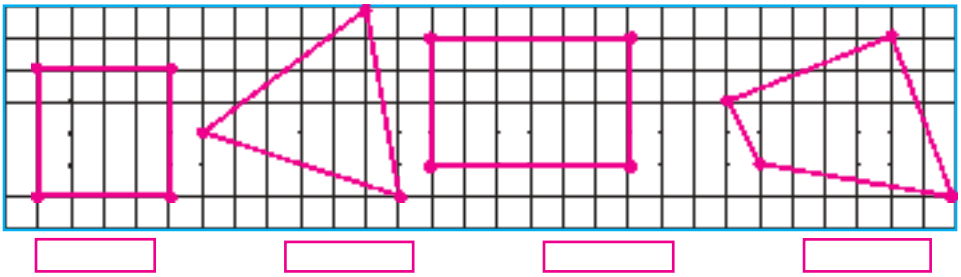



The figures above are round. These figures are called circles.

**Teaching instructions:** 1. Make students draw the circle, triangle and quadrilateral with the help of solid objects like coin, match-box, note-book, book, piece of wood and block of thick paper. 2. Get them to draw different shapes on board or in their exercise books by adding dotted lines and by folding and cutting the paper with scissors.

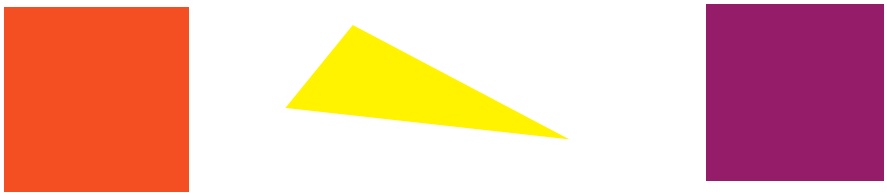
## Exercise

1. **Trace the external boundary of a match-box in your exercise book with the help of a pencil. Then, write the name of the shape.**
2. **Trace the external boundary of a coin (1 or 2 Rs.) in your exercise book with a pencil. Take off the coin and look at the shape. What shape is made now?**
3. **Draw different shapes in your graph sheet as given below and write the name of each shape under it.**



4. **How many straight lines and corners are there in each figure below ? Find out.**

(a) (b) (c)



5. **Draw two triangles,quadrilaterals and circles in your ex ercise book.**
6. **Draw a quadrilateral with the help of your mathematics book.**
7. **What is the shape of the window, door and board in your school?**
8. **Write down how many quadrilaterals there are in the figuresbelow.**

9. **Write down the shape of shaded parts in the following figures.**

(a) (b) (c) (d)

**Teaching instructions:** Ask the students to draw the shapes of wall-clocks that they have seen.

# 2 Solid object and its Shape in Plane Surface

## Look and discuss:

The surface of match box is quadrilateral.

Quadrilateral

## Let's look at the shape of outer lines of the following objects:

1.  Quadrilateral

2.  Triangle

3.  Circle

## Exercise

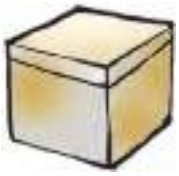
1. **Identify the shape of the shaded parts in plane surface in the following solid objects and write their name:**

2. **Draw triangle, quadrilateral and circle without using solid object.**

**Teaching instructions:**

1. Ask the students to draw the external boundary of different solid objects like; coin, match-box, note-copy, book, piece of wood and block of thick paper.
2. Then, get the students to say and write the name of the shapes.

3. Write the name of the circular surfaced objects availabe in your home.
4. Write the name of the quadrilateral surfaced objects available in your home.
5. Write the name of the triangular surfaced objects available in your home.
6. Draw a circle using a coin.
7. Write the shape of the upper surface of the following figures:

(a) 
(b) 
(c) 

(d) 
(e) 

(f) 

## Review exercise

1. Tick (√) for true and cross (x) for the false statements:

(a) A triangle is made up of three straight lines.

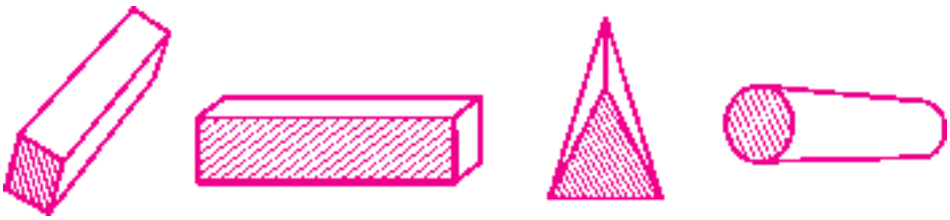
(b) A triangle has two corners.

(c) A quadrilateral has four corners.

(d) The shape of a brick is circular.

2. **Draw a circle with the help of a glass.**

3. **Write the shape of the shaded parts in the following solid objects.**

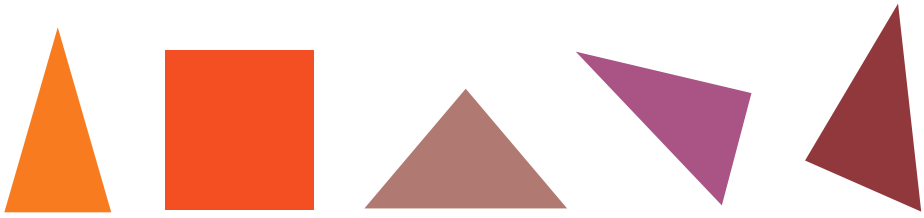


..... ..... ..... .....

4. **Draw two quadrilaterals, triangles and circles in your exercise book.**

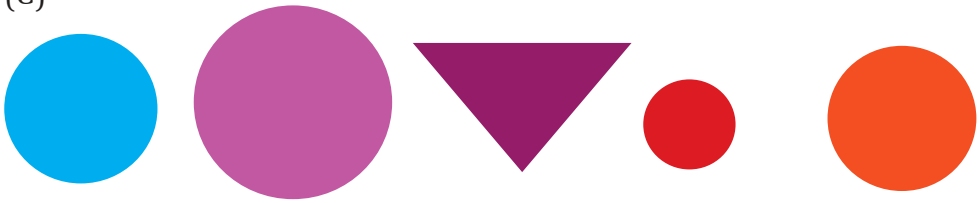
5. **Identify the odd shape and draw it in your exercise book.**

(a)



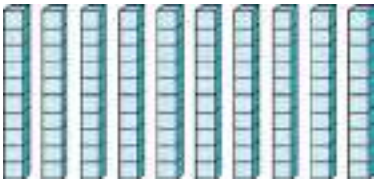
(b)

(c)

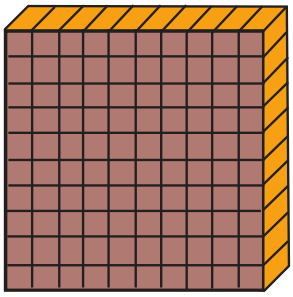


# 3 Numbers upto Thousands

**Count, read, learn and write in your exercise book:**



10 Tens



1 Hundred = 100

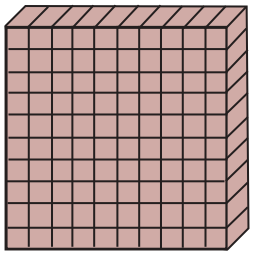
| | | |
|---|---|---|
| 100 and 1 = 101 | 100 and 2 = 102 | 100 and 3 = 103 |
| 100 and 4 = | 100 and 5 = | 100 and 6 = |
| 100 and 7 = | 100 and 8 = | 100 and 9 = |
| 100 and 10 = 110 | 100 and 14 = | 100 and 18 = |
| 100 and 11 = | 100 and 15 = | 100 and 19 = |
| 100 and 12 = | 100 and 16 = | 100 and 20 = |
| 100 and 13 = | 100 and 17 = | |
| 100 and 22 = 122 | 100 and 31 = 131 | 100 and 81 = 181 |

**Teaching instructions:**

Involve the students in activities and exercises on already learnt number system in grade one. Make the students change the name and number to each other. Then teach numbers upto 1000 that will be the teaching based on prior knowledge. Give the concept of counting 100 to 1000 with the help of local materials like stick, charts, block etc. and teach them to write in numbers.

## Numbers of hundreds

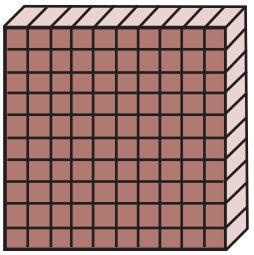
Count, read and write the numbers of hundreds in your exercise book.



100

1 hundred = 100

One hundred

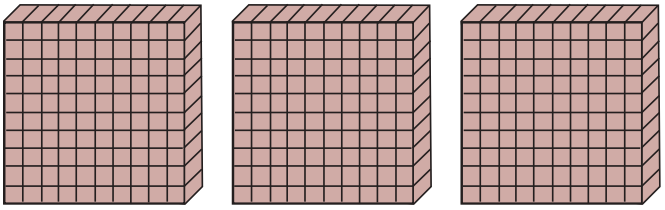


100 + 100

2 hundreds = 200

Two hundreds

| Hundred | Tens | Ones |
|---|---|---|
| 2 | 0 | 0 |



100 + 100 + 100

| Hundred | Tens | Ones |
|---|---|---|
| 2 | 0 | 0 |

3 hundred = 300 (Three hundred)

### Exercise

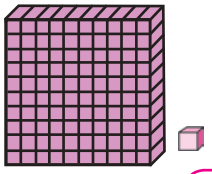
**Fill in the blanks with the appropriate number.**

| | | | | | |
|---|---|---|---|---|---|
| one hundred | = | 100 | six hundreds | = | |
| two hundreds | = | | seven hundreds | = | |
| three hundreds | = | | eight hundreds | = | |
| four hundreds | = | | nine hundreds | = | |
| five hundreds | = | | one thousands | = | |

100 200 300 400 500

# Numbers up to thousand (In figure and words)

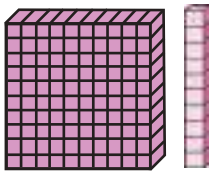
## Count, read and write in your exercise book:



| Hundred | Tens | Ones |
|---|---|---|
| 1 | 0 | 1 |

100 + 1 = 101

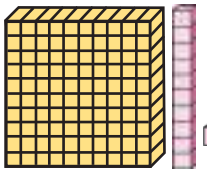
one hundred one



| Hundred | Tens | Ones |
|---|---|---|
| 1 | 0 | 1 |

100 + 10 = 110

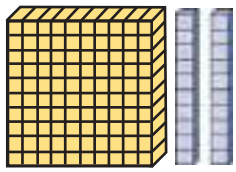
one hundred ten



| Hundred | Tens | Ones |
|---|---|---|
| 1 | 1 | 1 |

100 + 10 + 1 = 111

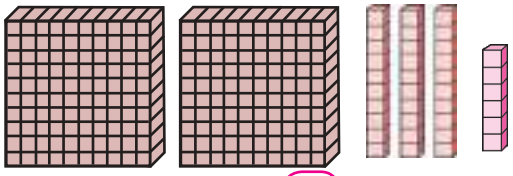
one hundred eleven



| Hundred | Tens | Ones |
|---|---|---|
| 1 | 2 | 0 |

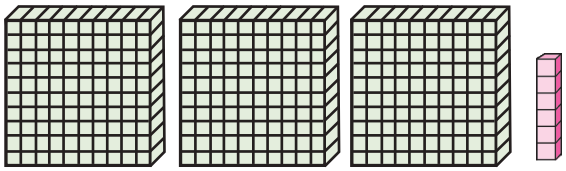
100 + 20 = 120

one hundred twenty



| Hundred | Tens | Ones |
|---|---|---|
| 2 | 3 | 6 |

200 + 30 + 6 = two hundreds thirty six



| Hundred | Tens | Ones |
|---|---|---|
| 3 | 0 | 6 |

300 + 6 = three hundreds six

## Exercise

### 1. Write the following numbers in words:

105, 108, 198, 200, 249, 360, 415, 578, 970

***Teaching instructions:***

Teach students to write the numbers up to 1000 and their number name as mentioned above by using the local materials such as stick, chart, block, etc.

**2. Recognise the following numerals in numbers and in words names. Write in your exercise book and read.**

| | | | |
|---|---|---|---|
| 101 | one hundred and one | 111 | one hundred and eleven |
| 102 | one hundred and two | 112 | |
| 103 | | 113 | |
| 104 | | 114 | |
| 105 | | 115 | |
| 106 | | 116 | |
| 107 | | 117 | |
| 108 | | 118 | |
| 109 | | 119 | |
| 110 | one hundred and ten | 120 | |

**3. Write the numbers 121 to 200 in words as given in question 2.**

**4. Write the following numbers in words.**

Example : 503 = Five hundred and three

(a) 136 (b) 207 (c) 308 (d) 509

(e) 777 (f) 888 (g) 999 (h) 283

**5. Write the number for the following number names.**

Example : Five hundred and seventy = 570

(a) One hundred and sixty (b) Three hundred and eleven

(c) Five hundreds and fifty (d) Six hundred and fifty-five

(e) Seven hundreds and twelve

(f) Eight hundreds and seventy-one

(g) One hundred and eleven

(h) Two hundreds and twenty-two

(i) Five hundreds and three

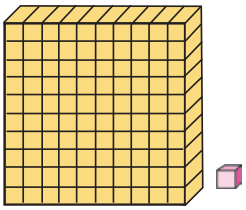
---

**Teaching instructions:** Make the students write, read and count the numbers up to 1000 as given above.

# 4 Hindu-Arabic Numbers up to Thousand

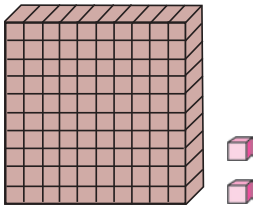
## Hindu-Arabic numerals:

1 2 3 4 5 6 7 8 9 10 .....



