



GOVERNMENT OF TAMIL NADU

STANDARD FIVE

MATHEMATICS

SCIENCE

SOCIAL SCIENCE

Term - III

Volume-2

A publication under Free Textbook Programme of Government of Tamil Nadu

Department of School Education

Untouchability is Inhuman and a Crime

Government of Tamil Nadu

First Edition - 2019

Revised Edition - 2022, 2023

Reprint - 2020, 2021, 2024

(Published under New syllabus in
Trimester Pattern)

NOT FOR SALE

Content Creation



State Council of Educational Research
and Training

© SCERT 2019

Printing & Publishing



Tamil NaduTextbook and Educational
Services Corporation

www.textbooksonline.tn.nic.in



MATHEMATICS

TERM - III

CONTENTS

MATHEMATICS

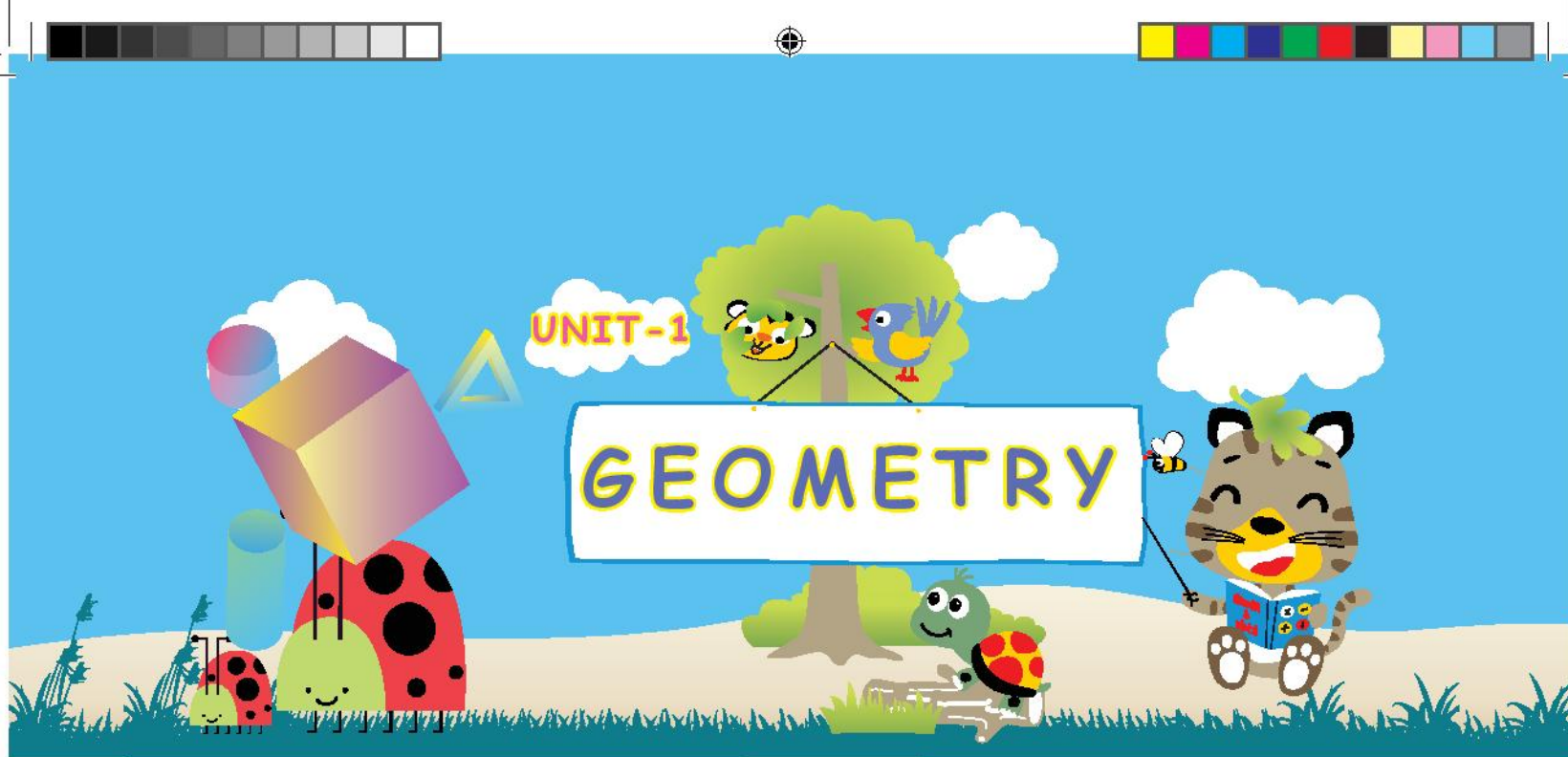
Unit	Title	Page Number	Month
1	GEOMETRY	1	January
2	NUMBERS	11	January
3	MEASUREMENTS	21	February
4	ALGEBRA	35	February
5	MONEY	41	March
6	FRACTIONS	53	March
	ANSWERS	66	



E-book



Assessment



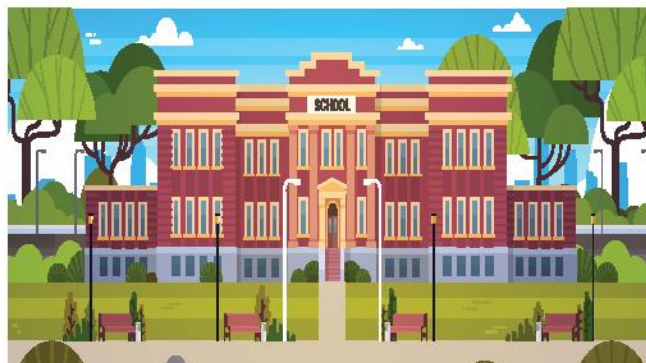
Perimeter and Area



Perimeter of the rectangle and square

Situation

Raju is a class 5 student of a Panchayat union middle school. Raju's head master wanted to fence the school as there is disturbance caused by the trespassers. Hence the headmaster decided to fence the school.



The headmaster asked Raju and his classmates to measure the length of the boundary of the school premises, so as to buy the required fencing wire.

Raju and his friends measured the length of each side and added them to find the total length.

Length of the boundary = sum of the length of each side

Here, the length of the boundary is called as perimeter.

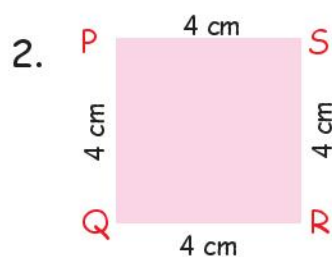
Hence, the sum of the length of all the sides of a closed area is called its perimeter.

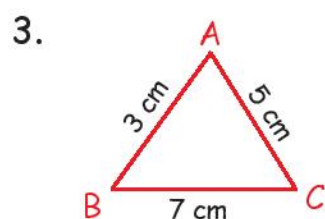
Perimeter is used in framing a photo, for fencing a vacant land, etc.,

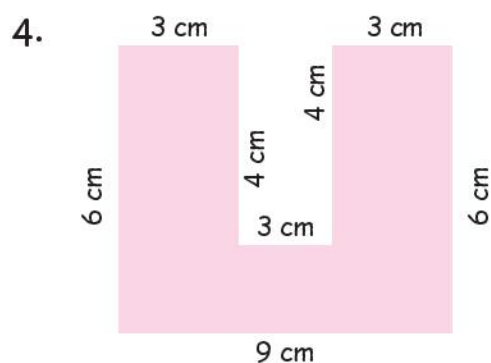
Activity 1

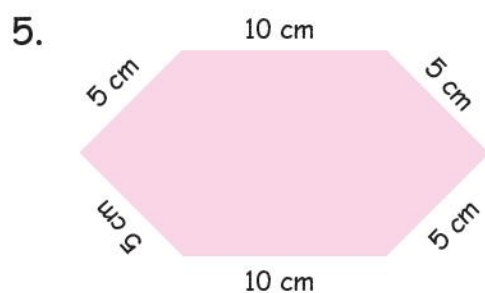
Find the perimeter of each figure:



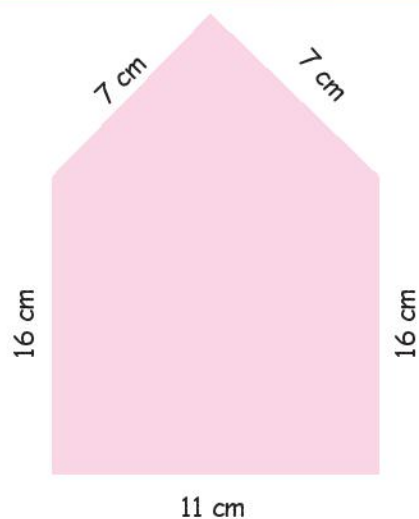




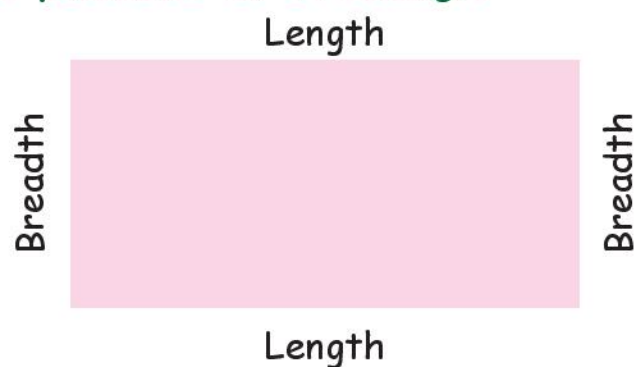




6.



Formula for the perimeter of a rectangle:



Perimeter = length + breadth + length + breadth (opposite sides of a rectangle are equal)

So, the perimeter of a rectangle = twice the length + twice the breadth

Perimeter of a rectangle = $(2 \times \text{length}) + (2 \times \text{breadth})$

Example 1.1

The length and the breadth of the rectangle given below is 5cm and 2cm respectively. Find its perimeter.

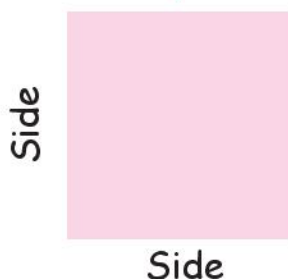


Solution

$$\begin{aligned}\text{Perimeter of rectangle PQRS} &= (2 \times \text{length}) + (2 \times \text{breadth}) \\ &= (2 \times 5) + (2 \times 2) \\ &= 10 + 4 \\ &= 14\end{aligned}$$

Therefore, the perimeter of the rectangle is 14 cm.

Formula for the perimeter of a square



The length of all the sides of a square are equal.

Therefore, the perimeter of a square = four times the length of one of its sides

$$\text{Perimeter of a square} = 4 \times (\text{the length of one side})$$

Example 1.2

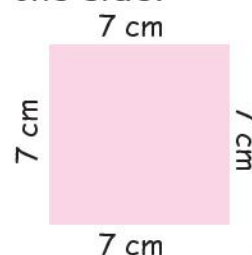
The length of one side of a square is 7cm. Find its perimeter.

Solution

The perimeter of a square is four times the length of one side.

$$\begin{aligned}\text{Perimeter of a square} &= 4 \times (\text{length of one side}) \\ &= 4 \times 7 \\ &= 28\end{aligned}$$

Therefore, the perimeter of the square is 28 cm.



Example 1.3

The length of a rectangular park is 60 cm, while its width is 50 cm. What is its perimeter?

Solution

$$\text{Perimeter of the rectangle} = (2 \times \text{length}) + (2 \times \text{breadth})$$

$$\begin{aligned}
 &= (2 \times 60) + (2 \times 50) \\
 &= 120 + 100 \\
 &= 220
 \end{aligned}$$

Therefore, the perimeter of the rectangular park is 220 cm.

Example 1.4

How much wire will be needed to put a triple fence around a square plot with side 20m? What will be the total cost of the wire at ₹ 50 per metre?

Solution

Perimeter of a square = $4 \times \text{length of one side} = 4 \times 20 = 80$

The perimeter of the square plot is 80 metres. Since the fence is to be a triple fence we must triple the perimeter

$80 \times 3 = 240$ m of wire will be needed to fence the square plot.

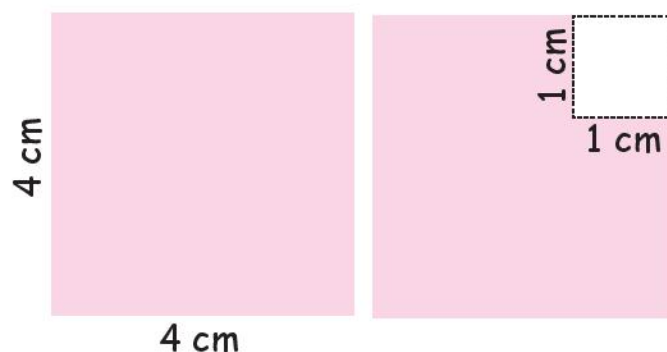
Now let us find out how much the wire will cost. One metre of wire costs ₹ 50

Therefore the cost of 240 m of wire will be $240 \times 50 = 12,000$

The total cost of wire for putting a triple fence around the plot will be ₹ 12,000

Try this

If a square of side 1 cm is cut out of the corner of a larger square with side 4 cm. What will be the perimeter of the remaining shape?



Exercise 1.1

- 1 How much wire will be needed to make a rectangle of length 6 cm and breadth 3 cm?
- 2 If the length of a rectangle is 14 m and its breadth is 10 m, what is its perimeter?
- 3 Each side of a square is 6 m long. Find its perimeter.
- 4 If we take 2 rounds of a field, that is 340 m long and 160 m wide. Find the distance covered in kilometers?
- 5 Sanju completes 10 rounds around a square park every day. If one side of the park is 110 m, then find the distance covered by sanju in a day in terms of kilometers and metres.

Area of the rectangle and square

Situation

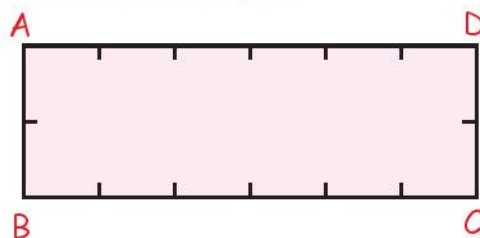
There are lot of mosquitoes in Kavitha's house. These mosquitoes enter her house through the windows. Kavitha's mother decided to cover the windows by a mesh. What kind of measurement is required by Kavitha's mother to cover the window using the mesh?

The measurement required by Kavitha's mother to cover the window is the area.

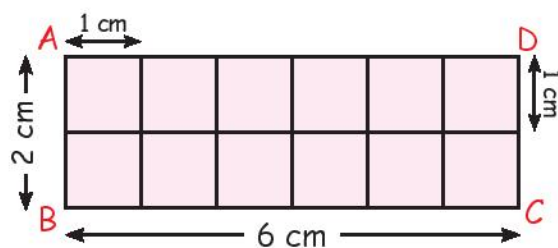
Area can be defined as the space occupied by a flat shape or the surface of an object.

The unit denoted for the area of an object is square units. (Example: 16 sq. cm, 24 sq. m).

Formula for the area of a rectangle



In the rectangle ABCD given above, 1 cm divisions were marked on each side.



The points on opposite sides were joined as shown in the figure above. The length of the sides of each square thus created is 1 cm.

Therefore, the area of each square is 1 sq.cm, Its a unit square.

In the rectangle ABCD we have created 2 rows of 6 squares each.

Therefore, the number of squares in the rectangle ABCD is $6 \times 2 = 12$

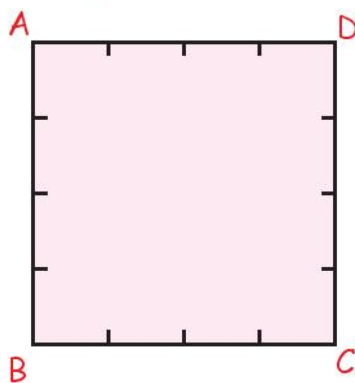
Here, the length of the rectangle ABCD is 6 cm and its breadth is 2 cm.

The number of unit squares formed are the same as the product of the length and breadth of the rectangle.

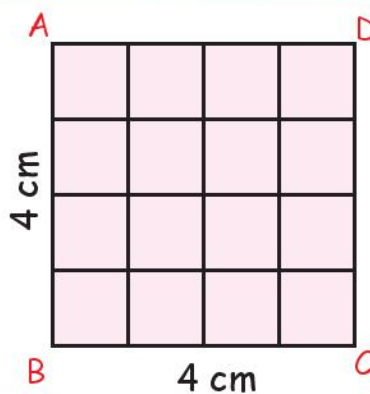
Therefore, the area of rectangle ABCD = $6 \times 2 = 12$ sq.cm

Therefore, the area of the rectangle = length $\times$ breadth

Formula for the area of a square:



In the square ABCD given above, 1 cm divisions were marked on each side.



The points on opposite sides were joined as shown in the figure above. In the square ABCD we have created 4 rows of 4 squares each. The length of the sides of each square thus created is 1 cm.

Therefore, the area of each square is 1 sq.cm, Its a unit square.

Look at the square given above. The side of the square is 4 cm and we have 16 squares of 1cm each within this square.

The number of unit squares formed are the same as the product of two sides of the square.

Since the length of each side of the square is 4 cm the area of the square = $4 \times 4 = 16$ sq.cm.

Therefore, the area of a square = length of a side $\times$ length of a side

It is not necessary to divide a square or rectangle into small squares every time when you calculate their area. The advantage of a formula is that you can calculate the area simply by substituting the appropriate values.

Example 1.5

What is the area of a rectangle of length 10 cm and breadth 8 cm?

Solution

$$\begin{aligned}\text{Area of a rectangle} &= \text{length} \times \text{breadth} \\ &= 10 \times 8 \\ &= 80\end{aligned}$$

Therefore, the area of the rectangle is 80 sq.cm.

Example 1.6

A wall that is 6 m long and 2 m wide has to be painted. If the labour charges are ₹20 per sq.m, then what is the cost of labour for painting the wall?

Solution

First let us calculate the area of the wall to be painted

$$\begin{aligned}\text{Area of the wall} &= \text{length of the wall} \times \text{breadth of the wall} \\ &= 6 \times 2 = 12\end{aligned}$$

Thus, the area of the wall is 12 sq.m.

Labour cost of 1 sq.m is ₹20.

So, the labour cost for 12 sq.m. = $12 \times 20 = ₹240$.

Therefore, the cost of labour for painting the wall is ₹240.

Example 1.7

What is the area of a square with side 12 cm?

Solution

$$\begin{aligned}\text{Area of a square} &= \text{length of a side} \times \text{length of a side} \\ &= 12 \times 12 = 144\end{aligned}$$

Therefore, the area of the square is 144 sq.cm.

Example 1.8

One side of a square floor is 3 m. If the cost of labour for laying 1 sq.m of the floor is ₹25, then what is the total cost of labour?

Solution

First we must find the area of the square floor

$$\begin{aligned}\text{Area of the square floor} &= \text{length of a side} \times \text{length of a side} \\ &= 3 \times 3 = 9\end{aligned}$$

Therefore, the area of the square floor is 9 sq. m.

The labour cost of laying 1 sq.m of flooring is ₹25.

Therefore, the cost of laying 9 sq.m of flooring is $25 \times 9 = ₹225$.

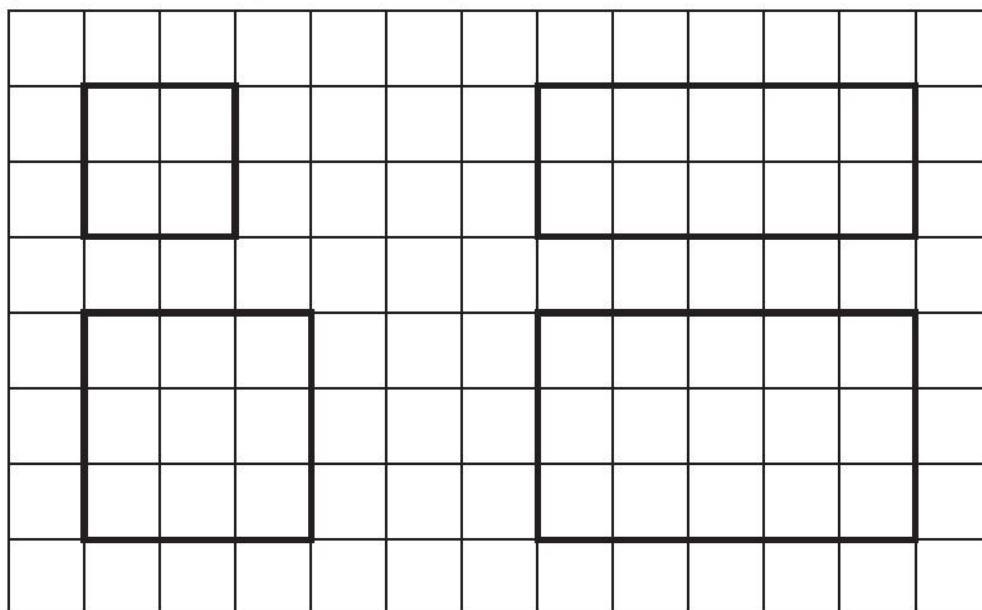
Exercise 1.2

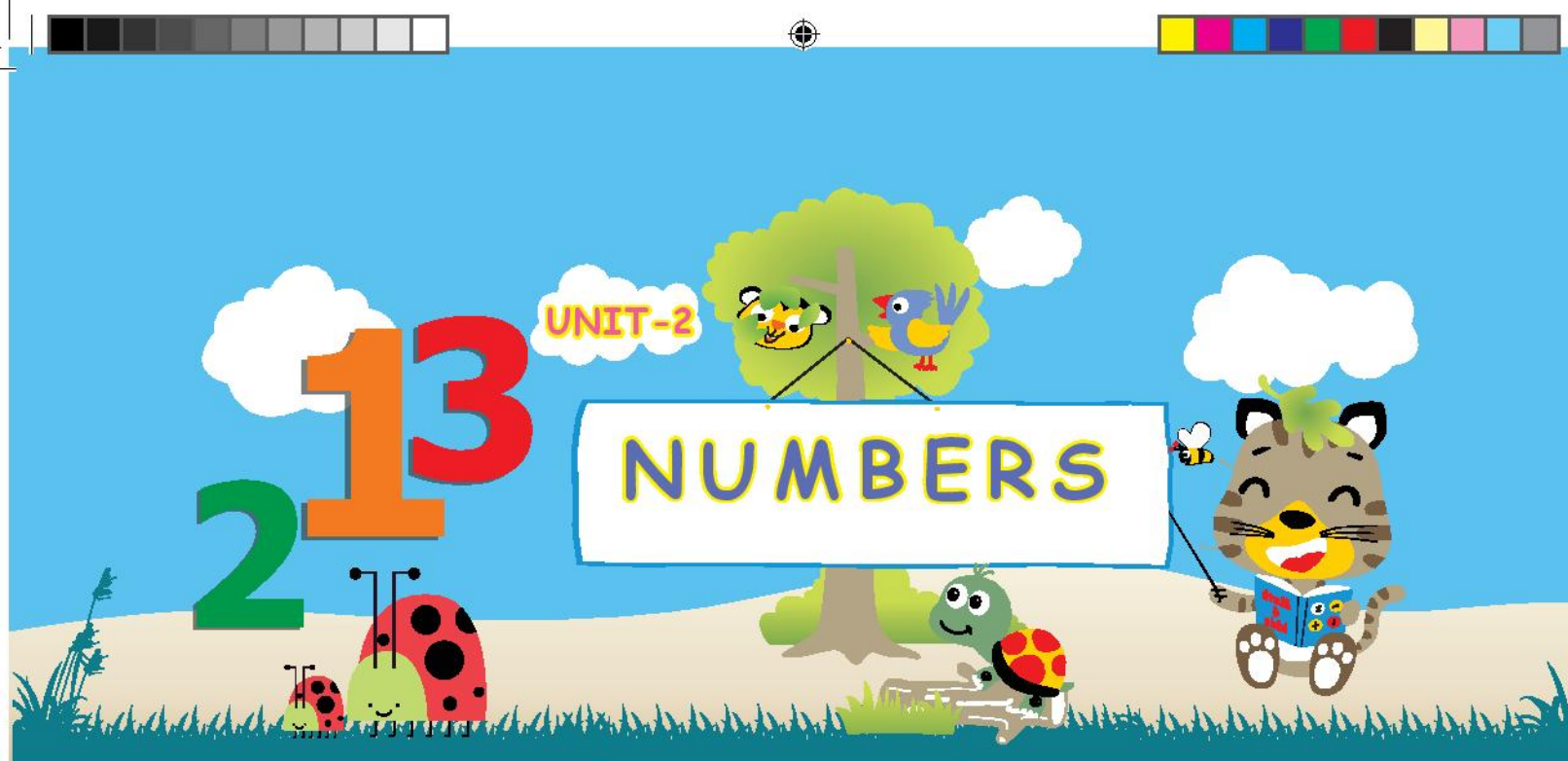
- 1 The length of the side of each square is given below. Find its area.
(i) 10 metres (ii) 5 cm (iii) 15 metres (iv) 16 cm
- 2 Find the area of the following rectangles.
(i) length = 6 cm and breadth = 3 cm
(ii) length = 7 m and breadth = 4 m
(iii) length = 8 cm and breadth = 5 cm
(iv) length = 9 m and breadth = 6 m
- 3 If the cost of 1 sq.m of a plot is ₹800, then find the total cost of the plot that is 15 m long and 10 m breadth.
- 4 The side of a square is 6 cm. The length of a rectangle is 10 cm and its breadth is 4 cm. Find the perimeter and area of both the square and rectangle.
- 5 What will be the labour cost of laying the floor of an assembly hall which is 14 m long and 10 m breadth if the cost of laying is ₹60 per sq.m?