100 and 1 = 101

one hundred and one



100 and 2 = 102

one hundred and two

## Read, recognise and learn.

### Number and Number Name

| | | | |
|---|---|---|---|
| 101 | one hundred and one | 111 | one hundred and eleven |
| 102 | one hundred and two | 112 | one hundred and twelve |
| 103 | one hundred and three | 113 | one hundred and thirteen |
| 104 | one hundred and four | 114 | one hundred and fourteen |
| 105 | one hundred and five | 115 | one hundred and fifteen |
| 106 | one hundred and six | 116 | one hundred and sixteen |
| 107 | one hundred and seven | 117 | one hundred and seventeen |
| 108 | one hundred and eight | 118 | one hundred and eighteen |
| 109 | one hundred and nine | 119 | one hundred and ninenteen |
| 110 | one hundred and ten | 120 | one hundred and twenty |

**Teaching instructions:** Make the students recognise, read and write the numbers and number names upto 1,000.

## Exercise

**1. Fill in the blank spaces with number in figure or in words.**

| Number | Number Name |
|---|---|
| 121 | one hundred and twenty -one |
| 129 | one hundred and twenty-nine |
| | one hundred and thirty-three |
| 138 | one hundred and thirty-eight |
| 141 | |
| | one hundred and fifty-seven |
| 166 | one hundred and sixty-six |
| 170 | one hundred and seventy |
| 182 | |
| 199 | one hundred and ninety-nine |
| 200 | two hundred |

**2. Write the number from 201 to 500 in figure and words as given in question 1.**

**3. Fill in the blank with the appropriate number in order:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 991 | | | | | | | | | 1000 |
| 545 | 546 | | | | | | | | |
| 700 | 701 | | | | | | | | |

**(a) Write the following numbers in words.**

**Example: 112 = one hundred and twelve**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (a) | 136 | (b) | 205 | (c) | 160 | (d) | 711 |
| (e) | 317 | (f) | 111 | (g) | 222 | (h) | 999 |
| (i) | 339 | (j) | 109 | (k) | 225 | (l) | 129 |
| (m) | 916 | (n) | 179 | (o) | 320 | (p) | 627 |

**(b) Write the numerals for the following number names.**

**Example :** five hundred and six = 506

(a) one hundred and ninety
(b) three hundred
(c) six hundred and two
(d) seven hundred and ten
(e) five hundred and eighty six
(f) two hundred and seventeen
(g) three hundred and seven
(h) eight hundred and sixty six

**(c) Write down in Devnagari.**

**Example : 350 = ३५०**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (a) | 360 | (b) | 309 | (c) | 555 | (d) | 537 |
| (e) | 137 | (f) | 645 | (g) | 189 | (h) | 139 |

**(d) Write down in Hindu-Arabic.**

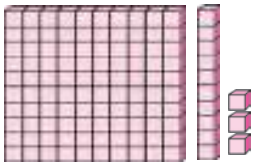
**Example :** ६२८ = 628

| | | | |
|---|---|---|---|
| (a) ३१५ | (b) ५५५ | (c) १३७ | (d) ९३६ |
| (e) २४८ | (f) ६३९ | (g) ७७७ | (h) ८१५ |

**(e) Count the numbers of students in your class and write in Hindu-Arabic number.**

# 5 Place Value of Three Digit Numbers

## Look, read and learn:

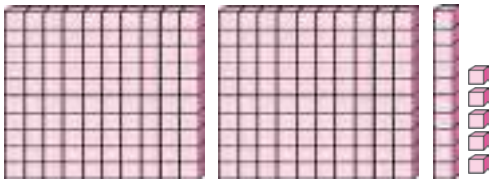


Place value table

| Hundred | Tens | Ones |
|---|---|---|
| 1 | 1 | 3 |

100 + 10 + 3

113 one hundred and thirteen



Place value table

| Hundred | Tens | Ones |
|---|---|---|
| 2 | 1 | 5 |

200 + 10 + 5

215 two hundred and fifteen

## Exercise

**1. Write numbers and number names for the numerals given in place value table.**

**Example:**

| Hundred | Tens | Ones |
|---|---|---|
| 2 | 5 | 1 |

251 = two hundred fifty-one

| Hundred | Tens | Ones |
|---|---|---|
| 3 | 0 | 0 |

| Hundred | Tens | Ones |
|---|---|---|
| 3 | 8 | 5 |

| Hundred | Tens | Ones |
|---|---|---|
| 6 | 7 | 2 |

| Hundred | Tens | Ones |
|---|---|---|
| 9 | 2 | 1 |

| Hundred | Tens | Ones |
|---|---|---|
| 7 | 8 | 9 |

| Hundred | Tens | Ones |
|---|---|---|
| 4 | 6 | 1 |

**Teaching instructions:** Give the knowledge of place value of numbers by using Abacus, stick, block, etc.

**2. Put the following numerals in place value table and also write them in words as shown in the example.**

Example : 231

| Hundred | Tens | Ones |
|---|---|---|
| 2 | 3 | 1 |

two hundred and thirty-one

(a) 400 (b) 333 (c) 284

(d) 382 (e) 699 (f) 567

(g) 914 (h) 899 (i) 900

**3. Copy in your exercise book and write the number in the place of hundred as shown in the example.**

Example : 365 3

(a) 565 (b) 376 (c) 251

(d) 655 (e) 741 (f) 821

**4. Write the number in the place of tens as shown in the example.**

Example 451 5

(a) 213 (b) 463 (c) 584

(d) 673 (e) 671 (f) 992

**5. Write the number in the place of ones in your exercise book as shown in the example.**

Example : 764 4

(a) 115 (b) 346 (c) 411

(d) 678 (e) 879 (f) 287

**6. Write the place value of the circled digits as shown in the example.**

Example : (2) 0 7 hundred

(a) 2 (5) 3 (b) (1) 0 6 (c) 2 6 (0)

# 6 Order of Numbers

## Numbers that come just after, just before and between the numbers

**Read and learn:**

| 101 | 102 | 103 | 104 | 106 | 106 | 107 | 108 | 109 |
|---|---|---|---|---|---|---|---|---|

Which number comes just after 105 ?

106 comes just after 105.

Which number comes just before 105?

104 comes just before 105.

Which number lies between 104 and 106?

105 lies between 104 and 106.

### Exercise

**1. Write the number that comes after the given numbers.**

(a) 201 (b) 359 (c) 876 (d) 735

(e) 617 (f) 560 (g) 800 (h) 999

**2. Write the number that comes just before the given numbers.**

(a) 192 (b) 564 (c) 875 (d) 651

(e) 217 (f) 431 (g) 705 (h) 939

**3. Copy in your exercise book and write the number that lies between the given numbers.**

(a) 198 200 (b) 337 339 (c) 559 561

(d) 620 622 (e) 703 705 (f) 447 449

## Smallest and greatest numbers

### Find out the greatest and the smallest numbers.

**536 312 784**

First, let's look the numbers in the place of hundreds.

7 is the greatest number in 5, 3 and 7. So, 784 is the greatest number.

3 is the smallest number in 5, 3 and 7. So, 312 is the smallest number.

### Find out the greatest and the smallest numbers:

**632 645 675**

The numbers in hundreds place are equal.

If so, let's look the numbers of tens place.

7 is the greatest number in 3, 4 and 7. So, 675 is the greatest number.

3 is the smallest number in 3, 4 and 7. So, 632 is the smallest

**Teaching instructions:** Give the concept of the number that comes just after, just before and between together with the concept of counting of the numbers and make them practise more as above.

## Find out the greatest and the smallest numbers.

**375 372 378**


8 is the greatest number in 5, 2 and 8. So, 378 is the largest number.

2 is the smallest number in 5, 2 and 8. So, 372 is the smallest number.

### Exercise

**1. Copy the following numbers in your exercise book and encircle ◯ the greatest number.**

Example : 731 (825) 107

(a) 215 107 205 (b) 802 300 504

(c) 411 212 387 (d) 515 518 517

**2. Copy the following numbers in your exercise book and encircle ◯ the smallest number.**

Example : 731 825 (107)

(a) 217 318 419 (b) 504 507 511

(c) 118 217 319 (d) 103 207 108

**3. Write the smallest and the greatest numbers.**

Example : 731 825 107

The smallest number = 107

The largest number = 825

a) 741 625 315 (b) 501 601 701

(c) 218 309 120 (d) 130 208 108

## Descending and ascending order

### Read and learn:

**Let's write the following numbers in order.**

318 207 405

Here, the smallest number is 207.

The greatest number is 405.

While writing these numbers in ascending order.

| 207 | 318 | 405 |
|---|---|---|

Smallest number Greatest number

Similarly, while writing 318 207 405 in descending order.

| 405 | 318 | 207 |
|---|---|---|

The greatest number is 405. The smallest number is 207.

### Exercise

**1. Copy the following numbers in your exercise book and put them in ascending order.**

Example: 207 662 503 ⇨ 207 503 622

(a) 105 207 308 (b) 616 218 728

**2. Copy the following numbers in your exercise book and put them in descending order.**

Example: 317 208 505 ⇨ 505 317 208

(a) 135 207 105 (b) 636 638 637

**Teaching instructions:** Give the concept of the number that comes just after, just before and between together with the concept of counting of the numbers. Besides this, give additional exercises as above for practice.

# 7 Comparison of Numbers

## Use of symbols (<, = and >) smaller than, equal to and greater than

**Read and learn:**

Which is greater 6 or 8 ? 8 is greater. So, 8 > 6.

Which is smaller 28 or 23 ? 23 is smaller. So, 23 < 28.

Which one is greater, 524 or 425 ?
Let's see in the place value table:

| Hundreds | Tens | Ones |
|---|---|---|
| 5 | 2 | 4 |

= 524

| Hundreds | Tens | Ones |
|---|---|---|
| 4 | 2 | 5 |

= 425

**First, let's look at the digits in the place of hundreds.**

5 is greater than 4
5 > 4

So, 524 > 425

**Which is smaller 203 or 511 ? Let's put in place value table,**

| Hundreds | Tens | Ones |
|---|---|---|
| 2 | 0 | 3 |

= 203

| Hundreds | Tens | Ones |
|---|---|---|
| 5 | 1 | 1 |

= 511

2 is smaller than 5
2 < 5

So, 203 < 511

**Let's compare 619 and 657.**

The numbers in the place of hundred are equal.

1 is smaller than 5
$1 < 5$

Now, let's see the digits in tens place.

So, $619 < 657$

**Let's compare 718 and 715:**

The numbers in the place of hundreds and tens are equal. What to do?

8 is greater than 5.
$8 > 5$

Now, let's see the numbers in ones place.

So, $718 > 715$

Let's see 531 and 531.
The numbers in the place of hundreds, tens and ones are equal.

So, 531 and 531 are equal. $531 = 531$

## Exercise

**1. Copy in your exercise book and put the appropriate symbol in the box (<, >):**

**2. Example :** 9 [>] 7, 98 [<] 99

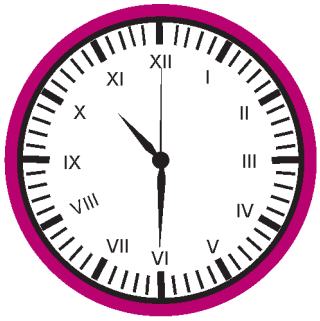
(a) 621 [ ] 680 (b) 140 [ ] 146

(c) 384 [ ] 438 (d) 758 [ ] 240

# 8 Roman Numerals

**Read and recognize the Roman numerals:**

| Devnagari Numerals | Hindu-Arabic numerals | Roman Numerals |
|---|---|---|
| १ | 1 | I |
| २ | 2 | II |
| ३ | 3 | III |
| ४ | 4 | IV |
| ५ | 5 | V |
| ६ | 6 | VI |
| ७ | 7 | VII |
| ८ | 8 | VIII |
| ९ | 9 | IX |
| १० | 10 | X |
| ११ | 11 | XI |
| १२ | 12 | XII |




## Exercise

1. **Write the numbers 1 to 12 in Roman numerals.**
2. **Copy the given table in your exercise book and put the correct Roman numerals in the box.**

| | | III | | V | | | | IX | |
|---|---|---|---|---|---|---|---|---|---|

3. **Write the following Roman numerals in Hindu-Arabic**

**Example :** IV = 4

(a) VII (b) VI (c) IV (d) IX (e) X (f) I

(g) VII (h) II (i) III (j) XI (k) XII (l) V

**4. Write the following numbers in Roman numerals:**

(a) 5 (b) 7 (c) 8 (d) 9

(e) 12 (f) 11 (g) 4 (h) 3

**5. Write the following numbers in Roman numerals.**

(a) ५ (b) ७ (c) ८ (d) ११

(e) १२ (f) १० (g) २ (h) १

6. Write the following Roman numerals in Devnagari:

(a) II (b) VI (c) VII (d) I

(e) XI (f) IV (g) III (h) V

## Review Exercsie

**1. Write the numbers 250 to 300 and put them in words.**

**2. Write the following number in Devnagari and Hindu Arabic.**

(a) Three hundreds and eighty-seven

(b) Five hundreds and seventy-five

(c) One thousand

(d) Two hundreds and seven

**3. Write in English.**

(a) 277 (b) 888 (c) 996 (d) 627

**4. Write in both Nepali and English.**

(a) 561 (b) 801 (c) 320 (d) 280

**5. Write in both Devnagari and Hindu-Arabic numerals:**

(a) six hundred

(b) four hundred and one

(c) seven hundred and eighty-six

(d) eight hundred and twenty-one

**6. Write in Devnagari.**

(a) 238 (b) 380 (c) 796 (d) 909

**7. Write the following Devnagari numerals in Hindu-Arabic.**

(a) २५३ (b) १०५ (c) २९१ (d) ८७१

(e) Match the followings.

| | | |
|---|---|---|
| ५ | 4 | X |
| ४ | 6 | V |
| १ | 2 | IX |
| ३ | 5 | VII |
| २ | 3 | IV |
| ७ | 1 | III |
| ९ | 9 | VI |
| १० | 7 | II |
| ६ | 8 | XI |
| ८ | 10 | VIII |
| १२ | 11 | XII |
| ११ | 12 | I |

**8. Write the number to represent the place value table.**

**Example:**

| Hundred | Tens | Ones |
|---|---|---|
| 5 | 2 | 0 |

520

| Hundred | Tens | Ones |
|---|---|---|
| 5 | 2 | 0 |

| Hundred | Tens | Ones |
|---|---|---|
| 5 | 2 | 0 |

| Hundred | Tens | Ones |
|---|---|---|
| 5 | 2 | 0 |

**9. Write the following numbers in place value table:**

(a) 388 (b) 105 (c) 836 (d) 211

**10. Write the place value of the encircled digits in the following numbers.**

(a) (5) 8 0 ☐ (b) (3) 4 4 ☐ (c) 5 1 (1) ☐

(d) 7 3 (7) ☐ (e) 2 (0) 8 ☐ (f) (9) 5 9 ☐

**11. Copy the table in your exercise copy and put correct numbers in the blank boxes in ascending order:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 801 | | | 804 | | | 807 | | | 810 |
| | 812 | | | 815 | | | 818 | | |
| | | | | 825 | | | | | 830 |
| | | | 834 | | | | 838 | | |
| 841 | | | | 845 | | | 848 | | |
| | 852 | | | | 856 | | | | 860 |
| | | 863 | | | | 867 | | | 870 |
| | | | 874 | | | 877 | | | |
| | | | | 885 | | | 888 | | 890 |
| | 892 | | 894 | | 896 | | | | 900 |

**12. Write the numbers from 701 to 800 in your exercise book:**

**13. Copy in your exercise book and put the symbols (< = or >) in the boxes:**

(a) 31 ☐ 25 (b) 826 ☐ 715

(c) 420 ☐ 432 (e) 563 ☐ 563

**14. Copy in your exercise book and put circle in the smallest number and rectangle in the greatest number:**

(a) 129 125 123 (b) 871 971 771

(c) 826 727 126 (d) 175 228 331

**15. Copy the following numbers in your exercise book and put them in ascending order.**

(a) 373, 278, 179 (b) 421, 425, 420

(c) 826, 879, 180 (d) 169, 237, 380

(e) 999, 818, 205 (f) 737, 284, 521

**16. Copy the following numbers in your exercise book and put them in descending order.**

(a) 437, 528, 407 (b) 831, 207, 119

(c) 773, 775, 770 (d) 251, 283, 279

(e) 641, 321, 715 (e) 339, 263, 177

**17. Write the following Devnagari numbers in Roman numerals.**

(a) ७ (b) ५ (c) ८ (d) १०

(e) १२ (f) ४ (g) ३ (h) २

**18. Write the following Hindu-Arabic Numerals in Roman numerals.**

(a) 5 (b) 3 (c) 7 (d) 8

(e) 9 (f) 10 (g) 11 (h) 12

**19. Write down the following Roman numerals in Devnagari.**

(a) X (b) IX (c) XII

(d) I (e) IV (f) V

**20. Write down the following Roman numerals in Hindu-Arabic numerals.**

(a) IX (b) XII (c) VII

(d) II (e) III (f) VI

# 9 Sets

## Sets and their members

**Look and discuss:**

Set of books

Set of fruits

1. **Can you choose the similar objects and form three groups from the following objects ? How many members are there in each group? Discuss and say.**

Write the groups in your exercise book.