Activity 2

Using the grid sheet find the area and perimeter of the rectangles and squares. Each square is 1 sq. cm.





2.1 Estimation

Situation 1

There are two bunches of grapes find the number of grapes in bunch 'A' and bunch 'B' without counting it.



Number of grapes in bunch 'A' -----

Number of grapes in bunch 'B' -----

Then count the exact number of grapes and note it.

Exact number of grapes in bunch 'A' -----

Exact number of grapes in bunch 'B' -----

Situation 2

The estimated bus fare for a trip from trichy to Chennai is ₹ 300
The Exact bus fare is ₹ 286.



Therefore, the value which is nearest to the correct value is called its estimated value.

The symbol for estimation is $\simeq$

Let us Know

Other words denoting estimates are 'About', 'Approximate', 'nearby', etc.,

Activity 1

Fill in the boxes

	Estimated value	Exact value
Number of bananas in a bunch		
Number of Tamarind seeds in your hand		
Number of leaves in small neem stick		
Your weight		
Your teacher's height		

Able to estimate a number upto two digit

Estimating a number to the desired digit by rounding off is called estimation.

To estimate a number to a particular digit, first underline the digit right to that digit

Case 1: If underlined digit is less than 5, then the number should be rounded off to that particular digit by making the underlined digit as 0

For example, when we estimate 64 to its nearest Tens place the number have to be rounded to 60.



Case 2: If the underlined digit is greater than or equal to 5, then add 1 to the digit to which the number is to be estimated and make the underlined digit as 0

For example, when we estimate 65 to its nearest Tens place the number have to be rounded to 70.

Example 2.1

Estimate 48 to its nearest Tens place.

Solution

Estimating 48 to its nearest Tens place, we get 50.

Since the unit place is 8, which is greater than 5, the number have to be rounded upto 50.

Therefore, $48 \approx 50$.

Example 2.2

Estimate 74 to its nearest Tens place.

Solution

Estimating 74 to its nearest Tens place, we get 70.

Since the unit place is 4, which is less than 5, the number have to be rounded down to 70.

Therefore, $74 \approx 70$.

Example 2.3

Estimate 144 to its nearest Tens place.

Solution

Estimating 144 to its nearest Tens place, we get 140.

Since the unit place is 4, which is less than 5, the number have to be rounded down to 140.

Therefore, $144 \approx 140$.

Example 2.4

Estimate 155 to its nearest Tens place.

Solution

Estimating 155 to its nearest Tens place, we get 160.

Since the unit place is 5, The number have to be rounded to 160.

Therefore, $155 \approx 160$.

Able to estimate sums, differences products and quotients to two digit numbers.

Example 2.5

If the cost of 1 kg apple is ₹ 95 and the cost of 1 kg Guava is ₹ 48 then estimate their cost nearest to Tens place and find their sum. Also, find the difference between the estimated sum and actual sum.

Solution

	Actual value	Estimated value
The cost of 1kg apple	= ₹ 95	₹ 100
The cost of 1kg Guava	= ₹ <u>48</u>	₹ <u>50</u>
Sum	= ₹ <u>143</u>	₹ <u>150</u>
Difference between estimated value and actual value	} = Estimated value - Actual value = 150 - 143 = ₹ 7	

Example 2.6

If the cost of a note book is ₹ 42 and the cost of a pen is ₹ 27, then estimate their cost nearest to Tens place and find their difference. Also, find the difference between the estimated value and actual value.

Solution

	Actual amount	Estimated amount
The cost of a note book	= ₹ 42	₹ 40
The cost of a pan	= ₹ 27	₹ 30
Difference	= ₹ 15	₹ 10
Difference between actual value value and estimated value	$\begin{aligned} &= \text{Actual value} - \text{Estimated value} \\ &= 15 - 10 \\ &= ₹ 5 \end{aligned}$	

Try this

Write down the estimated value of numbers and find their sum. Also, find the difference of their sum.

Numbers	Estimated sum	Actual sum	Difference
68, 31	$70 + 30 = 100$	$68 + 31 = 99$	1
33, 42			
46, 52			
29, 35			

Example 2.7

If the cost of 1 metre cloth is ₹ 86, then find the estimated cost of 5 metre cloth nearest to its Tens place.

Solution

	Actual cost	Estimated cost
The cost of 1 metre cloth	= ₹ 86	₹ 90
The cost of 5 metre cloth	= 86×5	90×5
	= ₹ 430	₹ 450

Therefore, the cost of 5 metre cloth is ₹ 450

Example 2.8

If the cost of 3 kg potato is ₹ 63, then estimate its cost nearest to Tens place and find the cost of 1 kg potato.

Solution

	Actual cost	Estimated cost
The cost of 3 kg potato =	₹ 63	₹ 60
The cost of 1 kg potato =	$63 \div 3$	$60 \div 3$
	₹ 21	₹ 20

Therefore, the cost of 1 kg potato is ₹ 20

Try this

Write down the estimated value of numbers and divide. Then find the difference between estimated value and actual value.

Numbers	Estimated sum	Actual sum	Difference
42, 14	$40 \div 10 = 4$	$42 \div 14 = 3$	1
81, 9			
63, 21			
36, 9			

Exercise 2.1



Fill in the blanks

- Estimation of 27 to its nearest Tens place is -----
- Estimation of 65 to its nearest Tens place is -----
- The cost of 1kg pomegranate is ₹ 93. Then the estimated cost is -----
- Estimation of 76 bananas to its nearest Tens place is -----





- 2 There are 27 girls and 38 boys in a class. Find the sum and estimate the sum to its nearest Tens place.
- 3 If the cost of a geometry box is ₹ 53 and the cost of a note book is ₹ 36, then estimate their cost to its nearest Tens place and find the sum. Also, find the difference between the estimated value and the actual value.
- 4 If Kavitha has 93 pictures and she gave 42 pictures to her friend Neela, then estimate the pictures to its nearest Tens place and find their difference. Also, find the difference between actual value and the estimated value.
- 5 The cost of a pen is ₹ 32. Find the cost of 6 pens and estimate it to its nearest Tens place.
- 6 Arun has ₹ 47, Raja has ₹ 54. Find the sum and estimate it to its nearest Hundreds place.
- 7 There are 21 chocolate bars in a packet. Find the number of chocolate bars in 9 such packets and estimate it to its nearest Hundreds place.
- 8 132 peanut candies are shared equally with 12 students. Find the share for one student and estimate it to its nearest Tens place.

2.2 Systematic Ordering

Logically find out something based on the condition.



LOGICALLY TRY AND SOLVE THE PROBLEM

Know the sequence of numbers

Sequence of natural numbers	1, 2, 3, 4, 5.....
Sequence of odd numbers	1, 3, 5, 7, 9.....
Sequence of even numbers	2, 4, 6, 8,
Sequence of square numbers	1, 4, 9, 16, 25





Sequence of prime numbers

2, 3, 5, 7, 11

Multiples (Multiples of 2)

2, 4, 6, 8, 10

Multiples of 4

4, 8, 12, 16

Add the same number and set a successive
Numbers

1, 4, 7, 10

Subtract the same number and set a successive
Numbers

37, 32, 27, 22

Multiply the same number and set a successive
Numbers

1, 3, 9, 27

Divide the same number and set a successive
Numbers

64, 32, 16

LET'S GIVE NUMBERS TO THE ENGLISH ALPHABLET.

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

Example 2.9

(i) If CAT is 24 [3 + 1 + 20],

Then BAT is 23 [2 + 1 + 20]

(ii) If BOY is 21525 [2 15 25],

Then GIRL is 791812 [7 9 18 12]

(iii) If PEN is 35 [16 + 5 + 14]

Then PENCIL is 59 [16 + 5 + 14 + 3 + 9 + 12]

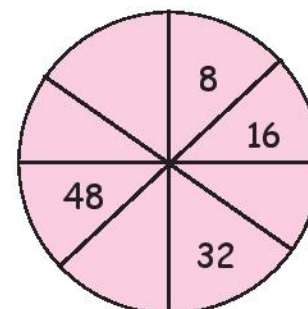
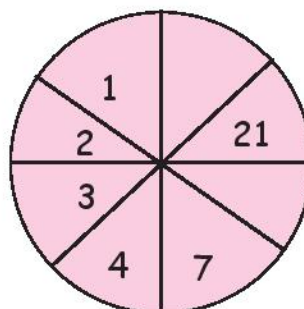
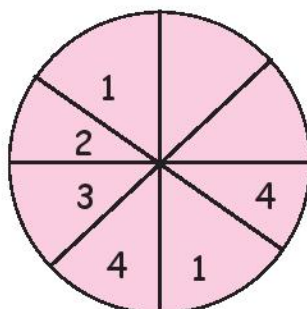
Activity 2

A. Colour each row of numbers using the instructions given below.

2	23	5	37	61	13	17	29	97
1	16	4	25	9	36	49	64	81
1	3	5	7	9	11	13	15	17
2	4	6	8	10	12	14	16	18
6	12	18	24	30	36	42	48	54
8	16	24	32	40	48	56	64	72

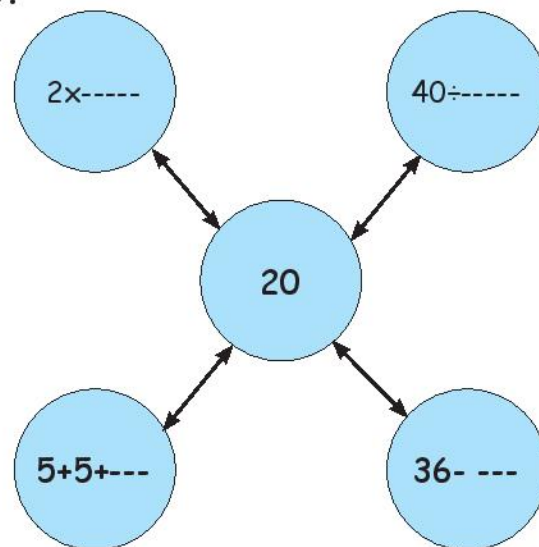
1. **Orange** colour to the prime number row.
2. Don't colour the odd number row.
3. **Blue** colour to multiples of 6 row.
4. **Orange** colour to the square number row.
5. Don't colour the even number row.
6. **Blue** colour the multiples of 8 row.

B. Let us fill the number wheel





C. Complete the circle using the given four basic operators to get the number 20.



D. Fill in the blanks:

1. 5, 10, 15, -----, 25
2. 30, 24, -----, 12, 6
3. 7, 9, 11, -----, -----, 17
4. 1, 4, 9, -----, 25
5. 1, 4, 7, -----, 13, -----, 19

E. Answer the following

1. If **BOOK** is 43,
Then **PEN** is -----
2. If **SCHOOL** is 1938151512,
Then **CLASS** is -----
3. If **BAG** is 10,
Then **BOOK** is -----
4. If **LION** is 50,
Then **TIGER** is -----
5. If **HEN** is 8514,
Then **COCK** is -----

MEASUREMENTS

To know the volume of a solid body by informal measurement

Situation 1

Venba's uncle gave her a sweet box. The sweet box contains 10 pieces of soan papdi. Now, we can tell that the capacity of the sweet box is 10 soan papdi. So, we can tell that the volume of that sweet box is the space occupied by 10 pieces of soan papdi.

**Situation 2**

Kuralini arranged her books in her school bag. She kept five books in her bag. Hence, we can say that the capacity of the bag is 5 books.





Here, 5 books occupy the space in one bag.

The volume of 5 books is one bag.

The volume of 1 book is $\frac{1}{5}$ th of a school bag.

Capacity of a container is the atmost quantity of an item the container can hold.

Volume of a solid is the space occupied by the solid.

Exercise 3.1

1 Tick the object which has more volume

☐☐☐☐☐☐☐☐☐☐

2

Arrange the given objects according to their volume

(i)



(ii)



(iii)

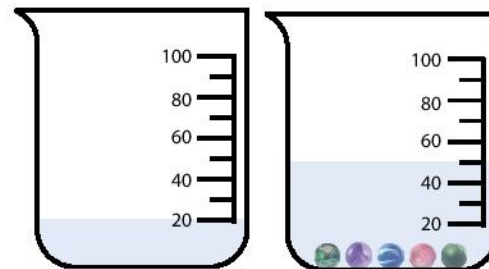


Activity 1

Measure the height of the water level by putting the object into the beaker.

Mark the measures millimeter and centimeter with a scale in a glass. Then fill the water at upto 20 mm.

Put a marble into the glass and note the height of the water level.



Similarly, put the items given in the table into the glass and note the height of the water level.

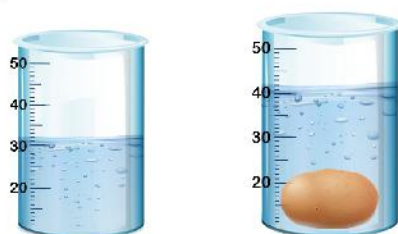
Name of the objects	Water level (mm)
Marble	45 mm
Eraser	
Coin	
Stone	
Potato	
Tomato	



Activity 2

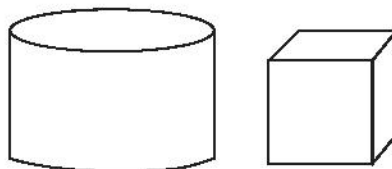
- ❖ Take some water in a beaker and mark its level.
- ❖ Take a solid, that is, potato and immerse it in the beaker containing water.

What do you observe?

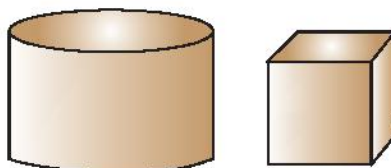


Activity 3

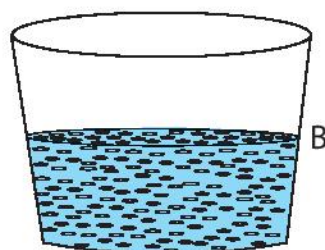
1. Take 2 sheets of same size (may be an old rough paper).
2. Using scissor and glue make a cylindrical and a cubical box.



3. Fill both with sand and cover all the ends.



4. Take a bucket. Partially, fill the bucket with water. Mark the water line.

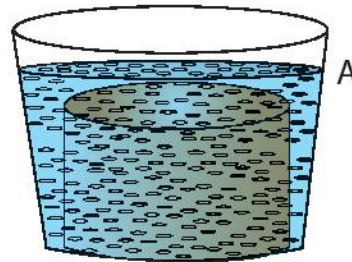


Before immersing sand box

5. Now, if we dip the sand-filled cylindrical box inside the bucket/tub, will there be any change in the water level? If so, will it increase or decrease?



6. Now, dip the sand-filled cylindrical box inside the bucket/tub. Mark the water level as "A" (after).



Let the children observe the rise in the water level. Ask them the following:

- What do you observe? Is there any changes in the water level?
- What could be the reason for change in the level?
- Could you find the space occupied by the cylindrical box?

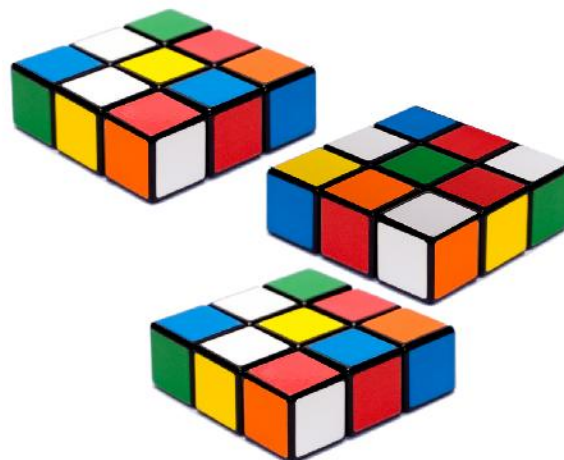
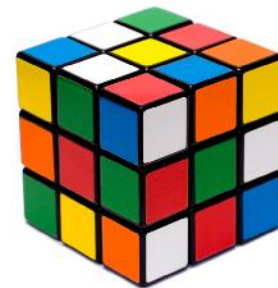
Finding volume using unit cubes.

We shall measure the volume of solid objects using unit cubes. Unit cubes are cubes with dimension of length = 1 unit, breadth = 1 unit and height = 1 unit. The units may be Centimetre or Metre.

Rubik's cube:

$$1 \text{ Cube} = 3 \times 3 \times 3 = 27 \text{ Units.}$$

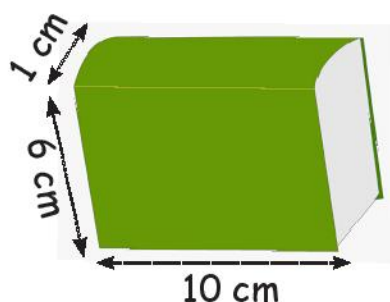
The cube can be filled by 3 layers of 3 rows and 3 columns of unit cube, that is, the volume of cube is $3 \times 3 \times 3 = 27$ Units.



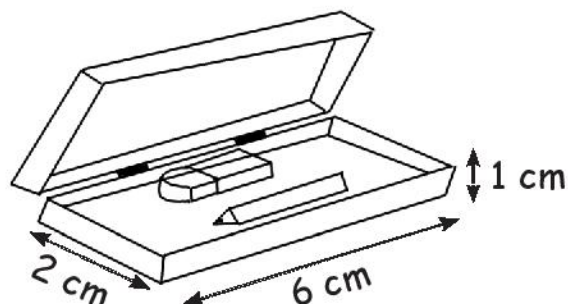
Activity 4

We shall follow the method of unit cubes to calculate or find the volume of the objects given below. The dimensions of the objects are mentioned.

Book



Pencil box



Exercise 3.2

- 1 Volume of regular solids such as cube and cuboid can be found by multiplying the dimensions. Complete the given table by finding the volume of the given objects.

S.No.	Objects	l	b	h	Volume (cubic cm)
1.	Note books	6 cm	15 cm	1 cm	
2.	Name board	20 cm	90 cm	2 cm	
3.	Show case cub board	70 cm	250 cm	70cm	
4.	Gift box	10 cm	10 cm	10 cm	
5.	Dice	1 cm	1 cm	1 cm	

- 2 Complete the given table by finding the volume of the given objects.

S.No.	Objects	l	b	h	Volume (cubic units)
1.	Brick	6 cm	8 cm	10 cm	—
2.	Window pane	5 cm	—	4 cm	900 cubic cm
3.	Sunshade	70 cm	20 cm	—	4200 cubic cm
4.	Steps	80 cm	—	20 cm	32000 cubic cm
5.	Room	—	4 m	3 m	36 cubic m

- 3 Find the number of bricks of dimension $20\text{ cm} \times 5\text{ cm} \times 10\text{ cm}$ required to construct a wall of dimension $300\text{ cm} \times 200\text{ cm} \times 20\text{ cm}$.

- 4 How many sack of dimension $15\text{ cm} \times 45\text{ cm} \times 90\text{ cm}$ filled with rice can be kept in a room of dimension $3\text{ m} \times 18\text{ m} \times 9\text{ m}$.



CAPACITY

- 3.1 Able to apply the four operation in solving problems involving capacity.

Recall



50ml



250ml



500ml



750ml



1000ml



Let us recall

10 millilitre (ml)	= 1 centilitre (cl)
10 centilitre	= 1 decilitre
10 decilitre	= 1 litre (l)
10 litre (l)	= 1 decalitre
10 decalitre	= 1 hectalitre
10 hectalitre	= 1 kilolitre (kl)

Let us know

1 litre (l)	=	1000ml
$\frac{1}{2}$ litre	=	500ml
$\frac{1}{4}$ litre	=	250ml
$\frac{3}{4}$ litre	=	750ml

Note:

Generally, we used to write millilitre as ml and litre as l in short.

CONVERSION

Example 3.1

Convert into millilitre.

(i) 2 l 500 ml

1 l = 1000 ml

$$\begin{aligned}2 \text{ l } 500 \text{ ml} &= (2 \times 1000) + 500 \text{ ml} \\&= 2000 + 500 \\&= 2500 \text{ ml}\end{aligned}$$

$$2 \text{ l } 500 \text{ ml} = 2500 \text{ ml}$$

Note:

To convert litre into millilitre multiply the given litre by 1000.

Note:

1 kilolitre (kl) = 1000 litre (l) To convert kilolitre into litre multiply the given kilolitre by 1000.

(ii) 7 Litre = (7×1000) ml
= 7000 ml

(iii) 6 Litre = (6×1000) ml
= 6000 ml

(iv) 5 l 700 ml = $(5 \times 1000) + 700$ ml
= 5000 + 700 = 5700 ml

Try this

Convert into millilitre:

- 5 l 500 ml
- 9 l 200 ml
- 2 l 300 ml

Activity 5

Litre	Millilitre
1 l	1000 ml
2 l	2000 ml
3 l	
4 l	
5 l 300 ml	5300 ml
6 l	
7 l	
8 l 400ml	
9 l	
10 l 200ml	

Example 3.2

Conversion Millilitre into litre

(i) 7000 ml

$$7000 \text{ ml} = 7000 \div 1000$$

$$= 7 \text{ l}$$

$$\begin{array}{r} 7 \\ 1000 \overline{) 7000} \\ \underline{7000} \\ 0 \end{array}$$

Millilitre	Litre
10000	10
9000	
8000	
7000	
6000	

Note:

To convert millilitre into litre divide the given millilitre by 1000

Addition

Example 3.3

(i) Add 6 l 700 ml and 12 l 800 ml.

	l	ml
	6	700
+	12	800
	19	500

$$700 \text{ ml} + 800 \text{ ml} = 1500 \text{ ml}$$

$$1500 \text{ ml} = 1 \text{ l } 500 \text{ ml}$$

Subtraction

Example 3.4

Find the difference

(i) 15 l 500 ml - 6 l 300 ml

	l	ml
	15	500
-	6	300
	9	200

$$\text{Difference} = 9 \text{ l } 200 \text{ ml}$$

(ii) 36 l 400 ml - 12 l 550 ml

	l	ml
	3 ⁵	4 ¹³ 00
-	12	550
	23	850

Try this

- 4 l 300 ml + 6 l 700 ml
- 7 l 250 ml + 2 l 300 ml
- 5 l 500 ml - 4 l 450 ml
- 46 l 300 ml - 12 l 550 ml

$$36 \text{ l } 400 \text{ ml} - 12 \text{ l } 550 \text{ ml} = 23 \text{ l } 850 \text{ ml}$$

Example 3.5

Look at the quantity of milk bought for three days to make sweets in a bakery. Find the total quantity of milk bought for three days?

Monday	7 l	300ml
Tuesday	15 l	350ml
Wednesday	16 l	200ml

Solution:

		l	ml
Quantity of milk bought on Monday	=	7	300
Quantity of milk bought on Tuesday	=	15	350
Quantity of milk bought on Wednesday	= +	16	200
Total quantity of milk bought	=	38	850

Total quantity of milk bought on Monday, Tuesday and Wednesday } = 38 l 850 ml

Do It Yourself

Find the total quantity of milk bought in seven days.

Example 3.6

A tin contains 10 l 500 ml of coconut oil out of this 7 l 250 ml oil was used. What is the remaining quantity of coconut oil?

Solution:

		l	ml
Total quantity of coconut oil	=	10	500
The quantity of coconut oil used	= -	7	250
Remaining coconut oil	=	3	250

Multiplication in capacity

Example 3.7

Multiply the following:

$$4 \text{ l } 200 \text{ ml} \times 3$$

	l	ml
	4	200
×		3
	12	600

Try this
2 l 250 ml × 2

$$4 \text{ l } 200 \text{ ml} \times 3 = 12 \text{ l } 600 \text{ ml}$$

Example 3.8

Deepak fills 1 litre 500 ml petrol in a day. How much quantity of petrol will he fill in 5 days?