Discuss whether you can form more groups.

2. **Divide the girls of your class into two groups, who put on ribbon and don't. Tell the name of the girls of each group.**

**Teaching instructions:** Mix the objects of different characteristics and give to the students. Then ask them to say one of their characteristics. On the basis of same characteristics, tell them to form the group of things .

## Exercise

**1. Match the objects given above with the following sets.**

(a) Set of fruits

(b) Set of vegetables

(c) Set of utensils

(d) Set of objects that are put on feet

(e) Write down the number and name of the members of each group.

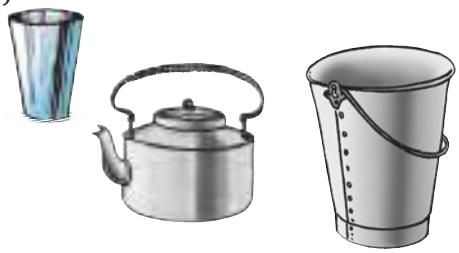
**2. Discuss on the sets given below and tell the name of the sets.**

(a)

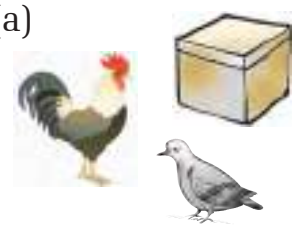
(b)

(c)

(d)



**3. Find the odd object in the following collection.**

(a) 

(b) 

(c) 

**4. Find the odd number in the following sets.**

(a) **1, 2, 3, 4, 5, 10, 6**

(b) **10, 20, 30, 40, 13, 50**

(c) **2, 4, 6, 8, 9, 10, 12**

**5. Tell the five members of each set in the following sets.**

(a) Set of birds found in jungle

(b) Set of domestic animals

(c) Set of objects in kitchen

(d) Set of grains

(e) Set of numbers in multiplication table of 2

(f) Set of numbers between 25 and 35.

**6. Look at the numbers inside the circle and answer the following questions.**

**15 14 46 48 41 16**
**42 18 19 45 44**

(a) Form a set of numbers 10 and 20.

(b) Form a set of numbers 40 and 50.

**Teaching instructions:** Have a discussion on set with the help of pictures and problems as given in exercise and develop the concept in the students that a set has the members with same qualities or the objects with similar qualities form a set.

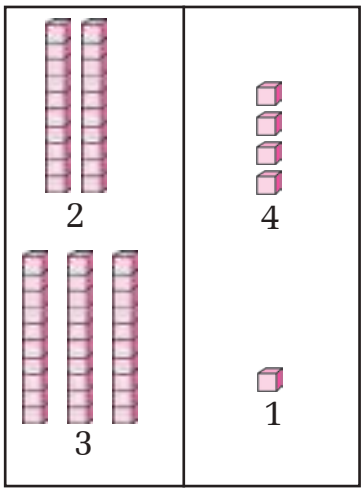
# 10 Addition

## Read, count and learn addition:

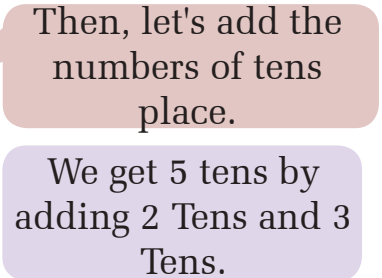
**Add:**

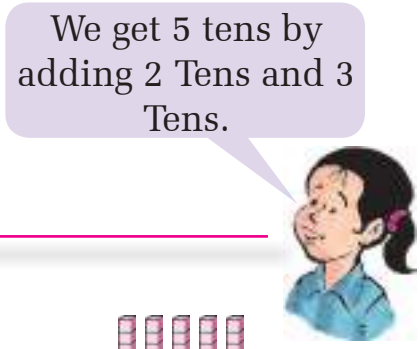
| | |
|---|---|
| | 2 4 |
| + | 3 1 |
| | |

| Tens | Ones |
|---|---|
| 2 | 3 |
| + 3 | 1 |
| | |





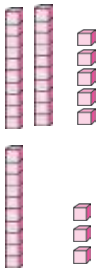

| | Tens | Ones |
|---|---|---|
| | 2 | 4 |
| + | 3 | 1 |
| | 5 | 5 |

## Exercise

**1. Add.**

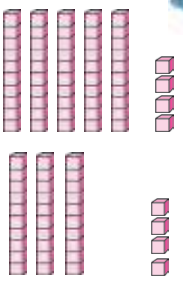
(a)

| | Tens | Ones |
|---|---|---|
| | 2 | 5 |
| + | 1 | 3 |
| | | |



(b)

| | Tens | Ones |
|---|---|---|
| | 5 | 4 |
| + | 3 | 4 |
| | | |



**Teaching instructions:** Make additional problems like in the exercise and let the students practice.

## Observe the given examples and learn to add

### Example

**Add:**

| Hundreds | Tens | Ones |
|---|---|---|
| 4 | 3 | 5 |
| + 4 | 6 | 2 |
| 8 | 9 | 7 |

First, let's add the numbers of ones place. 5 + 2 = 7

Second, let's add the numbers at tens place. 3 + 6 = 9

Finally, add the numbers at hundreds place. 4 + 4 = 8

### Exercise

**1. Add the following by using place value table.**

(a)

| Tens | Ones |
|---|---|
| 5 | 3 |
| + 2 | 6 |
| | |

(b)

| Tens | Ones |
|---|---|
| 3 | 4 |
| + 5 | 5 |
| | |

(c)

| Tens | Ones |
|---|---|
| 6 | 2 |
| + 1 | 6 |
| | |

(d)

| Hundreds | Tens | Ones |
|---|---|---|
| 1 | 1 | 2 |
| + 5 | 3 | 1 |
| | | |

(e)

| Hundreds | Tens | Ones |
|---|---|---|
| 5 | 1 | 1 |
| + 2 | 3 | 4 |
| | | |

(f)

| Hundreds | Tens | Ones |
|---|---|---|
| 2 | 1 | 2 |
| + 3 | 5 | 7 |
| | | |

(d)

| Hundreds | Tens | Ones |
|---|---|---|
| 2 | 5 | 6 |
| + 5 | 4 | 0 |
| | | |

(e)

| Hundreds | Tens | Ones |
|---|---|---|
| 1 | 2 | 4 |
| + 5 | 3 | 1 |
| | | |

(f)

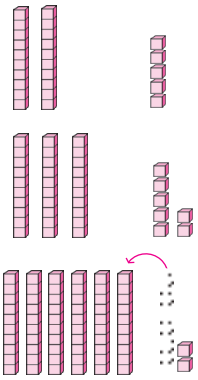
| Hundreds | Tens | Ones |
|---|---|---|
| 2 | 7 | 1 |
| + 3 | 2 | 5 |
| | | |

## Addition with carryover

### Look at the addition below, discuss and learn:

**Add by using the place value table.**

| | Tens | Ones |
|---|---|---|
| | 2 | 5 |
| + | 3 | 7 |
| | 5 | 12 |
| | 6 | 2 |



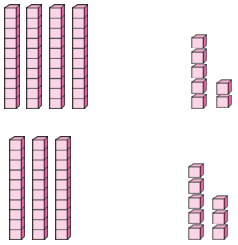
Add the number at ones place. We get 12 ones. It means one tens and two ones.

Now, add the 2 ones and 3 ones of tens place. We get 5 tens. Add one tens and write 6.

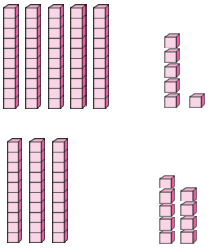
### Exercise

**Add.**

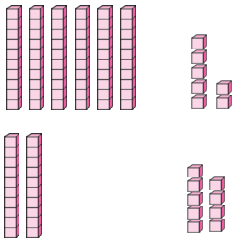
(a) 4 7 + 3 8



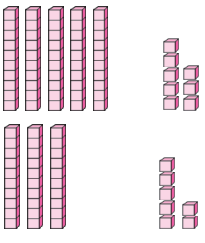
(b) 5 6 + 3 9



(a) 6 7 + 2 9



(b) 5 8 + 3 7



## Observe the following examples and learn to add.

### Add the following by using the place value table:

Example:

| Tens | Ones |
|---|---|
| 4 | 7 |
| + 2 | 9 |
| 6 ⟵ 1 | 6 |
| 7 | 6 |

7 one and 9 one = 16 ones

16 one = 1 ten and 6 one

| Tens | Ones |
|---|---|
| 2 | 9 |
| 3 | 2 |
| + 2 | 7 |
| 7 ⟵ 1 | 8 |
| 8 | 8 |

### Exercise

**1. Solve the following sums.**

(a)

| Tens | Ones |
|---|---|
| 5 | 7 |
| + 3 | 8 |

(b)

| Tens | Ones |
|---|---|
| 3 | 6 |
| + 5 | 8 |

(c)

| Tens | Ones |
|---|---|
| 2 | 8 |
| 3 | 7 |
| + 1 | 6 |

(d)

| Tens | Ones |
|---|---|
| 3 | 7 |
| 2 | 4 |
| + 1 | 6 |

## Observe the following examples and learn to add.

Example: (a)

| | | |
|---|---|---|
| 1 | 6 | 3 |
| + | 4 | 2 6 |
| 5 | 8 | 9 |

(b)

| | | |
|---|---|---|
| 2 | 3 | 5 |
| 1 | 4 | 0 |
| + | 5 | 0 3 |
| 8 | 7 | 8 |

**1. Solve the following sums.**

(a)

| | | |
|---|---|---|
| 5 | 6 | 3 |
| + 2 | 1 | 4 |

(b)

| | | |
|---|---|---|
| 7 | 4 | 7 |
| 1 | 1 | 1 |
| + 1 | 2 | 0 |

(c)

| | | |
|---|---|---|
| 2 | 2 | 1 |
| 3 | 0 | 2 |
| + 1 | 5 | 6 |

**Teaching instructions:** Make the students practise by giving additional problems as given in the exercise.

## Verbal problems on addition

### Read and learn to add:

**Example:**

**(a) Rita's mother has given her Rs. 39 and her father has given her Rs. 58. How much money does Rita have?**

Answer: Money given by mother = Rs. 39

Money given by father = Rs. 58

Therefore, Rita has total = Rs. 97.

| |
|---|
| Rs. 39 |
| + Rs. 58 |
| Rs. 97 |

**(b) A fruit seller sells 235 apples, 321 mangoes and 122 oranges in a day. How many fruits does he sell?**

Answer: Number of apples = 235

Number of mangoes = 321

number of oranges = 122

Therefore, he sells 678 fruits.

| |
|---|
| 2 3 5 |
| 3 2 1 |
| + 1 2 2 |
| 6 7 8 |

### Exercise

**1. One pen costs Rs. 45 and one book costs Rs. 23. Find the cost of both pen and book together.**

Answer: Price of pen = Rs

Price of book = Rs

Total price of pen and book is Rs

**Teaching instructions:** Help the students understand in their own language. Let them write in mathematical language and solve with problem solving method.

**(b) There were 50 mangoes in one basket and 35 in another. How many mangoes were there in two baskets?**

**Solution :**

Mangoes in first basket =

Mangoes in second basket =

Total mangoes =

The number of mangoes kept together in one are

**(c) There are 26 goats in a pen and 89 in another pen. How many goats will be there when they are kept together?**

**Solution :**

Goats in the first pen =

Goats in the second pen =

Total goats =

The numbers of goats together in one are

**(d) How many oranges will be there when 37 oranges from one tree and 59 from another tree are collected in one place?**

**Solution:**

Oranges of first tree =

Oranges of another tree =

Total number of oranges =

Oranges in one place are

**(e) Krishna bought a pen in Rs. 23, an exercise book in Rs. 15 and a book in Rs.51. How much money did he spend in total?**

Cost of a pen = Rs. ____

Cost of a copy = Rs. ____

Cost of a book = Rs. ____

Total cost = Rs. ____

In total, Krishna spent Rs. ____

**(f) In a cupboard, there are 25 books of English, 41 books of mathematics and 33 books of other subjects. How many books are there ?**

English books = ____

Mathematics books = ____

Other books = ____

Total books = ____

There were ____ books in a cupboard.

**(g) Fill in the blank spaces with correct number.**

1. ____ + 23 = 23 + 32
2. 37 + 49 = ____ + 37
3. ____ + 62 = ____ + 47

# 11 Subtraction

## Subtraction of three digit numbers

### Look, read and learn:

| Hundreds | Tens | Ones |
|---|---|---|
| 4 | 7 | 6 |
| 2 | 4 | 3 |
| 2 | 3 | 3 |

First, subtract the number of ones place from the number of ones place.

$$\begin{array}{r} 6 \\ -3 \\ \hline 3 \end{array}$$

Then, subtract the number of tens place from the number of tens place.

$$\begin{array}{r} 7 \\ -4 \\ \hline 3 \end{array}$$

And then, subtract the number of hundreds place from hundred place.

$$\begin{array}{r} 4 \\ -2 \\ \hline 2 \end{array}$$

### Example:

$$\begin{array}{r} 865 \\ -\ 241 \\ \hline 624 \end{array}$$

$$\begin{array}{r} 8 \\ -2 \\ \hline 6 \end{array} \qquad \begin{array}{r} 6 \\ -4 \\ \hline 2 \end{array} \qquad \begin{array}{r} 5 \\ -1 \\ \hline 4 \end{array}$$

### Exercise

**1. Subtract:**

(d)

| Tens | Ones |
|---|---|
| 7 | 6 |
| – 3 | 4 |
| | |

(e)

| Hundreds | Tens | Ones |
|---|---|---|
| 6 | 9 | 7 |
| – 4 | 5 | 2 |
| | | |

(f)

| Hundreds | Tens | Ones |
|---|---|---|
| 7 | 9 | 6 |
| – 6 | 6 | 3 |
| | | |

(d)

| Hundreds | Tens | Ones |
|---|---|---|
| 5 | 9 | 8 |
| – 2 | 7 | 0 |
| | | |

(e)

| Hundreds | Tens | Ones |
|---|---|---|
| 9 | 7 | 6 |
| – 6 | 0 | 4 |
| | | |

(f)

| Hundreds | Tens | Ones |
|---|---|---|
| 6 | 8 | 9 |
| – 1 | 7 | 2 |
| | | |

## Subtraction with borrowing

### Look at the examples below and learn:

| Tens | Ones |
|---|---|
| 4 | 3 |
| –2 | 7 |

7 ones cannot be subtracted from 3 ones

| Tens | Ones |
|---|---|
| 3 | 13 |
| ~~4~~ | ~~3~~ |
| – 2 | 7 |

One ten means ten one. There will be 13 while borrowing one ten from four tens.

| Tens | Ones |
|---|---|
| 3 | 13 |
| ~~4~~ | ~~3~~ |
| – 2 | 7 |
| 1 | 6 |

There will be six ones while subtracting seven ones from 13. Then, there remains only 3 tens in tens place. So there will be one ten while subtracting 2 tens from 3 tens.