Solution:

		l	ml
Petrol filled by Deepak in a day	=	1	500
Petrol filled by Deepak in 5 days	=	×	5
Total quantity of petrol	=	7	500

Division in capacity

Example 3.9

(i) $2 \text{ l } 320 \text{ ml} \div 2$

	l	ml
	1	160
2	2	320
	- 2	↓
		3
	-	2
		12
		12
		0

Try this
18 l 240 ml ÷ 6

$$2 \text{ l } 320 \text{ ml} \div 2 = 1 \text{ l } 160 \text{ ml}$$



- (ii) Vimal shared 500 ml cooldrink equally, to his two children.
How much quantity of cooldrink would each child get?

Solution:

The quantity of cooldrink that vimal bought = 500ml

Number of children = 2

The quantity of cooldrink that each child get = $\frac{500}{2} = 250\text{ml}$

Each child will get 250ml of cooldrink.

Exercise 3.3



1 Fill in the blanks

- (i) _____ is the smallest metric measure of capacity.
(ii) _____ is the largest unit of volume and equals _____ litres.
(iii) 7 kl 30l = _____.
(iv) 5 l 400 ml = _____ml.
(v) 1300 ml = _____l _____ml

2 Match the following

- (i) 4500 ml - 6 l 500 ml
(ii) 3250 ml - 8 l 200 ml
(iii) 6500 ml - 7 l 50 ml
(iv) 8200 ml - 4 l 500 ml
(v) 7050 ml - 3 l 250 ml

3 Add and write in litres

- (i) 400 l + 50 l + 500 ml
(ii) 3 kl + 400 l + 3 ml
(iii) 1400 ml + 5680 ml + 280 l

4 Subtract:

- (i) 3 kl from 15 kl 485 l
- (ii) 15 kl from 20 kl
- (iii) 345 ml from 5 l

5 Multiply the following:

- (i) 3 l 200 ml $\times$ 8
- (ii) 4 l 450 ml $\times$ 4
- (iii) 5 l 300 ml $\times$ 5
- (iv) 6 l 700 ml $\times$ 6

6 Divide the following:

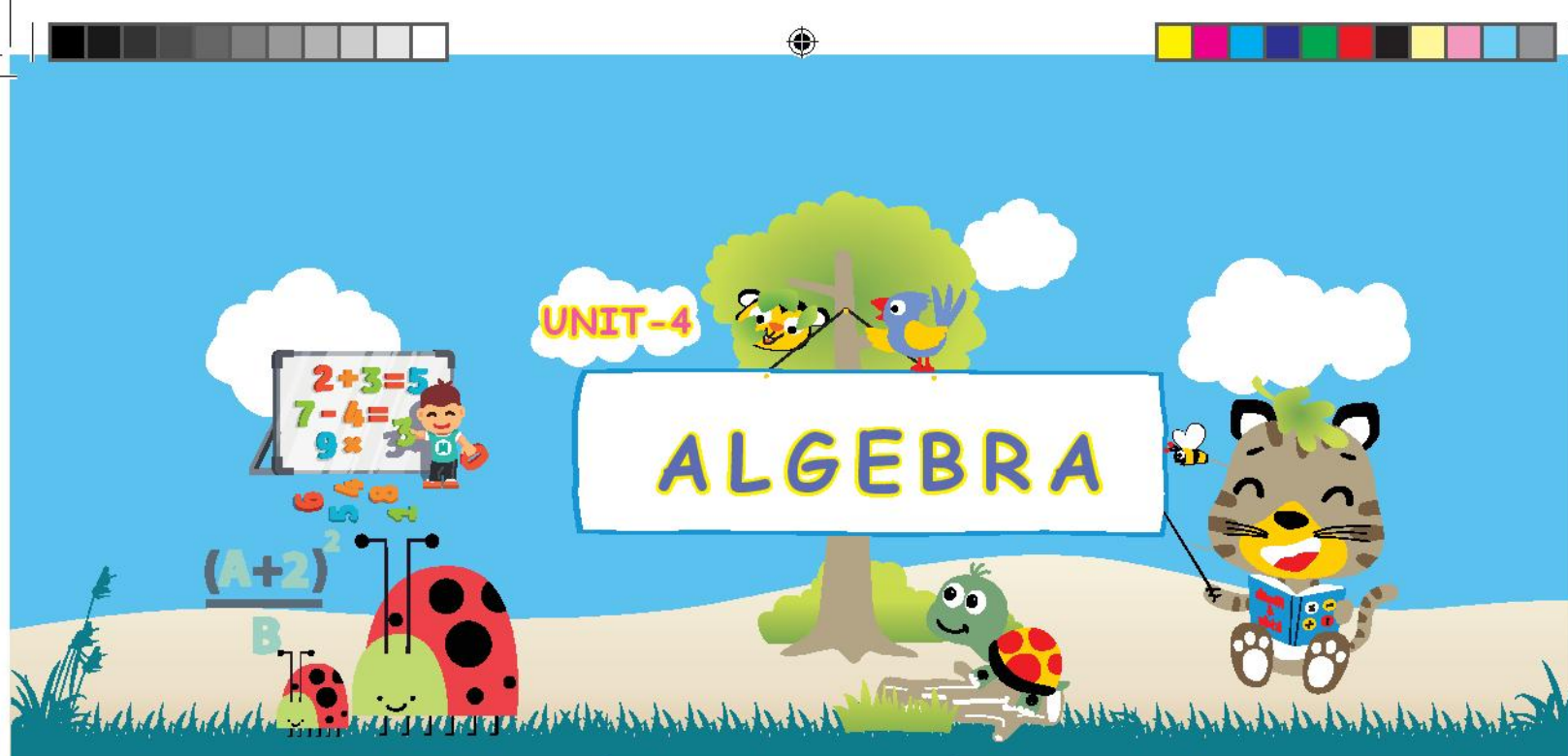
- (i) 18 l 240 ml $\div$ 6
- (ii) 20 l 600 ml $\div$ 2
- (iii) 21 l 490 ml $\div$ 7
- (iv) 25 l 350 ml $\div$ 5

7 Kalaiyarasi bought 5 l 500 ml groundnut oil and 750 ml sesame oil. How much quantity of oil did she bought in all?

8 In a fuel station there was 70 l 500 ml of fuel. How much quantity of fuel will be left after selling 35 l 700 ml of fuel?

9 A pot contains 9 l 800 ml of water, how much quantity of water will 7 such pots contain?

10 25 l 500 ml of milk is filled in 5 milk cans, how much quantity of milk is filled in one can?



Situation

Mala: Sir, my brother said he was studying algebra. What is algebra?

Sir: To put it simply, algebra consists of the use of numbers and letters to state and solve problems.

Arun: Does that mean addition and subtraction of letters? How do we do that?

Sir: To prepare for that, let's first learn a few things using numbers.



Equality

Whenever we add, subtract, multiply or divide two numbers, the answer we get is always another number. For example when we add 4 and 2, we get the number 6. We write this as $4 + 2 = 6$. Similarly, $10 - 4 = 6$, $12 \div 2 = 6$, $6 \times 1 = 6$.

Now, let us think about this in another way.

Suppose that, by performing a mathematical operation on two numbers, we have obtained the number 10. Let us find pairs of such numbers.

They could be $(5 + 5)$, $(17 - 7)$, (5×2) , $(20 \div 2)$ etc.



When we want to say a number obtained by adding 5 and 5, it is easier to express it by using brackets like this: $(5 + 5)$.

$(17 - 7)$ means a number obtained by subtracting 7 from 17.

(5×2) means a number obtained by multiplying 5 by 2.

$(20 \div 2)$ means a number obtained by dividing 20 by 2.

Arrangement of numbers like $(5 + 5)$, $(17 - 7)$, (5×2) and $(20 \div 2)$ are called expressions. The value of each of these expressions is 10, which means all these expressions are equal to each other.

Hence, we can also write this as,

$$(5 + 5) = (17 - 7) = (5 \times 2) = (20 \div 2)$$

An expression such as $(5 + 5) = (17 - 7)$ or $(5 + 5) = (20 \div 2)$ is called an 'equality'.

$5 + 2 = 7$, $8 \times 1 = 8$ are also equalities.

Exercise 4.1

- 1 Using brackets, write three pairs of numbers whose sum is 12. Use them to write three equalities.
- 2 Find four pairs of numbers, one for each of addition, subtraction, multiplication and division that make the number 16. Write the equalities for each of them.

Inequality

The value of the expressions $(6 + 3)$ and (6×3) are 9 and 18 respectively. It means the above two expressions are not equal.

We can consider another example. Take two numbers 4 and 5. We know that 4 is not equal to 5. But, still we can relate those two numbers by a relationship.

If two expressions or numbers are not equal, one of them is greater or smaller than the other. To show 'greater than' and 'lesser than', we use the symbols ' $>$ ' and ' $<$ ' respectively.

This kind of representation is called an 'inequality'.

Let us consider another example, the value of $(9 - 5)$ is 4 and the value of $(25 \div 5)$ is 5 and we know that $4 < 5$. So, the relation between the expressions $(9 - 5)$ and $(25 \div 5)$ can be shown as $(9 - 5) < (25 \div 5)$.

Do you know?

Note: Have you ever seen these symbols ' $\geq$ ' and ' $\leq$ '?

These, two symbols can be read as, greater than or equal to ($\geq$) and lesser than or equal to ($\leq$).

Example 4.1

Fill in the boxes between the expressions with $<$, $=$ or $>$ as required in the following.

(i) $(7 + 8) \square (20 \div 2)$

Solution

First, we have to add 7 and 8

$$7 + 8 = 15,$$

Now, we divide 20 by 2, we get

$$20 \div 2 = 10$$

$$\text{Therefore, } (7 + 8) \square (20 \div 2) \\ 15 \square 10$$

$$\text{Hence, } (7 + 8) \geq (20 \div 2).$$

(ii) $(12 \times 3) \square (9 \times 4)$

Solution

First, we have to multiple 12 by 3

$$12 \times 3 = 36$$

Now, multiplying 9 by 4, we get,

$$9 \times 4 = 36,$$

Since, (12×3) and (9×4) is equal, we have,

$$(12 \times 3) = (9 \times 4).$$

(iii) $(15 - 5) \square (8 \times 3)$

Solution

First, we have to subtract 5 from 15.

$$15 - 5 = 10$$

Now, multiplying 8 by 3, we get,

$$8 \times 3 = 24$$

Since, $(15 - 5 = 10)$ is less than $(8 \times 3 = 24)$, we have,

$$(15 - 5) < (8 \times 3).$$

Example 4.2

Write a number in the box that will make this statements correct.

(i) $(6 \times 4) = (\square - 6)$

Solution

The value of the expression 6×4 is 24. So, the number in the box has to be one that gives 24 when 6 is subtracted from it. Subtracting 6 from 30 gives 24.

Therefore, $(6 \times 4) = (30 - 6)$

(ii) $(35 \div 5) < (2 + \square)$

Solution

The value of the expression $35 \div 5$ is 7. So, the number in the box has to be such that when it is added to 2, the sum is greater than 7.

Therefore, $(35 \div 5) < (2 + 6)$

Instead of 6, the solution for this condition can be 7, 8,

Exercise 4.2

1 Say whether true or false.

- | | |
|------------------------------------|---------------------------|
| (i) $(23 + 4) = (4 + 23)$ | (ii) $(9 + 4) > 12$ |
| (iii) $(9 + 4) < 12$ | (iv) $121 > 121$ |
| (v) $142 < 142$ | (vi) $112 = 112$ |
| (vii) $(6 \times 5) = (32 - 2)$ | (viii) $\frac{49}{7} > 7$ |
| (ix) $(4 \times 3) = (3 \times 4)$ | (x) $(21 + 0) = 21$ |

2 Fill in the blanks with the right symbol ($<$, $>$ or $=$).

- (i) $(54 \div 9) \square (8 - 3)$
(ii) $(6 + 2) \square (4 \times 2)$
(iii) $(10 \times 2) \square (15 + 20)$



3 Fill in the blanks in the expressions with the suitable number.

(i) $(1 \times 9) = (\square \times 1)$ (ii) $(6 \times 3) > (8 \times \square)$

(iii) $(36 \div 6) < (\square \times 7)$ (iv) $(0 + 2) > (7 \times \square)$

(v) $(42 \div 7) = (4 + \square)$ (vi) $(6 - \square) < (1 + 2)$

Using letters

Symbols are frequently used in mathematical writing. The use of symbols makes the writing very short. For example, using symbols, division of 63 by 9 gives us '7' can be written in short as " $63 \div 9 = 7$ ". It is also easier to grasp.