### Exercise

### 1. Subtract:

(a)

| Tens | Ones |
|---|---|
| 7 | 3 |
| — 2 | 8 |

(b)

| Tens | Ones |
|---|---|
| 8 | 6 |
| — 5 | 4 |

(c)

| Tens | Ones |
|---|---|
| 6 | 5 |
| — 3 | 7 |

(d)

| Tens | Ones |
|---|---|
| 5 | 2 |
| — 1 | 9 |

### 1. Subtract:

(a) 9 4 – 5 8

(b) 7 3 – 4 9

(c) 8 1 – 5 7

(d) 6 0 – 5 2

(d) 9 6 – 2 8

(f) 6 3 – 4 5

(g) 8 2 – 3 7

(h) 5 8 – 3 9

**Teaching instructions:** Use solid objects like small sticks to give the concept of subtraction by borrowing.

## Verbal problems on subtraction

### Look, read and recognize.

**Example:**

There are 82 apples in a basket. 29 apples are damaged. Then, how many apples are fresh?

Total apples in a basket = 82

Damaged apples = 29

Fresh apples = ?

Fresh apples = 53

There are 53 fresh apples in the basket.

$$\begin{array}{r} 8\ 2 \\ -\ 2\ 9 \\ \hline 5\ 3 \end{array}$$

**Example:**

Ramesh had Rs. 564. How much money will remain after spending Rs. 301 in buying book and exercise book?

total amount with Ramesh = Rs. 564

He spent = Rs. 301

Money left with him = ?

Money left with him is Rs. 263

$$\begin{array}{r} 5\ 6\ 4 \\ -\ 3\ 0\ 1 \\ \hline 2\ 6\ 3 \end{array}$$

### Exercise

**1. There were 57 hens in Nara Bahadur's house. He sold 31 hens. How many hens remained in his house?**

**Solution:**

Total hens = 

Hens he sold = 

Remaining hens = 

In his house, there were  hens remained.

**2. Sudip's mother gave him Rs.75. He bought a book for Rs. 31. How much money was left with him?**

Answer: Total money = Rs. ____

Money spent = Rs. ____

money left = Rs. ____

Sudip had Rs. ____

**3. There were 59 girls out of 76 students. How many were boys?**

Answer: Total students = ____

Girls = ____

Boys = ____

There were ____ boys.

**4. Mother had cooked 80 breads. Among them 45 were eaten. How many breads were left there?**

Answer: Total breads ____

Breads eaten = ____

Breads left = ____

There were ____ breads left.

**5. Sagar had Rs. 55. He spent Rs. 28. How much money did he have?**

Answer: Total amount = ____

Spent amount = ____

Left amount = ____

He had Rs. ____

# 12 Distance

## Length and measurement

### Read and learn:

Bench, table, etc. can be measured with hand. But very small objects cannot be measured by a hand.

Can you measure an eraser with your hand ?

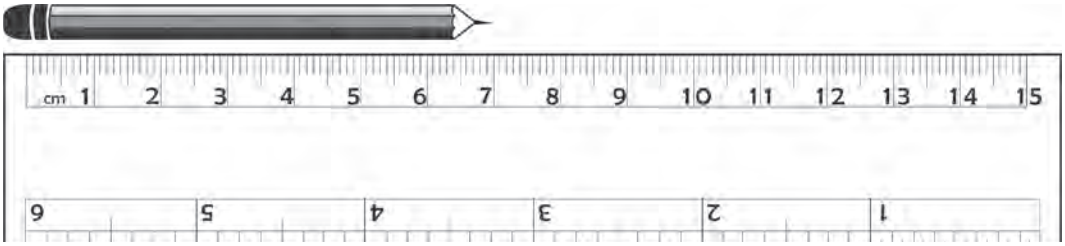
Eraser

Small objects like, eraser can be measured with ruler.

**Measurement of length**

**We use ruler as given to measure the length of objects:**

**The numbers in upper part of ruler denote centimeter.**




**Pencil is 7 centimeter (c m.) long.**

**100 cm. = 1 meter**

Meter tape

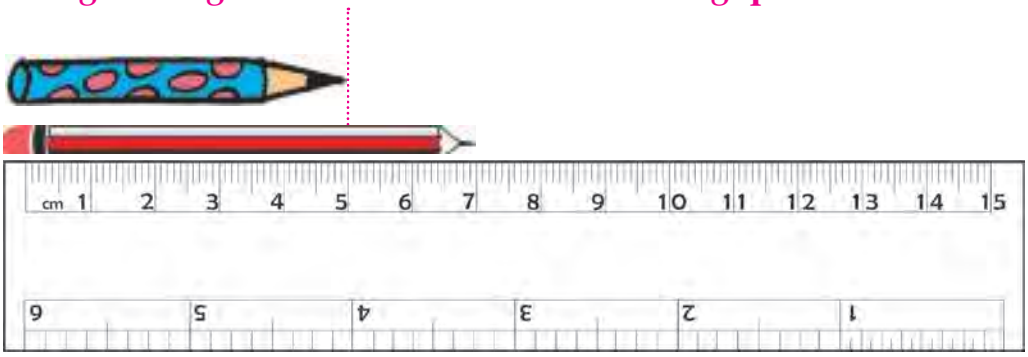
**Teaching instructions:** 1. Let the students practise the measurement of length with hand that was learnt in grade 1 and move to the activities given in this lesson. 2. Get the students to estimate length, breadth and height of different objects and later let them measure and find their length, breadth and height.

## Activity

1. How long is 1 meter? Measure with a rope or thread.
2. Is your pencil shorter or longer than 15 cm. ?
3. Is your paw is longer or shorter than 15 cm.?
4. What is the length of your "My Mathematics book 2" ?
5. Measure the length of your classroom with the help of 1 meter rope.
6. Measure the length of your play ground with the help of 1 meter rope.

## Exercise

**1. What is the length of the following pencils ? Observe the given figure and answer the following questions.**




**(a) What is the length of longer pencil above?**

**(b) What is the length of the shorter pencil above?**

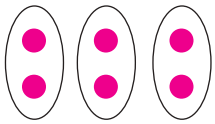
**(c) How longer is longer pencil than the shorter one?**

**(d) Draw five lines in your exercise book, measure them and show to your teacher.**

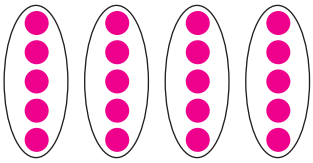
# 13 Multiplications

## Concept of multiplication from addition method.

### Count, read and learn multiplication.



2 + 2 + 2 = 6
2 three times = 6
2 x 3 = 6

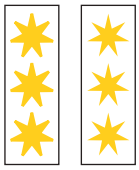


5 + 5 + 5 + 5 = 20
5 four times = 20
5 x 4 = 20

### Exercise

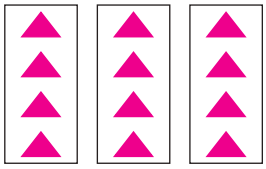
**Look at the pictures and fill in the blanks.**

(a)



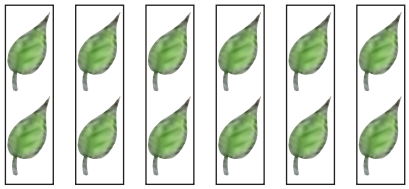
3 + 3 =
3 two times =
3 x 2 =

(b)



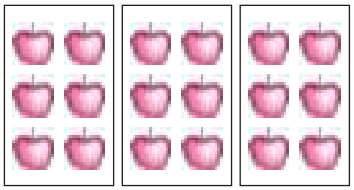
4 + 4 + 4 =
4 three times =
4 x 3 =

(c)



2 + 2 + 2 + 2 + 2 + 2 =
2 six times =
2 x 6 =

(d)



6 + 6 + 6 =
6 three time =
6 x 3 =

## Count and fill in the blanks:

**Example:**

6 + 6 = 12

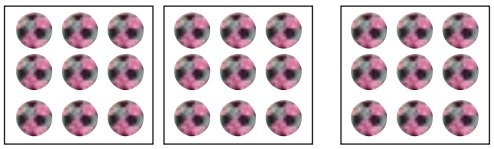
6 x 2 = 12

1.

__ + __ + __ = __

__ x __ = __

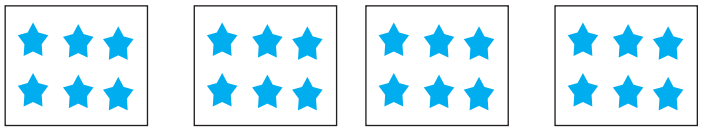
2.



__ + __ + __ = __

__ x __ = __

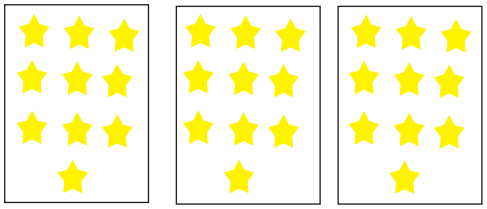
3.



__ + __ + __ = __

__ x __ = __

4.



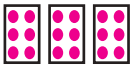
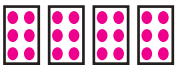
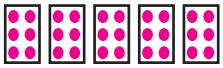
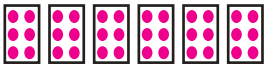
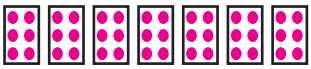
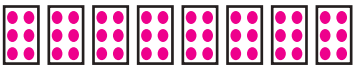
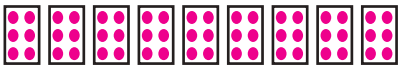
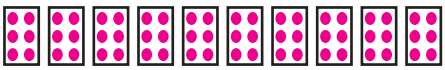
__ + __ + __ = __

__ x __ = __

# Multiplication Table

## Table from 6 to 10

### Table of 6

| Read | Count | Read | Write/say |
|---|---|---|---|
| 6 one's |  | 6 one time | 6 x 1 = 6 |
| 6 two's |  | 6 two times | 6 x 2 = 12 |
| 6 three's |  | 6 three times | 6 x 3 = 18 |
| 6 four's |  | 6 four times | 6 x 4 = 24 |
| 6 five's |  | 6 five times | 6 x 5 = 30 |
| 6 six's |  | 6 six times | 6 x 6 = 36 |
| 6 seven's |  | 6 seven times | 6 x 7 = 42 |
| 6 eight's |  | 6 eight times | 6 x 8 = 48 |
| 6 nine's |  | 6 nine times | 6 x 9 = 54 |
| 6 ten's |  | 6 ten times | 6 x 10 = 60 |

**Teaching instructions:** Make the students learn the multiplication table from 3 to 10.

## Read the following multiplication table and learn:

| | | | |
|---|---|---|---|
| 3 x 1 = 3 | 4 x 1 = 4 | 5 x 1 = 5 | 6 x 1 = 6 |
| 3 x 2 = 6 | 4 x 2 = 8 | 5 x 2 = 10 | 6 x 2 = 12 |
| 3 x 3 = 9 | 4 x 3 = 12 | 5 x 3 = 15 | 6 x 3 = 18 |
| 3 x 4 = 12 | 4 x 4 = 16 | 5 x 4 = 20 | 6 x 4 = 24 |
| 3 x 5 = 15 | 4 x 5 = 20 | 5 x 5 = 25 | 6 x 5 = 30 |
| 3 x 6 = 18 | 4 x 6 = 24 | 5 x 6 = 30 | 6 x 6 = 36 |
| 3 x 7 = 21 | 4 x 7 = 28 | 5 x 7 = 35 | 6 x 7 = 42 |
| 3 x 8 = 24 | 4 x 8 = 32 | 5 x 8 = 40 | 6 x 8 = 48 |
| 3 x 9 = 27 | 4 x 9 = 36 | 5 x 9 = 45 | 6 x 9 =54 |
| 3 x 10 = 30 | 4 x 10 = 40 | 5 x 10 = 50 | 6 x 10 = 60 |

| | | | |
|---|---|---|---|
| 7 x 1 = 7 | 8 x 1 = 8 | 9 x 1 = 9 | 10 x 1 = 10 |
| 7 x 2 = 14 | 8 x 2 = 16 | 9 x 2 = 18 | 10 x 2 = 20 |
| 7 x 3 = 21 | 8 x 3 = 24 | 9 x 3 = 27 | 10 x 3 = 30 |
| 7x 4 = 28 | 8 x 4 = 32 | 9 x 4 = 36 | 10 x 4 = 40 |
| 7 x 5 = 35 | 8 x 5 = 40 | 9x 5 = 45 | 10 x 5 = 50 |
| 7 x 6 = 42 | 8 x 6 = 48 | 9 x 6 = 54 | 10 x 6 = 60 |
| 7 x 7 = 49 | 8 x 7 = 56 | 9 x 7 = 63 | 10 x 7 = 70 |
| 7 x 8 = 56 | 8 x 8 = 64 | 9 x 8 = 72 | 10 x 8 = 80 |
| 7 x 9 = 63 | 8 x 9 = 72 | 9 x 9 = 81 | 10 x 9 = 90 |
| 7 x 10 = 70 | 8 x 10 =80 | 9 x 10 = 90 | 10 x 10 = 100 |

## Exercise

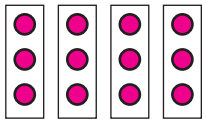
**Learn the multiplication table by heart and fill in the blanks with appropriate number:**

| | | |
|---|---|---|
| 2 x 1 = 2 | 3 x 2 = | 4 x 2 = |
| 2 x 5 = | 4 x 3 = | 5 x 4 = |
| 6 x 3 = | 7 x 2 = | 6 x 4 = |
| 4 x 8 = | 7 x 7 = | 8 x 6 = |
| 9 x 7 = | 8 x 5 = | 9 x 9 = |

## Multiplication with zero

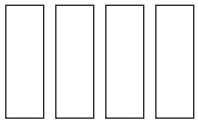
### Read and learn the multiplication with zero:

Example:



3 four times

3 x 4 = 12



0 four times

0 x 4 = 0

4 zero times

4 x 0 = 0

When zero is multiplied by any number, the result is zero.
For example, 0 x 4= 0
If a number is multiplied by zero, the result is also zero. For example, 4 x 0= 0

### Exercise

**Fill in the blanks:**

a. 2 x 0 = ____

b. 0 x 3 = ____

c. 0 x 0 = ____

d. 7 x ____ = 0

e. 0 x 9 = ____

f. ____ x 5 = 0

**Multiply:**

a. 3 x 0

b. 0 x 2

c. 5 x 0

d. 0 x 6

e. 7 x 0

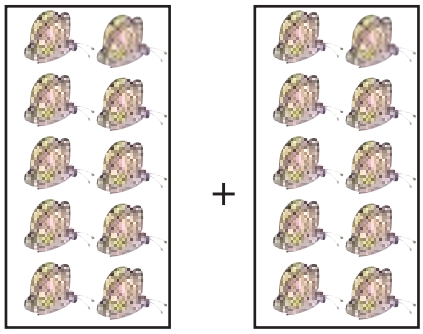
f. 0 x 4

g. 9 x 0

h. 0 x 8

## Multiplication of ten

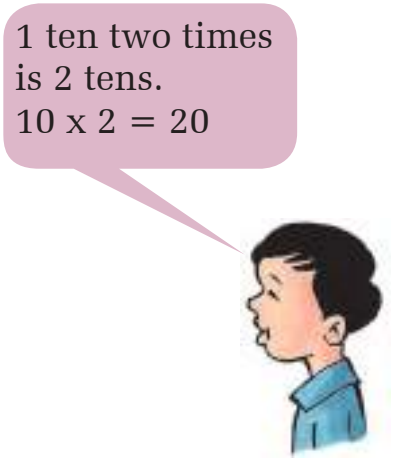
Count, read and learn the multiplication of 10.