Letters can be used like symbols to make our writing short and simple

While adding, subtracting or carrying out other operations on numbers, you must have discovered many properties of the operations.

For example, what properties do you see in sums like $(7 + 3)$, $(3 + 7)$?

The sum of any two numbers and the sum obtained by reversing the order of the two numbers is the same.

Now see how much easier and faster it is to write this property using letters.

Let us use a and b to represent any two numbers. Their sum will be ' $a + b$ '

Changing the order of those numbers will make the addition as ' $b + a$ '. Therefore, the rule will be, for all values of ' a ' and ' b '

$$(a + b) = (b + a).$$



Let us see two more examples

- ❖ Multiplying any number by 1 gives the number itself. If the number is replaced by an alphabet 'a', then the above statement can be represented as $a \times 1 = a$.



- ❖ Given two unequal numbers, the division of the first by the second is not the same as the division of the second by the first.

In short, if a and b are two different numbers, then $(a \div b)$ is not equal to $(b \div a)$

Take the value of 'a' as 6 and the value 'b' as 2 and verify the above property by yourself.

Activity

Use a letter for "any number" and write the following properties in short.

- (i) The sum of a number and zero is the number itself
- (ii) The product of any two numbers and the product obtained after changing the order of those numbers is the same.
- (iii) The product of a number and zero is zero
- (iv) Write the following properties in words
 - (i) $n - 0 = n$
 - (ii) $m \div 1 = m$

UNIT-5

MONEY

Recall:

We have already learnt about the conversion of money in the interconcept chapter in the previous term. Let us try to fill in the following.

Try this

$$₹1 = 100 \text{ Paise}$$

$$₹5 = \underline{\hspace{2cm}} \text{ Paise}$$

$$775 \text{ Paise} = ₹7.75$$

$$425 \text{ Paise} = ₹\underline{\hspace{2cm}}$$

Addition and Subtraction using money



Situation 1

Sarathi and Meenu went to a temple car festival (Thaer thiruvizha) with their parents. In the festival, Sarathi bought a watch for ₹70,



Meenu bought bangles and earrings for ₹90 and their mother bought a chain for ₹160. The shopkeeper asked them to pay money for what they bought. Meenu didn't know how much money she had to pay. So, she asked her mother. Her mother told her to add the cost of the items purchased. She added as follows.

Cost of the watch = ₹70

Cost of bangles and earrings = ₹90

Cost of the chain = ₹160

Total cost = $70 + 90 + 160 = ₹320$.

So Meenu had to pay ₹320 to the shopkeeper.

Situation 2

Vasu had a stationery shop. He wanted to check the stock of pen. Vasu didn't know how to find out the remaining items. For that he asked his friend. His friend helped him to form a table. The table is given below.

S.No	Name of the item	Cost of available item	Cost of sold out item	Cost of remaining item
1.	Pen	₹ 3750	₹ 1680	₹ 2070

To get the cost of remaining item, we have to subtract the cost of sold out items from the cost of available items.

That is, cost of remaining items = cost of available item - cost of sold out items
 $= ₹3750 - ₹1680$
 $= ₹2070$

Example 5.1

Arun bought a T.V, a Washing Machine and a bike at the cost of ₹ 12,500, ₹ 14,999 and ₹ 75,000 respectively. Find the total amount spent by Arun.

Solution

Cost of a T.V	=	₹ 12,500
Cost of a Washing machine	=	₹ 14,999
Cost of a Bike	= (+) ₹	75,000
Total amount	=	₹ 1,02,499

Example 5.2

Find the total amount by adding the amounts ₹7678.75, ₹50875.50, ₹4071.50 and ₹675.75

Solution

Rupees	Paise
7678	75
50875	50
4071	50
675	75
63301	50

Add the paise 75+50+50+75 and convert into rupees.

$$75 + 50 + 50 + 75 = 250 \text{ paise}$$

$$100 \text{ paise} = 1 \text{ rupees}$$

$$250 \text{ paise} = \frac{250}{100} = 2.50 \text{ rupees}$$

$$\begin{aligned}\text{Therefore, the total amount} &= ₹7678.75 + ₹50875.50 + ₹4071.50 + ₹675.75 \\ &= ₹63,301.50\end{aligned}$$

Example 5.3

A colony of people had arranged for a tour for three days. They allotted an amount of rupees ₹18,540 for the same. They spent ₹6235 on the first day. How much money was left for the next two days?

Solution

$$\text{Amount allotted for three days} = ₹18,540$$

$$\text{Amount spent on the first day} = (+) ₹6,235$$

$$\text{Remaining amount} = \underline{\underline{₹12,305}}$$

Therefore, remaining amount for the next two days is ₹12,305.

Example 5.4

Geetha wants to buy a table for her family. She has paid an amount of ₹4,529.50 to the Shop Keeper. He has given ₹439.75 as balance to her. What is the cost of the table?

Solution

$$\begin{array}{rcl}
 \text{Amount paid by Geetha} & = & ₹\ 4,529.50 \\
 \text{Balance amount given by the} & & \\
 \text{Shop Keeper} & = (-) ₹ & 439.75 \\
 \hline
 \text{Cost of the table} & = & ₹\ 4,089.75
 \end{array}$$

When we subtract 75 paise from 50 paise convert ₹1 into paise and add with 50 paise and then subtract.

$$\begin{array}{l}
 ₹\ 1 = 100 \text{ paise} \\
 100 + 50 = 150 \text{ paise} \\
 150 - 75 = 75 \text{ paise}
 \end{array}$$

Activity 1

Match the big bag with small bags

Big Bag

Small Bags



.....



-



-



.....



+



+



.....



-



-



.....



+



+



Exercise 5.1

1 Fill in the blanks

(i) ₹ 35.50 + ₹ 4.50 = _____

(ii) ₹ 7500 + ₹ 3000 = _____

(iii) ₹ 1000 - ₹ 230 = _____

(iv) ₹ 75.50 - ₹ 30.25 = _____

2 Match the following

(i) ₹ 950.50 + ₹ 350 - (a) ₹ 399.50

(ii) ₹ 8000 - ₹ 3500 - (b) ₹ 91.25

(iii) ₹ 50.75 + ₹ 40.50 - (c) ₹ 1300.50

(iv) ₹ 750 - ₹ 350.50 - (d) ₹ 4500

3 Add the following

(i) ₹ 8987.75 + ₹ 9565.50 + ₹ 7693.50

(ii) ₹ 29763.50 + ₹ 95675.50 + ₹ 4973.50

(iii) ₹ 9978.75 + ₹ 7695.50 + ₹ 635.00

4 Subtract the following

(i) ₹ 1985 - ₹ 798.25

(ii) ₹ 688 - ₹ 215

(iii) ₹ 49689 - ₹ 33462.50

5 Arun purchased gold coins in different weights in a Jewellery shop. The price of the gold coins were ₹ 18965.75, ₹ 26998.00 and ₹ 3589.50 respectively. Find the total price of the gold coins.

6 In a textiles shop, father, mother, son and daughter were purchasing clothes. The price of each of their clothes were ₹ 8950, ₹ 14875, ₹ 7895 and ₹ 9780 respectively. Find the total cost of their clothes.

7 A farmer wanted to buy a tractor. The price of the tractor was ₹6,72,598, but he had only ₹2,86,760. How much more amount was required to buy the tractor?

8 A man had ₹17,246 in his savings account. If he had taken ₹8,891 to pay for house rent, then how much amount was left in his savings account?

Multiplication and Division in Money

Situation 1

A book company announced a discount on dictionaries to school students. After discount, the cost of a dictionary was ₹425 and 25 students wanted to buy it. How much money in total was required for them to buy? For this, we have to multiply the number of students with the cost of a dictionary.

The cost of each dictionary = ₹425

Therefore, the total cost of 25 dictionaries = $25 \times ₹425$
= ₹10,625

Situation 2

8 students of a school participated in an International Competition and won a cash award of ₹5,000. They wanted to share the amount among themselves. How much share would each one get?



For this, we have to divide the total amount by the number of students.

$₹5,000 \div 8 = ₹625$

Therefore, each one's share is ₹625.

Example 5.5

The cost of a chair is ₹520. What will be the cost of 9 chairs?

Solution

Cost of one chair = ₹520

Cost of 9 chairs = $₹520 \times 9$
= ₹4680

Example 5.6

Rani buys a saree which costs ₹675.50. She wants to buy 12 such sarees. What will be the cost of 12 sarees?

Solution

Cost of one saree = ₹675.50

Cost of 12 sarees = ₹675.50 × 12
= ₹8106

(i) Multiply the paise

$$50 \times 12 = 600 \text{ paise}$$

Convert the paise into rupees 600 paise } = ₹6

(ii) Multiply the rupees

$$675 \times 12 = 8100$$

Now, add (i) and (ii) to get

$$= 8100 + 6$$

$$= 8106$$

Example 5.7

Find the answer for ₹65,295 ÷ 9

Solution

$$\begin{array}{r} 7255 \\ 9 \overline{)65295} \\ \underline{63} \\ 22 \\ \underline{18} \\ 49 \\ \underline{45} \\ 45 \\ \underline{45} \\ 0 \end{array}$$

Therefore, ₹65295 ÷ 9 = ₹7,255

Example 5.8

The total cost of 7 pens is 105. Find the cost of one pen

Solution

Total cost of 7 pens is = ₹105

Therefore, cost of one Pen = ₹105 ÷ 7
= ₹15

Therefore, the cost of one pen is ₹15.

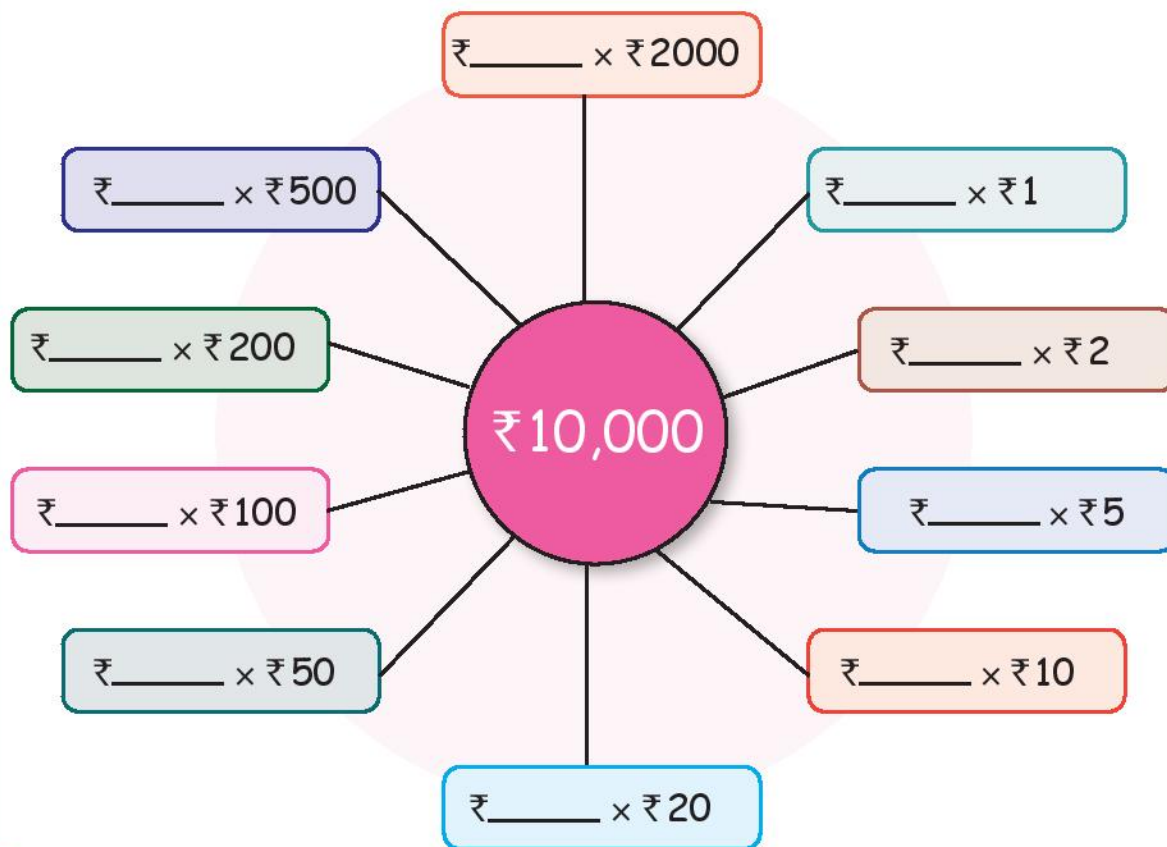
$$\begin{array}{r} 15 \\ 7 \overline{)105} \\ \underline{7} \\ 35 \\ \underline{35} \\ 0 \end{array}$$

Let's think

Divide 1000 paise equally for 5 students. How many rupees does each student get?