1 ten two times

1 ten x 2 = 2 tens

10 x 2 = 20




### Exercise

a. 10 x 2 = ____ b. 10 x 3 = ____ c. 10 x 7 = ____

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| d. | 30 x 3 = | e. | 50 x 4 = | f. | 90 x 5 = | g. | 90 x 6 = |
| h. | 40 x 5 = | i. | 60 x 7 = | j. | 50 x 9 = | k. | 80 x 8 = |
| l. | 60 x 8 = | m. | 80 x 9 = | n. | 90 x 7 = | o. | 20 x 5 = |

## Multiplication of two digit numbers by one digit number (without carryover)

**Example**

| Tens | Ones |
|---|---|
| 1 | 3 |
| x | 3 |
| | 9 |
| + 3 | 0 |
| 3 | 9 |

First,multiply by number of ones place.
3 x 3 ones = 9 ones
Then, multiply by number of tens place .
3 x 1 ten = 3 tens
= 3 tens + 9 ones
= 30 + 9
= 3 9

**Shortcut method**

| Ten | One |
|---|---|
| 1 | 3 |
| x | 3 |
| 3 | 9 |

10 + 3
x 3
30 + 9 = 39

3 x 3 ones = 9 ones
3 x 1 ten = 3 tens

### Exercise

**1. Multiply:**

a.

| Ten | One |
|---|---|
| 2 | 3 |
| x | 2 |

b.

| Ten | One |
|---|---|
| 4 | 3 |
| x | 3 |

c.

| Ten | One |
|---|---|
| 2 | 2 |
| x | 4 |

d. 4 2 x 4

e. 3 1 x 5

f. 9 0 x 7

g. 6 1 x 7

## Word problems on multiplication

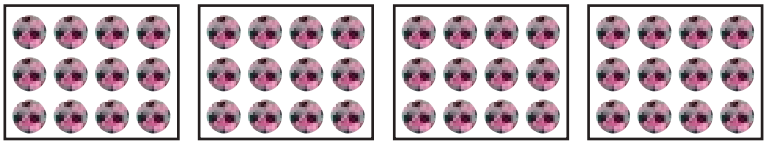
### Look, read and recognize.

Example:

**1. One cow has 4 legs. How many legs do 3 cows have?**

$$\begin{array}{r} 4 \\ \times\ 3 \\ \hline 12 \end{array}$$

**2. A box contains 12 balls. How many balls can be kept in 4 boxes?**



$$\begin{array}{r} 12 \\ \times\ 4 \\ \hline 48 \end{array}$$

## Exercise

### Understand the questions and solve the following sums.

**a.** If a bicycle has 2 wheels, how many wheels are there in 4 bicycles?

**b.** If 4 students can sit in a bench, how many students can sit in 5 benches?

**c.** If a spider has 6 legs, how many legs do 7 spiders have?

**d.** If a basket contains 21 oranges, how many oranges are there in 6 baskets?

**e.** If 32 students are stood in one row, how many students are there in 3 rows?

**f.** If a pen costs Rs. 42 , find the cost of 4 pens.

# 14 Division

## Read, discuss and learn the division.

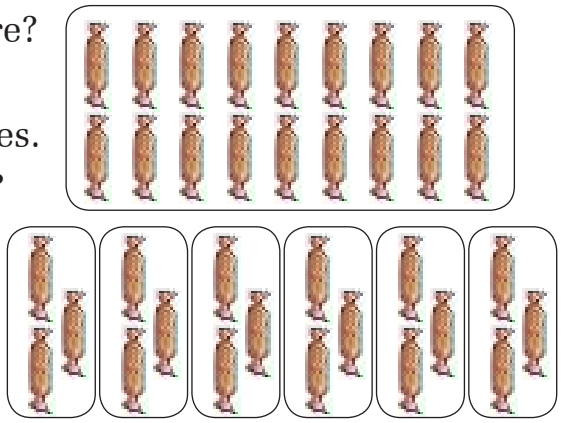
How many chocolates are there?

There are 18 chocolates.

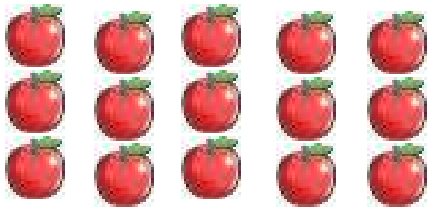
Form the groups of 3 chocolates.

How many groups were there?

There were 6 groups.



## Solve the following problems.

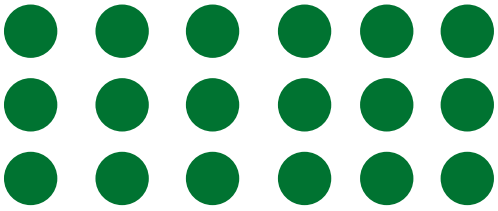


Form the group of 5.

How many groups are there?

Form the group of 4.

How many groups are there?

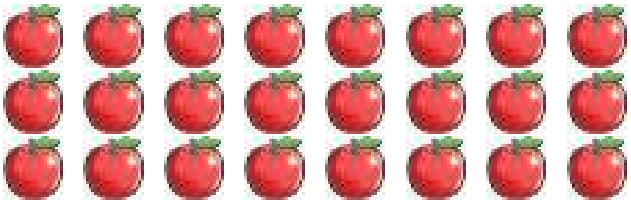


Form the groups of 6.

How many groups are there?

Form the groups of 7.

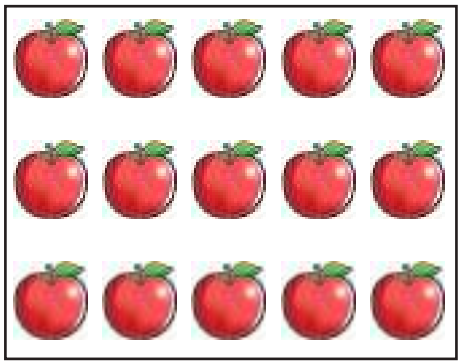
How many groups are there?



Form the groups of 8.
How many groups are there ?

Use of symbol of division ( ÷ )
How many apples are there?
There are 15 apples.
Form the groups of 3 apples.
Then, there are 5 groups.
We can write using the symbol:

15 ÷ 3 = 5



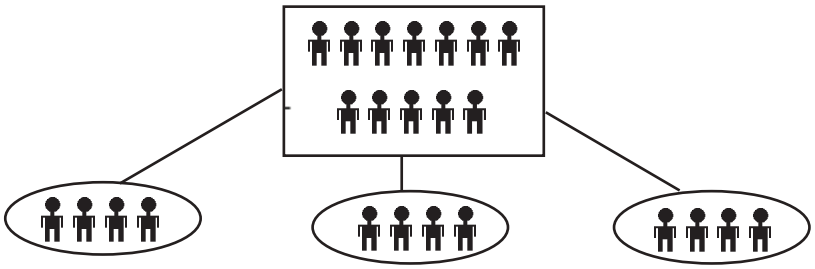
Again, form the groups of 5 apples.

15 ÷ 5 = 3

Can we make 4 groups? Observe by making the groups.

**Activity**

## Get 12 students to stand in a line.



Divide them into 3 groups and let them count the numbers of students in each group.

This can be written as: 12 ÷ 3 = 4

**Teaching instructions:**

Give the concept that a group can be divided into several groups.

## Exercise

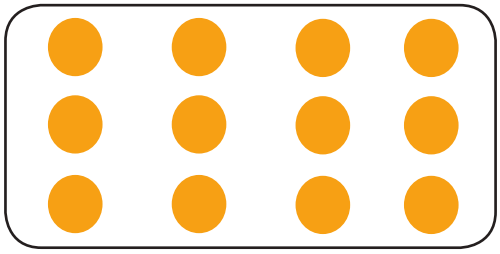
**Count the following dots and fill in the blanks with appropriate number:**

a. $12 \div 2 =$ ____

$12 \div 3 =$ ____

$12 \div 4 =$ ____

$12 \div 6 =$ ____

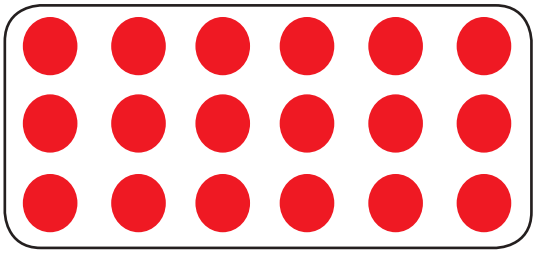


b. $18 \div 2 =$ ____

$18 \div 3 =$ ____

$18 \div 6 =$ ____

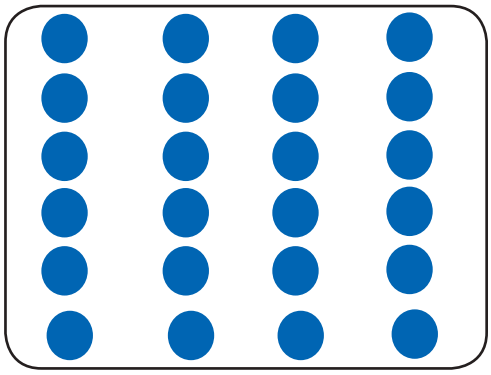
$18 \div 9 =$ ____



c. $24 \div 4 =$ ____

$24 \div 6 =$ ____

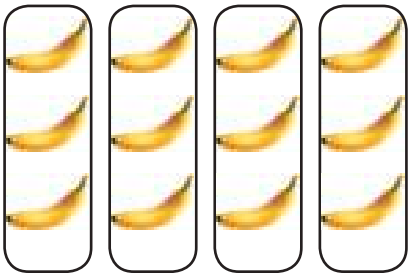
$24 \div 8 =$ ____



d. Collect the marbles and small stones and solve the problems as given in question 1,2,3.

# 15 Relationship between Multiplication and Division

## Read, discuss and learn division.



There are 4 groups.

There are 3 in each group.

3 x 4 = 12

How many groups can be formed of each 3 from 12?

12 ÷ 3 = 4

There can be 4 groups of each 3 in 12.

If we form 4 groups of 12, how many in each group?

12 ÷ 4 = 3

There are only 3 in one group.

6 x 3 = 18  3 times 6 is 18.

18 ÷ 3 = 6 There are 6 three in 18.

18 ÷ 6 = 3 There are 3 six in 18.

## Exercise

**Fill in the blanks with appropriate number:**

a. 3 x 4 = ____

12 ÷ 3 = ____

12 ÷ 4 = ____

b. 6 x 3 = ____

18 ÷ 6 = ____

18 ÷ 3 = ____

c. 7 x ☐ 28

4 x ☐ 28

28 ÷ ☐ 7

28 ÷ ☐ 4

d. ☐ x 6 = 48

48 ÷ 6 = ☐

48 ÷ 8 = ☐

☐ ÷ 8 = 6

e. 5 x 4 = ☐

20 ÷ 4 = ☐

20 ÷ 5 = ☐

f. 8 x 3 = ☐

24 ÷ 3 = ☐

24 ÷ 8 = ☐

g. 4 x ☐ = 20

20 ÷ ☐ = 4

20 ÷ ☐ = 5

☐ x 5 = 20

☐ ÷ 5 = 4

h. 4 x 9 = ☐

9 x 4 = ☐

36 ÷ 4 = ☐

36 ÷ 9 = ☐

☐ x 4 = 36

## Method of division

8 ÷ 4

Divide with the help of multiplication table.

4 x 1 = 4
4 x 2 = 8

18 ÷ 6

3 Quotient
Divisor 6 ) 18 Dividend
18
0

6 x 1 = 6
6 x 2 = 12
6 x 3 = 18

Dividend = Divisor x Quotient

To check: 6 x 3 = 18

## Exercise

**Divide the following by using multiplication table.**

a. $3\overline{)15}$ b. $4\overline{)16}$ c. $6\overline{)24}$ d. $5\overline{)25}$

e. $7\overline{)28}$ f. $8\overline{)48}$ g. $9\overline{)72}$ h. $9\overline{)81}$

# 16 Verbal Problems of Division

## Read, discuss and learn Division:

**Example:**

There are 36 oranges in a basket. If they are divided equally to 4 persons, how many oranges will a person get?

Total oranges = 36

Total number = 4

Each person get 9 oranges. 0

$$4\overline{)36}\quad 9,\ 36,\ 0$$

## Exercise

**(a) The cost of 3 exercise book is Rs. 18. Find the cost of 1 exercise book?**

Total amount = ____

Number of exercise book = ____

1 exercise book costs Rs. ____

$$3\overline{)18}$$

**(b) If 24 balloons are divided equally among 8 persons, how many balloons will each person get?**

**(c) There are 28 students in a classroom. If these students are divided equally into 7 benches, how many students will sit on a bench?**

**(d) If 40 chocolates are distributed equally among 8 children, how many chocolates will each get?**

**(e) Chandra has Rs. 54. If one exercise book costs Rs. 9, how many exercise books can he buy?**

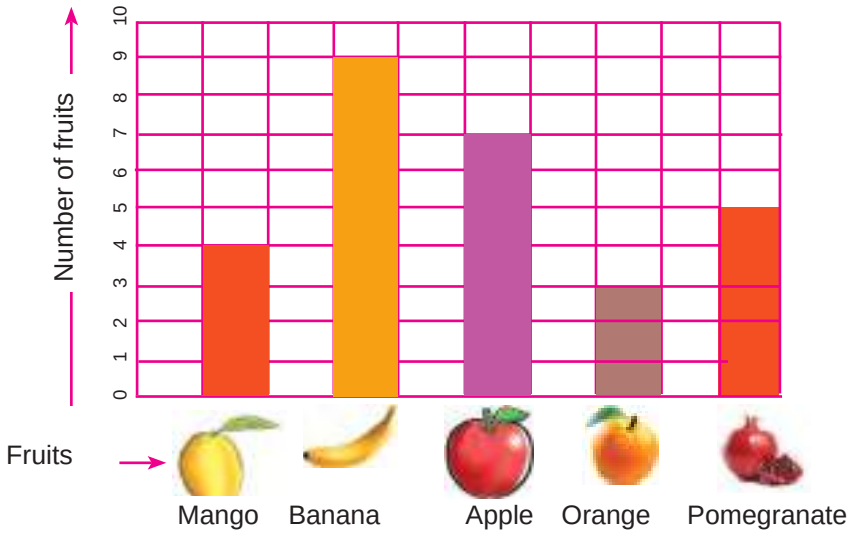
**Teaching instructions:** Practise additional exercises by using the local materials like, small stick, stones etc. by dividing them into different groups.

# 17 Bargraph

## Bargraph and information from it

### Look, discuss and learn.

The fruits which Hari has got have been show in the following bargraph:




The figures as above are called bargraph.

This bargraph shows the types and numbers of fruits Hari has got.

Now, observe the figure and write answer in your exercise book.

(a) How many mangoes are there?

(b) Which fruit is only five in number?

(c) How many oranges are more than mangoes?

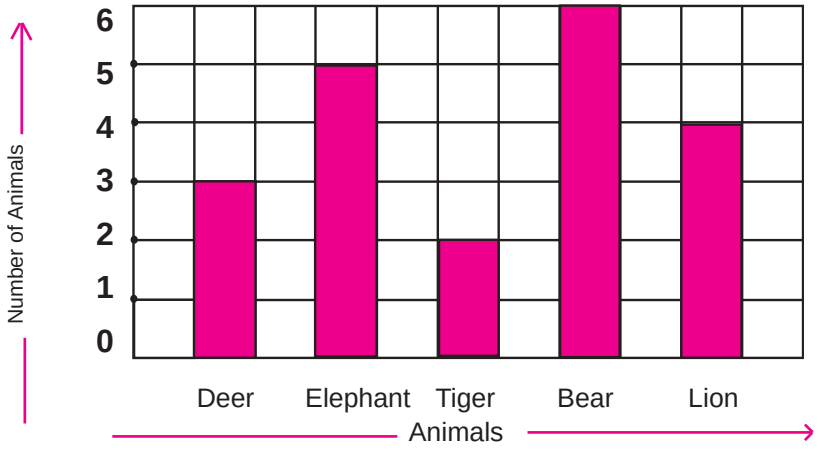
(d) How many oranges are less than apples?

(e) Which fruits are most and least in number and how many are there?

**Teaching instructions:** Have a discussion by making bar graphs, different types of data and local materials. And give the concept that variuos objects in quantity are used to make a bargraph.

## Exercise

**1. The animals in a zoo are shown in the bargraph below. Answer the following questions with the help of bagraph.**




**Example:** Which animals are the most in number and how many are there? Bears 6

(a) How many tigers are there?

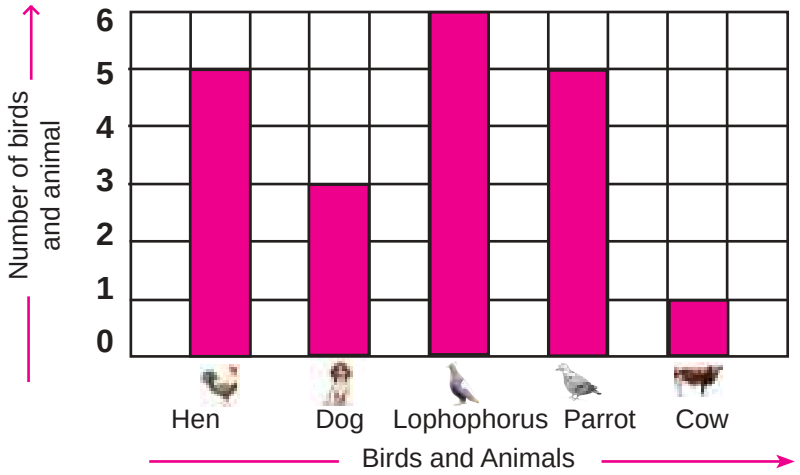
(b) How many elephants are there?

(c) How many elephants are more than tigers?

(d) How many lions are less than bears?

(e) Which animals are least in number and how many are there?

**2. The animals and birds in a zoo are shown in the following bargraph:**



**Look at the bargraph above and write the answer of the following questions in your exercise book:**

**Example:** Which animal is least in number and how many are there? Cow 1

(a) How many dogs are there? ☐

(b) How many hens are there? ☐

(c) Which animal is five in number? ☐

(d) How many hens are less than lophophorus? ☐

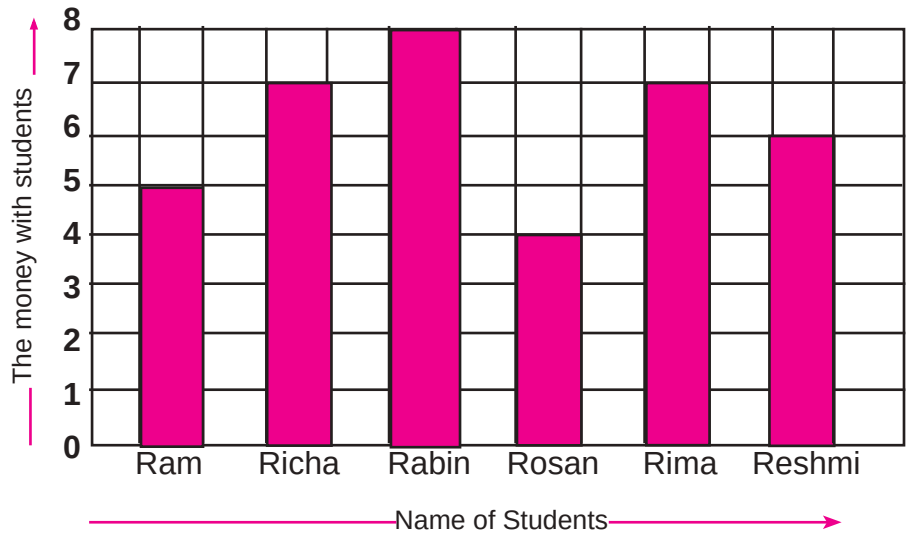
(e) How many pigeons are more than dogs? ☐

(f) How many pigeons are there? ☐

(g) How many cows are less than pigeons? ☐

(h) Which animals are most and how many are there? ☐

**3. The family members of 6 students studying in grade 2 are shown in the following bargraph. Discuss by making ques tions as mentioned above.**




**Teaching instructions:** Have a discussion on different bargraphs as above that are related with the student's daily life and practise more.

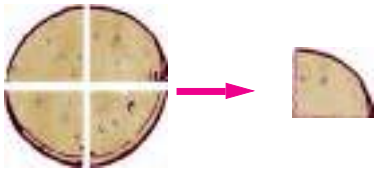
# 18 Fraction

## Concept of fraction

## Look at the figure and discuss

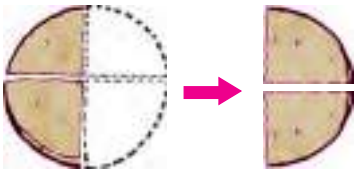
whole bread

Half $\frac{1}{2}$ of a whole bread.

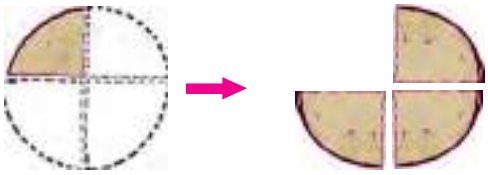


One fourth $\frac{1}{4}$ of a whole bread.

### 4 equal parts of a bread



Two fourth of a whole bread. $\frac{2}{3}$



Three fourth of a whole bread $\frac{3}{4}$

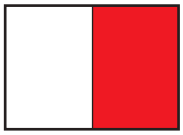
**Teaching instructions:** Give the concept of half $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{2}{4}$ and $\frac{3}{4}$ demonstrating different solid objects like, paper, sticks etc.

## Half and quarter

### Look at the figure and discuss:

2 equal parts

Half



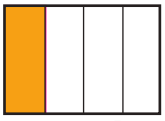
one half of the figure is shaded.

$$\frac{\text{shaded parts}}{\text{total equal parts}} = \frac{1}{2}$$

If one whole is divided into two equal parts, then each part is called half, we write half as $\frac{1}{2}$ , $\frac{1}{2}$ is read as one by two.

### Quarter

4 equal Parts



one-fourth of the figure is shaded

$$\frac{\text{shaded parts}}{\text{total equal parts}} = \frac{1}{4}$$

When a whole object is divided into four equal parts, each part is called a quarter.
In mathematics, it is written as $\frac{1}{4}$ .
And it is read as 1 by 4.

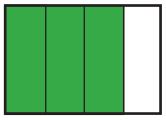
4 equal parts

two-fourth of the figure is shaded.

$$\frac{\text{shaded parts}}{\text{total equal parts}} = \frac{2}{4}$$

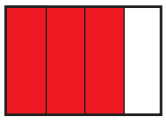
Two parts of a four equal parts of a whole is called two quarter. In mathematics, it is written as $\frac{2}{4}$ .

And it is read as 2 by 4.



$$\frac{\text{shaded parts}}{\text{total equal parts}} = \frac{3}{4}$$

**Third fourth**

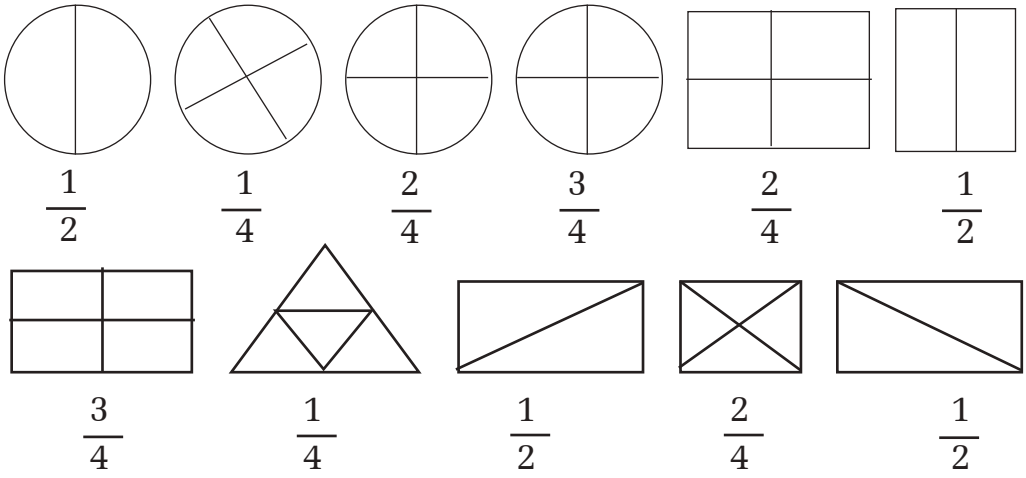


3 parts of a four equal parts of a whole is called third quarter. In mathematics, it is written as $\frac{3}{4}$.

It is read as 3 by 4.

## Exercise

**Shade in the following figures to represent the given fraction.**



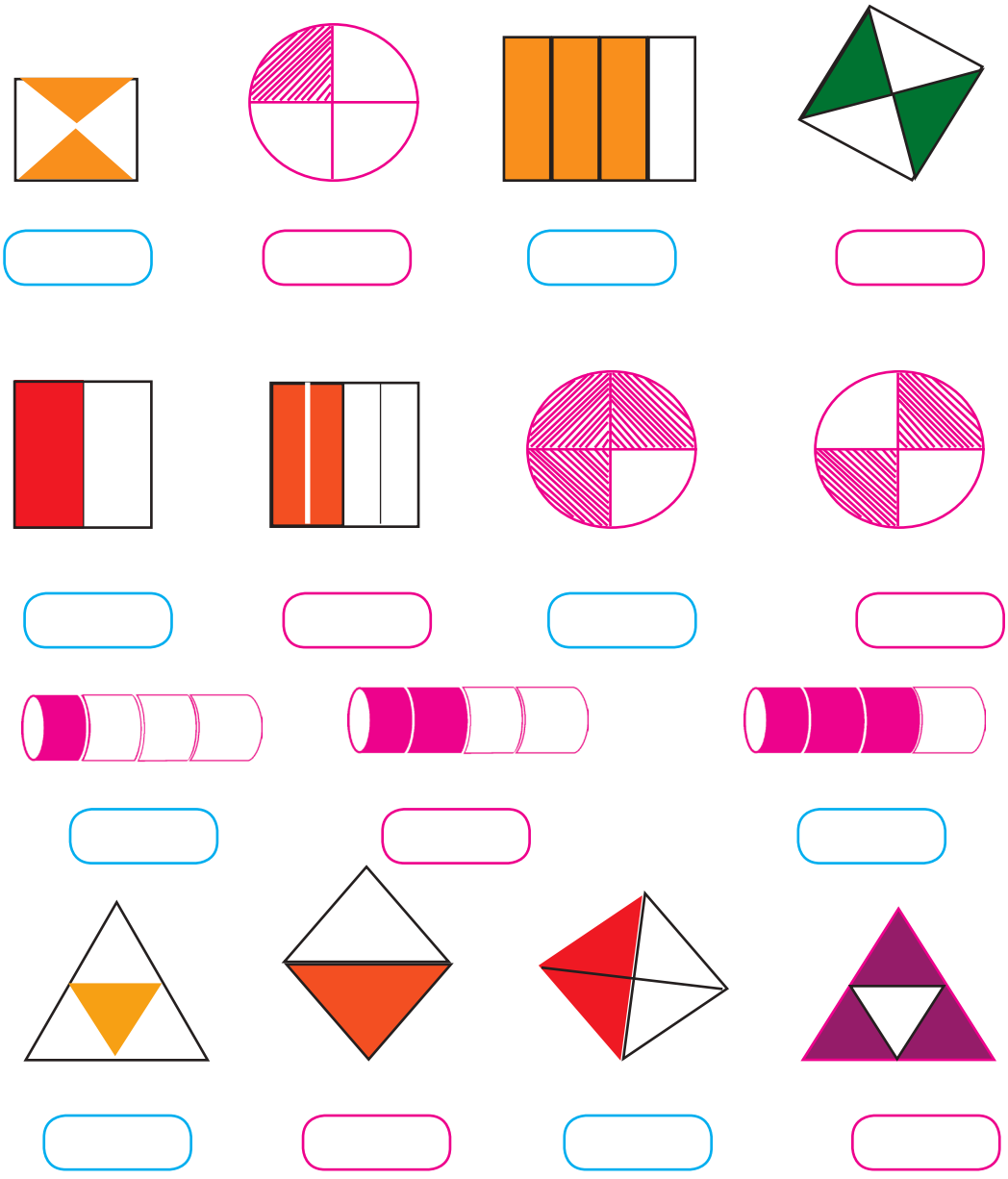
$\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ $\frac{2}{4}$ $\frac{1}{2}$

$\frac{3}{4}$ $\frac{1}{4}$ $\frac{1}{2}$ $\frac{2}{4}$ $\frac{1}{2}$

**Teaching instructions:**

1. As the concept of fraction is given to the student using the solid objects, give the concept of half, one fourth, etc with the help of figures. Tell the students to write in mathematical language.
2. Divide the students into groups or pairs and ask them to draw figures, shade them and write in fraction.
3. Give different shapes or flashcards as given above and tell the students to divide them into different equal parts and shade, colour and read.