Activity 2

Find out how many denominations of ₹1, ₹2, ₹5, ₹10, ₹20, ₹50, ₹100, ₹200, ₹500 and ₹2,000 are there in ₹10,000?



Exercise 5.2



1 Fill in the blanks

- (i) ₹75 × 5 = _____
- (ii) ₹200.25 ÷ 25 = _____
- (iii) ₹3500 ÷ 500 = _____
- (iv) ₹15.50 × 100 = _____



2 Answer the following

- (i) ₹98725 × 5
- (ii) ₹679.68 × 7
- (iii) ₹362.37 × 12
- (iv) ₹324.52 ÷ 28
- (v) ₹7980 ÷ 8
- (vi) ₹397.10 ÷ 11

3 The cost of 1kg of tomato is ₹15. Find the cost of 5 kg of tomatoes?

4 The cost of one egg is ₹4.50. Find the cost of 20 eggs.

5 The school management has decided to give a pen for all children participating in the Children's day celebration. The cost of a pen is ₹18 . How much money do they need to buy pens for 256 children?

6 A fruit seller buys 8 boxes of grapes for ₹2,000. What is the cost of one box?

7 In a sweet stall, the cost of 18 kg of sweets is ₹2,520. What is the cost of 1 kg of sweet?

To collect bills for items bought and compare costs of same items

Situation

Raju and Ravi got two bills of the same items from two different shops which are given below.

Shop 1 (Raju's Bill)

S. No	Name of the item	Quantity	Cost of the item (in ₹)	
			Rupees	Paise
1	Pencil	10 Nos.	37	50
2	Eraser	12 Nos.	15	00
3	Pen	11 Nos.	60	50
Total			₹113	00



Shop 2 (Ravi's Bill)

S. No	Name of the item	Quantity	Cost of the item (in ₹)	
			Rupees	Paise
1	Pencil	10 Nos.	40	00
2	Eraser	12 Nos.	12	00
3	Pen	11 Nos.	66	00
Total			₹118	00

They have shown the above bills to the teacher in the class. Teacher asks the students to sit in groups and discuss and compare the cost of items. After a few minutes, the teacher asks the following question regarding bills.

Teacher: In which shop is the cost of an eraser less? By how much?

Student: In shop 2, it is less by ₹ 3.

Teacher: What is the difference in total between shop 1 and shop 2?

Student: ₹ 5.

Teacher: Is the cost of a pencil high or less in shop 1 compared to shop 2?

Student: The cost of a pencil is less in shop 1.

Teacher: What is the cost of a pen in shop 1 and shop 2? Also find the difference between the costs?

Student: The cost of 1 pen in shop 1 is ₹ 5.50 and in shop 2, it is ₹ 6.
The difference between the cost is 50 paise.

The teacher concludes that the cost vary from place to place depending on factors like travel, rent, wages for labour and electricity etc., used by the shopkeeper.

Activity 3

Observe at the vegetables shop nearby your house and find out the cost of items sold over there. Compare it with the cost of vegetables sold at the supermarket nearby to your house.



To find and reason out for being expensive and inexpensive

Situation

Rani bought 1 kg of brinjal from a vegetable vendor nearby her house. Its cost was ₹ 50. Her friend Kala bought the same quantity of brinjal in a wholesale market. Its cost was ₹ 30. What did you understand from the above situation?



From the above situation, we come to understand that the brinjal bought by Kala is inexpensive, but for Rani, it is expensive.

Activity 4

Check the cost of items bought from the provision store nearby your house and the cost of the same item in the supermarket. Find out which is expensive and inexpensive.

Use of vocabularies such as expensive, inexpensive costly, cheap, affordable and luxurious

Situation 1

Ravi goes to a provision store to buy provisions for his family. He wants to buy boiled rice. He sees many brands of boiled rice and from that he selected a brand. In that particular brand, there are different types, with a range of costs. It is given below.

Type-1 = ₹ 42 per kg

Type-2 = ₹ 48 per kg

Type-3 = ₹ 52 per kg

Type-4 = ₹ 56 per kg

He buys Type-1 boiled rice which costs ₹ 42 per kg. Why does he choose to buy that type and not other types? Though it is **affordable** for him to buy other types also, he thinks that Type-1 is **cheaper** for him.

Situation 2

Three families namely A, B and C in a city wanted to buy a car. They had gone to a car showroom. There, they saw cars of minimum price and maximum price and also the imported car.



Family A selected the car of minimum price. Why did family A select the car of minimum price? Though they had money to buy the car of maximum price, they felt that the car of minimum price is **inexpensive** for them.

Family B selected the car of maximum price. Why did family B select the car of maximum price? Though they had money to buy other cars also, they selected the car of maximum price which is **expensive**.

Family C selected the imported car because they wanted a **luxurious** car.

Now, we can see the meaning of following words:

- (i) Expensive - Costing much in price.
- (ii) Inexpensive - Low cost.
- (iii) Costly - High in price.
- (iv) Cheap - Low in price.
- (v) Affordable - Reasonable price.
- (vi) Luxurious - Highly expensive.

Activity 5

Ask the students to go to the market and find out the selling price of each and every vegetable in various shops over there and make them to prepare a list of their observations. Let them discuss about this in the classroom like which is cheaper, costlier and affordable with their pair groups. The teacher has to instruct the students while discussing.

Activity 6

Fruit seller-1, uses her bike to sell her fruits for ₹150 and spends ₹170 for petrol. But fruit seller-2 sitting outside of an office sells her fruits for ₹250.

Make the students to sit in groups to discuss about this situation on which is costlier and which is cheaper?

FRACTIONS

6.1 Compare fractions

Finds a number corresponding to a part of collection in the form of fractions



Situation

Radhika bought a chocolate bar, which is divided into 8 pieces. She wants to share it with his brother Tharun. She gave him 2 parts out of 8 parts. But he denied to have that. He needed more. Then she gave him 3 out of 8 parts, which was also refused by him. So she finally decided to give him 4 out of 8 parts. Again, he was not willing to take. He wants more. But she explained him that she had given him equal share only.



Consider the above situation. How will you express 2 out of 8 parts mathematically?

$\frac{2}{8}$ Isn't it?

How will you express 3 out of 8 parts ?

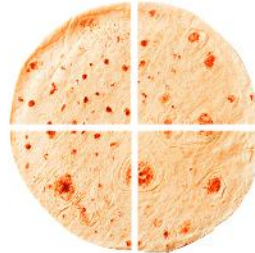
$\frac{3}{8}$ Isn't it?

Here, $\frac{2}{8}$ and $\frac{3}{8}$ are fractions.

Fraction is a part of a whole or collection.

6.2 Equivalent fractions

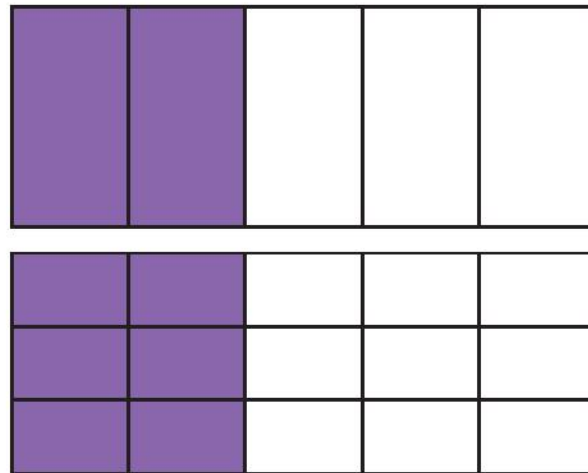
If one chappathi is divided equally between two people then, each one will get half a chappathi. The fraction half, is written as $\frac{1}{2}$. Here, 1 is the numerator and 2 is the denominator.



The same chappathi is divided into four equal parts. Two parts were given to each person. This is shown as $\frac{2}{4}$. Here 2 is the numerator and 4 is the denominator.

It means that the value of two fractions is the same. That is, $\frac{1}{2} = \frac{2}{4}$. Such fractions of equal value are called equivalent fractions.

Obtaining equivalent fractions



Two of the five equal parts in the figure are coloured. The coloured part is $\frac{2}{5}$ of the whole figure.

When two lines are drawn horizontally in the same figure, the figure gets divided into 15 equal parts. So, the fraction that shows the coloured part now has changed. Now, the fraction of the coloured part is $\frac{6}{15}$ but coloured size is the same.



Two figures that have the same size are called equivalent fractions. Therefore, we see that $\frac{2}{5} = \frac{6}{15}$

When the numerator and denominator of a fraction are multiplied by the same non-zero number, we get a fraction that is equivalent to the given fraction.

Example 6.1

Find a fraction with denominator 20 which is equivalent to $\frac{2}{5}$.

Solution

$\frac{2}{5} = \frac{\square}{20}$. We must find the right number for the box.

Here, 4 times the denominator 5 is 20. So, multiply the numerator also by 4

Therefore,

$$\frac{2}{5} = \frac{2 \times 4}{5 \times 4} = \frac{8}{20}$$

Hence, the fraction $\frac{8}{20}$ is equivalent to $\frac{2}{5}$.

Example 6.2

Find a fraction equivalent to $\frac{8}{20}$ with denominator 5.

Solution

$\frac{8}{20} = \frac{\square}{5}$. We must find the number for the box.

In both the fractions denominator is given, that is 20 and 5.

Here, we get 5 in one of the fractions if we divide 20 (denominator of the other fraction) by 4.

So, we can get the required number (in box), if we divide 8 by 4.

That is $8 \div 4 = 2$.

$$\text{Therefore } \frac{8}{20} = \frac{8 \div 4}{20 \div 4} = \frac{2}{5}$$

Thus, the fraction $\frac{2}{5}$ is equivalent to the fraction $\frac{8}{20}$.

Exercise 6.1

1 Write the suitable number in the box.

(i) $\frac{1}{2} = \frac{\square}{8}$

(ii) $\frac{1}{3} = \frac{7}{\square}$

(iii) $\frac{9}{11} = \frac{18}{\square}$

(iv) $\frac{5}{15} = \frac{\square}{3}$

(v) $\frac{14}{26} = \frac{\square}{13}$

(vi) $\frac{\square}{4} = \frac{8}{16}$

(vii) $\frac{1}{\square} = \frac{7}{28}$

(viii) $\frac{\square}{5} = \frac{15}{25}$

2 Find an equivalent fraction with denominator 18 for each of the following fractions.

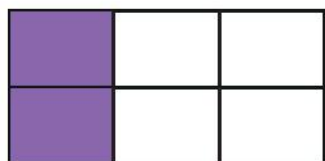
$\frac{1}{2}, \frac{2}{3}, \frac{4}{6}, \frac{2}{9}, \frac{7}{9}, \frac{5}{3}$

3 Find an equivalent fraction with denominator 5 for each of the following fractions.

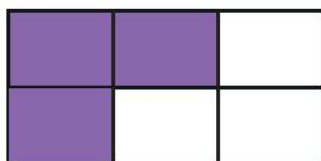
$\frac{6}{15}, \frac{10}{25}, \frac{12}{30}, \frac{6}{10}, \frac{21}{35}$

Like fractions and unlike fractions

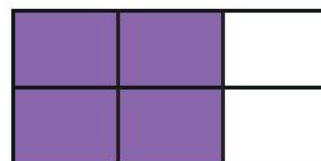
Consider the following figures:



(i)



(ii)



(iii)

The fraction represented by (i) is $\frac{2}{6}$. The fraction represented by (ii) is $\frac{4}{6}$. The fraction represented by (iii) is $\frac{4}{6}$.

In $\frac{2}{6}, \frac{3}{6}$ and $\frac{4}{6}$, the denominators are the same. Such fractions are called as like fractions.

Like fractions

Fractions with same denominators are called **like fractions**.