**Write the fraction to represent the shaded parts in the following figures.**



**Teaching instructions:** i. Make the students write in fraction by demonstrating different solid objects and their parts.
ii. Make the students write in fraction by drawing figures on board or by giving the flash cards to them.

## One third

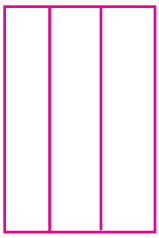
**Look at figure, discuss and learn.**

Whole bread

Bread divided into three parts

One third of a bread $= \frac{1}{3}$

Two third of a bread $= \frac{2}{3}$



3 equal parts

one third part is shaded.

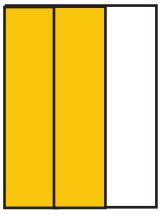
$$\frac{\text{shaded parts}}{\text{total equal parts}} = \frac{1}{3}$$

Among three equal parts of a whole, one part is called one third. In mathematics, it is written as $\frac{1}{3}$.
And it is read as 1 by 3.

**Teaching instructions:**

i. Give the concept of one third and two third to the students by showing different objects and dividing them into three equal parts.

ii. Divide papers, sticks and other materials into three parts by making the fraction of $\frac{1}{3}$ and $\frac{2}{3}$ .



Two third part is shaded

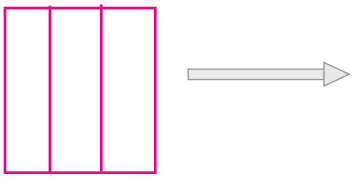
$$\frac{\text{shaded parts}}{\text{total equal parts}} = \frac{2}{3} \quad \text{two third}$$

$$\frac{\text{nonshaded parts}}{\text{total equal parts}} = \frac{1}{3} \quad \text{one third}$$

Among three equal parts two part is called two third of a whole. In mathematics, it is written as $\frac{2}{3}$ and read as 2 by 3..

## Activity

**1. Have a discussion and write the correct answer in the following boxes.**



3 equal parts

$$\frac{\text{shaded parts}}{\text{total equal parts}} = \frac{\square}{\square}$$

One third is shaded.

is not shaded.

**2. Shade one third and two third of the figures and show to your teacher.**

**Teaching instructions:** i. Get the student to make fraction 1/3 and 2/3 with the help of figures as they have known to make fraction with the help of solid objects in the previous lessons. ii. Draw the pictures and let the students write the shaded parts in mathematical language. iii. Divide students into groups and tell them to draw picture, shade it and make fractions.

## Exercise

**1. Copy the following fractions in your exercise book. Encircle the fraction to represent the shaded parts in the following figures.**

(a)

$\frac{3}{4}$ $\frac{1}{2}$ $\frac{1}{4}$

(b)

$\frac{1}{2}$ $\frac{2}{4}$ $\frac{1}{3}$

(c)

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{2}{3}$

(d)

$\frac{3}{4}$ $\frac{1}{4}$ $\frac{1}{3}$

(e)

$\frac{3}{4}$ $\frac{1}{2}$ $\frac{2}{4}$

(f)

$\frac{3}{4}$ $\frac{1}{3}$ $\frac{2}{3}$

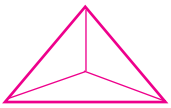
(g)

$\frac{3}{4}$ $\frac{1}{4}$ $\frac{2}{4}$

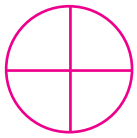
(h)

$\frac{2}{4}$ $\frac{1}{3}$ $\frac{2}{3}$

**2. Copy the following figures in your exercise book and shade the parts in the figures to represent the given fractions:**

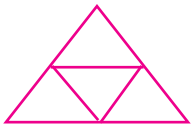


$\frac{2}{3}$

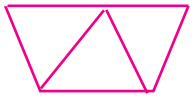


$\frac{3}{4}$

$\frac{2}{3}$

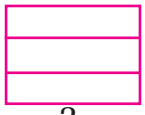


$\frac{3}{4}$



$\frac{1}{3}$

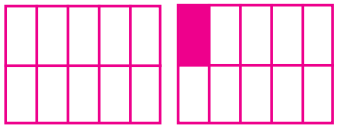
$\frac{1}{3}$



$\frac{2}{3}$

## Tenth and other fractions

### Tenth

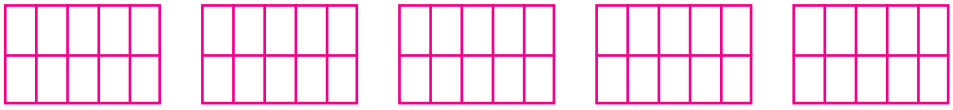


Ten equal parts

$$\frac{\text{shaded parts}}{\text{total parts}} = \frac{1}{10} \text{ one tenth}$$

$$\frac{\text{shaded parts}}{\text{total parts}} = \frac{3}{10} \text{ third tenth}$$

**(a) Copy the following figures in your exercise book and shade the parts in the figures to represent the given fractions.**



$\frac{1}{10}$ $\frac{4}{10}$ $\frac{3}{10}$ $\frac{7}{10}$ $\frac{9}{10}$

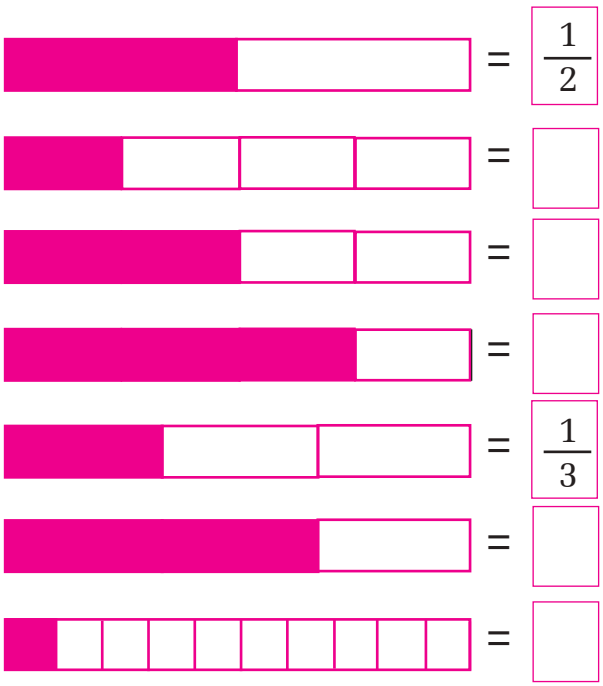
**(b) Copy in your exercise book and write in fraction as in question number 2.**

1. half = $\frac{1}{2}$ 2. one fourth 3. two fourth 4. four tenth

## Comparison of fractions

### Look at the figure and discuss.

The rectangles of equal size are divided into different equal parts below. Write the fractions to represent the shaded parts as shown in example.




### Exercise

Answer the following questions on the basis of the figure above.

(a) Which is the greatest fraction in the above fractions?

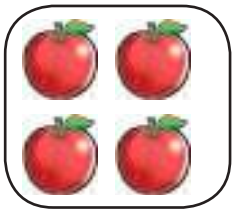
(b) Which is the smallest fraction in the above fractions?

(c) Which is greater in $\frac{1}{2}$ and $\frac{2}{4}$ ? Are they equal or not?

**Teaching instructions:** Ask the students to make the fractions mentioned in curriculum with the help of solid objects or figures and tell them to compare.

## Concept of fraction from set

**Read, discuss and learn.**



How many apples are there? ☐

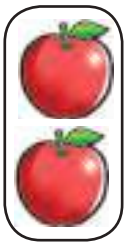
Mother told Sagar and Sita to divide an apple into two halves and eat.

How many apples did Sagar and Sita get?

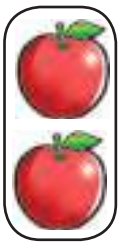
Let's discuss, how we can write in fraction the division of 4 apples into two equal parts.

4 apples

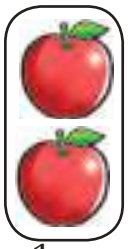
4 apples are divided into two equal parts.



Sagar's parts



Sita's parts



Half $\frac{1}{2}$ or 4 apples = 2 apples.

What is the part of 1 apple among 4 apples? $\frac{1}{4}$

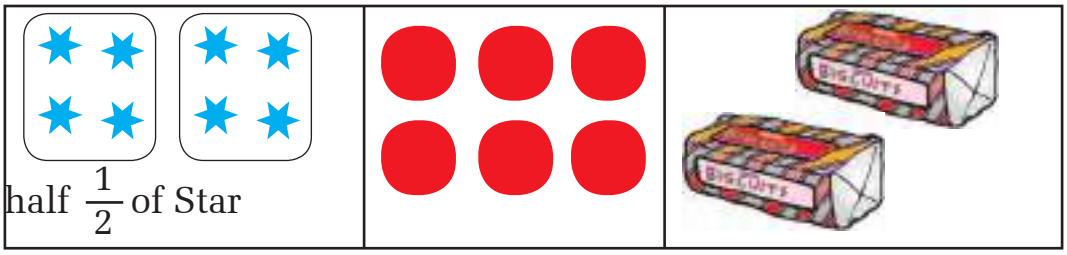
What is the part of 2 apples among 4 apples? $\frac{2}{4}$

What is the part of 3 apples among 4 apples? $\frac{3}{4}$

**Teaching instructions:** Provide the concept of other fractions with the help of sets as mentioned above.

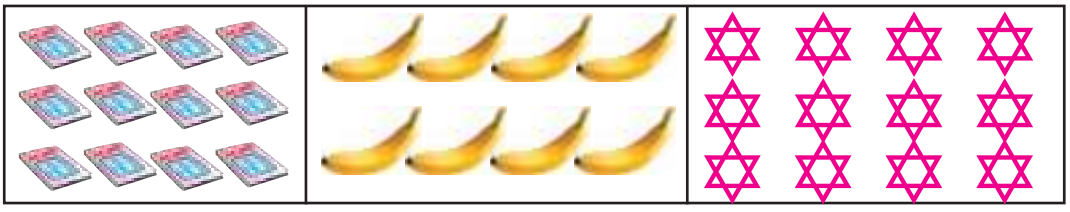
## Exercise

**1. Circle the following sets of materials. Divide them into two equal parts and write in fraction.**

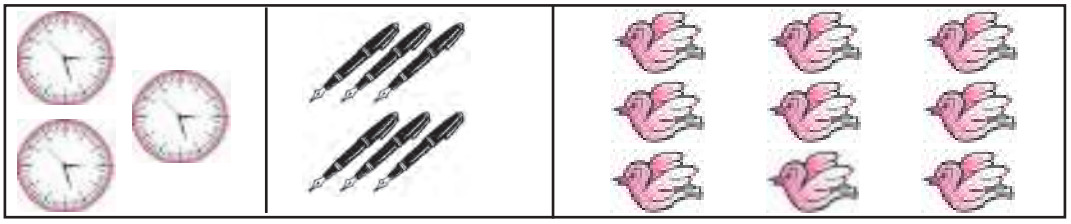


half $\frac{1}{2}$ of Star

**2. Circle the following sets of materials. Divide them into four equal parts and write in fraction.**



**3. Circle the following sets of materials. Divide them into three equal parts and write in fraction.**



## Review Exercsie

**1. Draw the figures and shade them to represent the following fractions.**

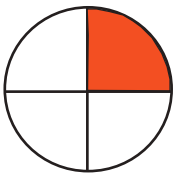
(a) $\frac{3}{4}$ (b) $\frac{2}{3}$ (c) $\frac{1}{3}$ (d) $\frac{1}{4}$

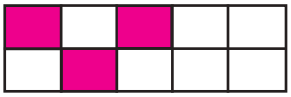
(e) $\frac{1}{2}$ (f) $\frac{1}{6}$ (g) $\frac{1}{8}$ (h) $\frac{1}{10}$

**Teaching instructions:**

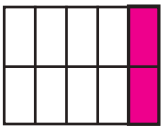
Ask the students to differentiate the fractions like 1/2, 2/4, 3/3, 2/3, 1/10 . with the help of solid objects and figures. Get them to practise by using flashcards.

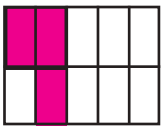
**2. Copy the following figures in your exercise book and write the fraction to represent the shaded parts.**

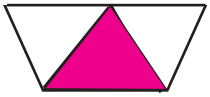
(a) 

(b) 

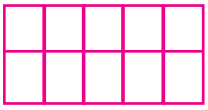
(c) 

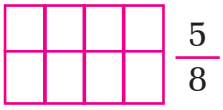
(d) 

(e) 

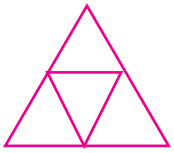
(f) 

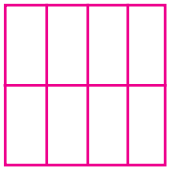
**3. Shade the parts in the following figures to represent the given fractions.**

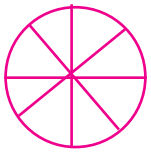
(a)  $\frac{3}{10}$

(b)  $\frac{5}{8}$

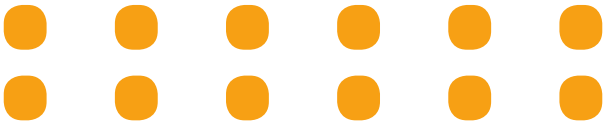
(c)  $\frac{2}{3}$

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

(e)  $\frac{3}{8}$

(f)  $\frac{6}{8}$

**4. 12 dots are given below. Circle to represent the following fractions. Mark different dots for every fraction in your exercise book. How many dots are there in one part?**



(a) $\frac{1}{2}$ (b) $\frac{1}{4}$ (c) $\frac{1}{6}$

**5. Mark ten dots in your exercise book and encircle for $\frac{3}{10}$ .**

# 19 Time

## Quarter past, half past and quarter to

**Look, read, discuss and learn.**

Ram arrived at school.
The short hand of a clock is at 10 and the long hand of a clock is at 12. It is 10 o'clock.

The short hand of a clock has crossed 10. The long hand is at 3. It is 10 o'clock and 15 minutes. Or, it is quarter past 10. Teacher entered the classroom.

The small hand of a clock is between 10 and 11. The long hand is at 6. It is 30 minutes past 10. It is half past 10.

The small hand is about at 11. The long hand is at 9. It is 15 minutes to 11. It is quarter to 11. It is also written as 10:45.

The long hand of a clock takes 15 minutes to reach at 3 from 12. That is called quarter past. When the hand arrives at 6, it takes 30 minutes. That is called half past. In the same way, it takes 45 minutes to reach at 9. That is called quarter. When it again reaches at 12, it is 60 minutes. 1 hour is equal to 60 minutes.

**Teaching instructions:** Make the students tell the time by showing different model clocks and real clocks. Clarify about the long hand and short hand. Tell about the second or longest hand if students have queries.

## Exercise

**Look at the following clocks and write the time.**

3:15 o'clock

It is quarter past 3

o' clock

It is

o' clock

It is

o' clock

It is

o' clock

It is

o' clock

It is

o' clock

It is

o' clock

It is


o' clock

It is


o' clock

It is


o' clock

It is


o' clock

It is

**Copy the following clocks in your exercise book. Draw long hand and short hand, Show the given time.**

Half past 4

12 o'clock

quarter past 9

quarter to 11

## Relation between hour and day

### Look, read, discuss and learn.

The sun rises at 6 o'clock in the morning. From 6 a.m of today to 6 a.m of tomorrow is one day. There are 24 hours in 1 day.

1 day = 24 hours

There are 12 hours in a clock.

The short (hour) hand rotates two times in 1 day.

Discuss, how many hours are there from today 10 o'clock in the morning to the same time tomorrow morning ?

**Calculation of time**

1 day = 24 hours

2 days = 2 x 24 hours

= 48 hours

### Exercise

**1. How many hours are there? Write.**

(a) 1 day (b) 3 days

(c) 5 days (d) 7 days

(e) When the short hand reaches at 9 from 5.

(f) When the short hand reaches at 7 from 12.

(g) When the short hand reaches at 11 from 12.

(h) 7 o'clock in the morning today to 7 o'clock in the morning tomorrow.

## Day, Month and Year

| Chaitra, 2074 | | | | | | |
|---|---|---|---|---|---|---|
| **Sun** | **Mon** | **Tue** | **Wed** | **Thu** | **Fri** | **Sat** |
| | | | | 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 | |

**3 ghodejatra  10 Chaitedashain  11 Ramnawami**

(a) How many days are there in this month?

(b) When is the Ramnawami?

(c) Which month is today? How many days are there in this month? What are the holidays? What are the festivals? Look the calendar and have a discussion.

| | |
|---|---|
| 1 month = 30 days<br>3 months = 3 x 30 days<br>= 90 days | 1 year = 12 months<br>2 years = 2 x 12months = 24months |

### Exercise

1. How many days are there in the following months? Write.
   (a) 4 months  (b) 5 months
2. How many months are there in the following years?Write.
   (a) 6 years  (b) 8 years

**Teaching instructions:** Help the students to look calendar by using a calendar with months, days, and date through discussion and question answer. Get them the practised about name of the months and days. Have a discussion on holidays and festivals. Tell the students that every month is taken of 30 days, though all the months do not have 30 days.

# 20 Money

## Look at the following rupees and recognize:

Rs. 5

Rs. 10

Rs. 20

Rs. 25

Rs. 50

Rs. 100

Rs. 500

Rs. 1000

**Look at the notes above and answer the following questions.**

1. What do you see in the notes of Rs. 5, Rs. 10, Rs. 50, Rs. 100, Rs. 500 and Rs. 1000? Discuss.
2. What is written in all notes? Discuss.
3. Discuss the size of the notes.
4. Match the following notes and the picture in them:

| | |
|---|---|
| Elephant | Rs. 5 |
| Yak | Rs. 100 |
| Tiger | Rs. 500 |
| Deer | Rs. 1000 |

## Rupees and Paisa

### Look, read, discuss and learn.

1 rupee = 100 paisa

100 paisa is in 1 rupee or Rs. 1 = 100 paisa

The things were very cheap in the past. Therefore, people could buy things with small amount of money. So, 1 rupee was divided into 100 paisa. 50 paisa is equal to 1 Mohar and 25 paisa is called a quarter (Suka). Even 10 paisa, 5 paisa, 2 paisa and 1 paisa were in use. But they are no more in use because the things can not be bought with them.

**Teaching instructions:** Have a discussion by showing the real notes and teach the students to add and subtract as well as count paisa.

## Problems of paisa and rupees

1. Gita has Rs.2 . How many paisa will it be?

   **Answer:** Re. 1 = 100 paisa

   Rs. 2 = 2 x 100 paisa = 200 paisa

   Therefore, Gita has 200 Paisa.

2. Hari has Rs. 5 and 50 Paisa. How many Paisa does Hari have?

   **Answer:** Rs. 5 and 50 Paisa = Rs. 5 + 50 Paisa

   = 500 Paisa + 50 Paisa = 550 Paisa

   Therefore, Hari has 550 Paisa.

Rs 5 = 5 x 100 Paisa = 500 Paisa

### Exercise

**1. Convert rupees into paisa:**

(a) Rs. 5 (b) Rs. 7 (c) Rs. 10

(d) Rs. 8 (e) Rs. 9 (f) Rs. 6

**2. Convert into Paisa**

(a) Rs. 1 and 50 Paisa (b) Rs. 7 and 75 Paisa

(c) Rs. 9 and 30 Paisa (d) Rs. 8 and 40 Paisa

(e) Rs. 6 and 20 Paisa (f) Rs. 1 and 90 Paisa

## Addition and subtraction of rupees and paisa

Look, read, discuss and write in your exercise book.

1. Ramu bought one biscuit for Rs. 15, one chocolate for Rs. 1 and one kite for Rs. 3. How much money did he spend?

Biscuit Chocolate Kite

Rs. 15 + Re. 1 + Rs. 3 = Rs. 19

**2. Maternal uncle gave Farhin Hussain the following notes for shopping. How much rupees is there altogether?**

Rs 10 + Rs 50 + Rs 100
= Rs 160

Rs. 100
Rs. 50
+ Rs. 10
= Rs. 160

## Exercise

**1. How much money is there? Write in your exercise book.**

(a)

= Rs.

(b)

= Rs.

**2. Add the cost of each sets of objects and find the total cost.**

(a)

**Rs. 90** **Rs. 430** **Rs. 288**

(b)

**Rs. 15** **Rs. 100** **Rs. 3**

(c)

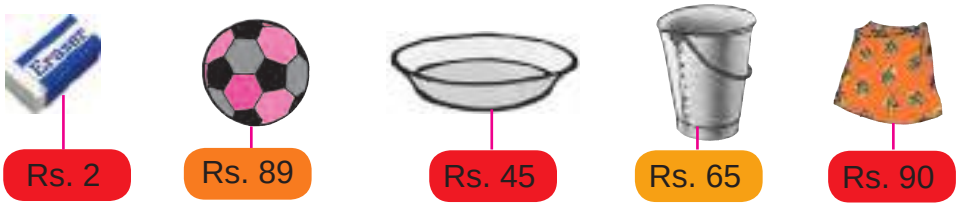
**Rs. 45** **Rs. 350** **Rs. 150**

(d)

**Rs. 455** **Rs. 20** **Rs. 10**

## Verbal problems of addition and subtraction

**Look at the price of the following objects, read, discuss and learn:**




**Example**

Chhiring went to the market. She bought an eraser and a football. She gave a note of Rs. 100 to the shopkeeper.

How much money did she get in return? Calculate.

**Answer:**

The total cost of eraser and ball = Rs. 2 + Rs. 89 = Rs. 91

The money that shopkeeper returned = Rs. 100 – Rs. 91 = Rs. 9

Therefore, the shopkeeper returned Rs. 9 to Chhiring

### Exercise

**Look at the price of the above objects and calculate.**

(a) Pemba has bought a bucket and a dish ? How much money did she pay in the shop?

(b) Rita Rai has bought an eraser, a cap, and a ball. How much money did she spend?

(c) Mahesh has bought a cap. If she gave Rs. 100 to the shopkeeper, how much would he return to him?

**Teaching instructions:** Make the students practise additional problems as above and other real problems through discussion and problem solving method.

## Addition and subtraction of rupees and paisa

### Read and learn:

**Example:**

Ratna had Rs.20 and 50 paisa. If he bought a copy of Rs.15 and 25 paisa, how much amount would be left with him?

**Answer:** Let's write the above problem in mathematical language and subtract:

| Rupees | Paisa |
|---|---|
| 20 | 50 |
| – 15 | 25 |
| 5 | 25 |

Therefore, Ratna had 5 rupees and 25 paisa left.

### Exercise

**1. See the sign and solve.**

(a)

| Rupees | Paisa |
|---|---|
| 40 | 15 |
| – 20 | 12 |

(b)

| Rupees | Paisa |
|---|---|
| 75 | 75 |
| + 62 | 15 |

(c)

| Rupees | Paisa |
|---|---|
| 97 | 20 |
| – 65 | 15 |

**2. Suju had Rs.30 and 50 paisa. If she bought an exercise book for Rs.15 and 20 paisa, how much money would she have?**

**3. Saurav's mother gave him Rs. 50 and 30 paisa,father gave him Rs. 20 and 60 paisa. How much money did he have?**

**4. Saroj has spent Rs. 20 in breakfast and Rs. 50 in lunch, how much money has he spent?**

**Teaching instructions:** Make the student practise more exercises similar to above of addition and subtraction without conversion from rupees to paisa.

# 21 Capacity

## Read, discuss and learn.

Which one of the following pots will contain more water?

bucket

jug

Bucket contains more water than jug. So, the capacity of bucket is more.

**Activity**

1. **Discuss and find, which one of the following pots has more capacity?**

(a)

(b)

(c)

2. **Which gyallin has the most capacity and which has the least capacity and why? Discuss.**

3. **This bucket contains four jugs of water. Compare the capacity of the given pots.**

**Teaching instructions:** Give the concept of more or less capacity by using the pots found in local areas and telling them to fill water.

## Capacity measuring pots and units

The capacity of pots is measured with the help of pots that measure liter and mililitre.

**Look at the measuring pots and recognize:**


100 mililitre


250 mililitre


500 mililitre


1 litre

**Which one has more capacity in 1 litre and 500 mililitre? Discuss and write in your exercise book.**


500 mililitre + 


500 mililitre = 


1 litre

**Therefore, 1 litre (l) = 1000 mililitre (ml)**

### Exercise

**1. Fill in the blanks with correct number. Which one has less capacity? Discuss and write in your exercise book.**


☐ mililiter + 


☐ mililiter = 


☐ mililiter

**2. Fill in the blanks with appropriate number.**


10 litre = 


☐ litre + 


☐ litre

**Teaching instructions:** Have a discussion with students by demonstrating standard pots of measuring capacity and introducing them. And compare their capacity by filling water from one to another.

# 22 Area

## Objects and comparison of their area of surface

**Read, discuss and learn.**

Your Mathematics book's surface is quadrilateral. Eraser's surface is also quadrilateral. Book's surface is greater than eraser. Therefore, book's area is greater than that of eraser's.


The surface of your bench is greater than your book. Therefore, the area of bench's surface is greater than that of book's.

Which one has greater surface area, blackboard or bench and which one has less? Discuss.

### Exercise

**Which one of the following similar shapes has greater area?**

1. (a) (b)

2. (a) (b)

3. (a) (b)

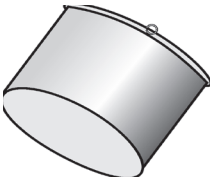
**Teaching instructions:** Tell them to compare their area on the basis of surface whether the things are thick or thin.

## Exercise

1. Which one has greater area: whether 'blackboard' or 'wall of the class' in the given picture?


2. Which one has greater area whether your book or exercise book?

3. Which one has bigger surface in lower part, a biscuit or a bucket? Which one has greater area and which one has less?



4. Which one has greater surface area whether a biscuit or a Gagri and which one has less?

5. Measure the hands, feet, and figures of your friends and find out their area.

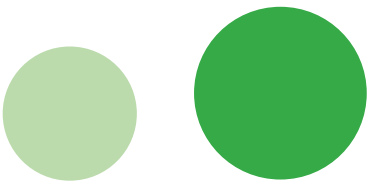
**Teaching instructions:**

Collect different things as mentioned above and show their plane surface and let them compare. And also give the concept that big surface has greater area and small surface has less area.

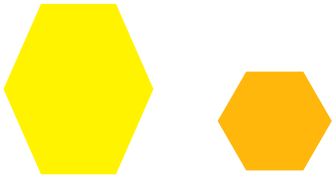
**7. Which one of the following figures has greater area and which one has less? Write in your exercise book.**

(a) (b)

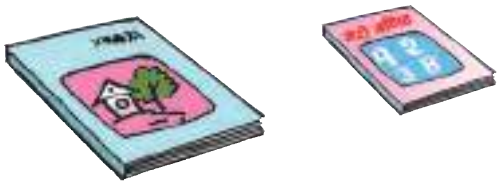
(a) (b)



(a) (b)



(a) (b)



**8. Write the names of five things that have greater area than that of your Maths book.**

**9. Write the names of five things that have less area than your bench.**

**10. Write the names of five things that have greater area than the window of your house.**

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**Teaching instructions:**

Divide the students of your class into two groups. Tell group A to tell or show the surface of an object. Tell B group to show or tell the name of objects with bigger and let them play such game. At the end the group announces the winner by counting the correct answer.

# 23 Weight

## Weight of objects and weight (Dhakas)

**Read, discuss and learn:**

Which one of the following objects is lighter and which one is heavier?

Box

Pencil

The box is heavier than pencil,. Therefore the box has more weight than the pencil.

The pencil is lighter than box. Therefore it has less weight than box.

We measure weight of objects with the help of weight and balance.

**Look at the weights, discuss and recognize.**






**1 kilogram** **500 gram** **250 gram** **100 gram** **50 gram**

1 kilogram = 500 gram + 500 gram = 1000 gram

Therefore, **1 kilogram(kg) = 1000 gram**

**Rita stood on a weighting machine to take weight. Her weight was 25 kg.**


The cauliflower and dhaka is in

balance, here the weight of cauliflower is 1 kilogram.

Write the name and weight of different objects while taking their weight in your home, shops, school.

## Exercise

1. **Which one is heavier in 1 kg or 500 gram? Which has more weight?**

2. **30 kg is written in the packet of rice. How many weight of 1kg will be equal to it?**

**Guess the weight of the following objects and write in your exercise book.**

(a) 4 kilogram
20 kilogram

**4 kilogram**

(b) 20 kilogram
200 kilogram

(c) 1 kilogram
50 gram

(d) 2 kilogram
500 gram

# 24 Algebra

## Exercise

**Copy in your exercise book and fill in the boxes with correct numbers.**

a. $4 + 2 = 6$

$3 + \square = 6$

$5 + \square = 6$

$2 + \square = 6$

$1 + \square = 6$

b. $9 + \square = 17$

$8 + \square = 17$

$10 + \square = 17$

$12 + \square = 17$

$4 + \square = 11$

c. $4 + \square = 10$

$5 + \square = 10$

$8 + \square = 10$

$7 + \square = 10$

$9 + \square = 10$

d. $7 + \square = 11$

$9 + \square = 11$

$6 + \square = 11$

$3 + \square = 11$

$10 + \square = 11$

e. $9 + \square = 15$

$10 + \square = 15$

$8 + \square = 15$

$11 + \square = 15$

$1 + \square = 15$

f. $4 + \square = 13$

$10 + \square = 13$

$7 + \square = 13$

$8 + \square = 13$

$1 + \square = 13$

g. $\square + 7 = 16$

$\square + 7 = 16$

$\square + 8 = 16$

$\square + 4 = 16$

$\square + 10 = 16$

$\square + 6 = 16$

h. $\square + 8 = 17$

$\square + 8 = 17$

$\square + 9 = 17$

$\square + 6 = 17$

$\square + 7 = 17$

$\square + 16 = 17$