Examples: $\frac{1}{5}, \frac{4}{5}, \frac{3}{5}$



Unlike fractions

Fractions with different denominators are called **unlike fractions**.

Examples: $\frac{1}{7}$, $\frac{2}{9}$, $\frac{9}{11}$

Converting unlike fractions into like fractions

To convert unlike fractions into like fractions, we change the denominators of the given fractions into a common denominator. This can be done by finding the common multiples of the denominator.

Example 6.3

Convert $\frac{5}{6}$ and $\frac{7}{9}$ into like fractions.

Solution

Find common multiples for the numbers 6 and 9

Multiples of 6 : 6, 12, **18**, 24, 30, 36, ...

Multiples of 9 : 9, **18**, 27, 36, 45,

Here, the number 18 is a multiple of both 6 and 9 and so 18 is the first common denominator of both the fractions.

$$\frac{5}{6} = \frac{5 \times 3}{6 \times 3} = \frac{15}{18} \quad \left| \quad \frac{7}{9} = \frac{7 \times 2}{9 \times 2} = \frac{14}{18}$$

Thus, $\frac{15}{18}$ and $\frac{14}{18}$ are like fractions, respectively equivalent to $\frac{5}{6}$ and $\frac{7}{9}$.

Example 6.4

Convert $\frac{4}{8}$ and $\frac{5}{16}$ into like fractions.

Solution

As 16 is twice 8, it is easy to make 16 as the common denominator.

$$\frac{4}{8} = \frac{4 \times 2}{8 \times 2} = \frac{8}{16}$$

Thus $\frac{8}{16}$ and $\frac{5}{16}$ are the required like fractions.

Example 6.5

Find a common denominator for $\frac{2}{5}$ and $\frac{3}{7}$.

Solution

The number 35 is a common multiple of both 7 and 5.

So, take 35 as the common denominator.

$$\frac{2}{5} = \frac{2 \times 7}{5 \times 7} = \frac{14}{35} \quad \left| \quad \frac{3}{7} = \frac{3 \times 5}{7 \times 5} = \frac{15}{35}$$

Therefore $\frac{14}{35}$ and $\frac{15}{35}$ are the required like fractions.

Exercise 6.2



Convert the following into like fractions.

- (i) $\frac{1}{4}, \frac{3}{8}$ (ii) $\frac{2}{5}, \frac{1}{7}$ (iii) $\frac{2}{5}, \frac{3}{10}$ (iv) $\frac{2}{7}, \frac{1}{6}$
(v) $\frac{1}{3}, \frac{3}{4}$ (vi) $\frac{5}{6}, \frac{4}{5}$ (vii) $\frac{1}{8}, \frac{3}{7}$ (viii) $\frac{1}{6}, \frac{4}{9}$

Comparing like fractions

To compare like fractions, check the numerators of the given fractions.

Example 6.6

Compare the shaded and unshaded part in the following figure.



Solution

A strip is divided into 7 equal parts. It means that each part represents $\frac{1}{7}$.

The coloured part is $\frac{3}{7} = \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$

The uncoloured part is $\frac{4}{7} = \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$

The coloured part is less than the uncoloured part.

This tells us that $\frac{3}{7}$ is less than $\frac{4}{7}$

This is written as $\frac{3}{7} < \frac{4}{7}$



Example 6.7

Compare the different shaded parts in the following figure.



Solution

This strip is divided into 5 equal parts. 2 out of 5 parts have one colour and 1 has another colour.

The fraction of blue coloured part = $\frac{2}{5}$

The fraction of yellow coloured part = $\frac{1}{5}$

Comparing the numerators 2 and 1, we find $2 > 1$

Therefore $\frac{2}{5} > \frac{1}{5}$.

In like fractions, the fraction with the greater numerator is the greater fraction.

Comparing fractions with equal numerators

You have learnt that the value of fractions with numerator 1 decreases as the denominator increases.

Even if the numerator is not 1, the same rule applies for all the fractions that have a common numerator. For example, look at the figures below, all the shaded strips in the figure are alike.

2 out of 3 equal parts of the strip is given as



2 out of 4 equal parts of the strip is given as



2 out of 5 equal parts of the strip is given as



The figures show that $\frac{2}{3} > \frac{2}{4} > \frac{2}{5}$



Out of two fractions with equal numerators, the fraction with the greater denominator is the smaller fraction.

To compare unlike fractions, convert them into their equivalent fractions so that their denominators are the same.

Exercise 6.3

1 Write the appropriate symbol $<$, $>$, or $=$ in the box.

- (i) $\frac{3}{5} \square \frac{2}{5}$ (ii) $\frac{2}{8} \square \frac{1}{8}$ (iii) $\frac{2}{11} \square \frac{10}{11}$ (iv) $\frac{3}{15} \square \frac{10}{30}$ (v) $\frac{3}{8} \square \frac{3}{7}$
(vi) $\frac{4}{7} \square \frac{4}{11}$ (vii) $\frac{5}{12} \square \frac{1}{6}$ (viii) $\frac{4}{9} \square \frac{4}{9}$ (ix) $\frac{3}{7} \square \frac{5}{9}$ (x) $\frac{4}{11} \square \frac{1}{5}$

Addition of like fractions

While adding like fractions, add only the numerators of the two fractions and write the denominator as it is.

Example 6.8

$$\frac{3}{7} + \frac{1}{7} = ?$$

Solution

Here, the denominators are the same, that is 7. So, add only the numerators.

$$\frac{3}{7} + \frac{1}{7} = \frac{3+1}{7} = \frac{4}{7}$$

Example 6.9

$$\text{Add: } \frac{1}{8} + \frac{3}{8} + \frac{2}{8}$$

Solution

Here, the denominators are the same, that is 8. So, add only the numerators.

$$\frac{1}{8} + \frac{3}{8} + \frac{2}{8} = \frac{1+3+2}{8} = \frac{6}{8}$$

Example 6.10

Add $\frac{2}{6}$ and $\frac{4}{6}$

Solution

Here, the denominators are the same, that is 6. So, add only the numerators.

$$\begin{aligned}\frac{2}{6} + \frac{4}{6} &= \frac{2+4}{6} \\ &= \frac{6}{6} = 1\end{aligned}$$

Note: If the numerator and denominator of a fraction are equal, the fraction is equal to one.

Exercise 6.4



Add the following fractions

(i) $\frac{1}{5} + \frac{3}{5}$

(ii) $\frac{1}{7} + \frac{3}{7}$

(iii) $\frac{5}{12} + \frac{2}{12}$

(iv) $\frac{3}{9} + \frac{7}{9}$

(v) $\frac{2}{15} + \frac{3}{15}$

(vi) $\frac{2}{7} + \frac{1}{7} + \frac{3}{7}$

(vii) $\frac{3}{10} + \frac{5}{10} + \frac{2}{10}$

(viii) $\frac{2}{9} + \frac{1}{9}$

(ix) $\frac{3}{8} + \frac{2}{8}$



Mother gave $\frac{2}{8}$ of guava to Meena and $\frac{3}{8}$ of guava to Geetha. How many parts of the guava did she give them altogether?



The girls of Std V cleaned $\frac{3}{5}$ of a field, while the boys cleaned $\frac{1}{5}$ part of the field. What part of the field was cleaned altogether?

Subtraction of like fractions

When subtracting a like fraction from another like fraction, write the difference between the numerators in the numerator and write the common denominator in the denominator.



Example 6.11

Subtract $\frac{2}{13}$ from $\frac{5}{13}$

Solution

Here, the denominators are the same, that is 13. So, subtract only the numerators.

$$\frac{5}{13} - \frac{2}{13} = \frac{5-2}{13} = \frac{3}{13}$$

Example 6.12

If Raju got $\frac{7}{12}$ part of a sugarcane and Sanju got $\frac{5}{12}$ part of it, how much did Raju get as extra part?

Solution

To find out the extra part, we must subtract $\frac{5}{12}$ from $\frac{7}{12}$.

$$\begin{aligned}\text{Raju's extra part} &= \frac{7}{12} - \frac{5}{12} \\ &= \frac{7-5}{12} \\ &= \frac{2}{12}\end{aligned}$$

Thus, Raju got $\frac{2}{12}$ as extra part.

Exercise 6.5

1 Subtract the following.

(i) $\frac{4}{7} - \frac{1}{7}$ (ii) $\frac{4}{8} - \frac{3}{8}$ (iii) $\frac{5}{9} - \frac{1}{9}$ (iv) $\frac{7}{11} - \frac{3}{11}$

(v) $\frac{7}{13} - \frac{4}{13}$ (vi) $\frac{5}{10} - \frac{3}{10}$ (vii) $\frac{7}{12} - \frac{2}{12}$ (viii) $\frac{8}{15} - \frac{2}{15}$

2 $\frac{5}{10}$ of a wall is to be painted. Ramu painted $\frac{2}{10}$ of it.

How much more is to be painted?

Multiplication of fractions by a single digit number

While multiplying a fraction with a single digit number, the numerator only is multiplied with the single digit number and denominator remains the same.

Example 6.13

Multiply $\frac{2}{3}$ with 5.

Solution

$$\frac{2}{3} \times 5 = \frac{2 \times 5}{3} = \frac{10}{3}$$

Example 6.14

If Iniyar gets $\frac{1}{4}$ part of a chocolate bar everyday, then how much chocolate will he get for 3 days?

Solution

Part of the chocolate bar that Iniyar gets everyday = $\frac{1}{4}$

Part of the chocolate bar that Iniyar will get for 3 days = $\frac{1}{4} \times 3 = \frac{1 \times 3}{4}$
 $= \frac{3}{4}$

Therefore, Iniyar will get $\frac{3}{4}$ parts of the chocolate bar for 3 days.

Exercise 6.6

1 Multiply the following

(i) $\frac{1}{7} \times 4$ (ii) $\frac{3}{8} \times 5$ (iii) $\frac{7}{11} \times 6$ (iv) $\frac{21}{50} \times 2$ (v) $\frac{15}{32} \times 3$

2 John has 300 ml of water in a glass and he drinks $\frac{2}{3}$ ml of water. How many ml of water does he drink?



Relationship between Fractions and Decimals

To introduce the concept of decimal

Take a rectangle and split the rectangle into 10 equal parts



How will you represent each part of the above rectangle?

That is $\frac{1}{10}$, $\frac{1}{10}$ and so on. Shade 1 part of the rectangle.



Here, 1 part is shaded out of 10 parts. Fractional representation is $\frac{1}{10}$. It can be written in another way as 0.1. In 0.1, 0 is called as the whole number part, 1 is called as the decimal part and "." is called as the decimal point which separates the unit place from tenth place.

The decimal number 0.1 is read as "zero point one".

Able to convert the fraction to decimals and vice versa

To convert a fraction to a decimal, keep the point before the numerator as per the number of zeros in the denominator.

Example 6.15

Convert the following fraction into decimals.

(i) $\frac{3}{10}$ (ii) $\frac{45}{10}$ (iii) $\frac{112}{10}$

Solution

(i) $\frac{3}{10} = 0.3$ (ii) $\frac{45}{10} = 4.5$ (iii) $\frac{112}{10} = 11.2$

Convert decimals to fractions.

To convert a decimal to a fraction, write the given number removing the decimal point as numerator and in the denominator put one and as many zeroes as the number of digits to the right of the decimal point in the decimal number.

Example 6.16

Convert the following decimals into fractions

- (i) 3.6 (ii) 20.7 (iii) 18.9

Solution

(i) $3.6 = \frac{36}{10}$

(ii) $20.7 = \frac{207}{10}$

(iii) $18.9 = \frac{189}{10}$



Exercise 6.7

- 1 Write the following decimals in words

(i) $0.5 =$ _____

(ii) $0.8 =$ _____

(iii) $3.5 =$ _____

(iv) $6.9 =$ _____

- 2 Express the following fractions as decimals.

(i) $\frac{4}{10}$

(ii) $\frac{12}{10}$

(iii) $\frac{23}{10}$

(iv) $\frac{146}{10}$

- 3 Express the following decimals as fractions.

(i) 38.9

(ii) 9.8

(iii) 10.4

(iv) 0.8

Answers

1. Geometry

Exercise 1.1

1. 18 cm 2. 48 m 3. 24 m 4. 2 km 5. 4 km 400 m

Exercise 1.2

1. (i) 100 sq.m (ii) 25 sq.cm (iii) 225 sq.m (iv) 256 sq.cm
2. (i) 18 sq.cm (ii) 28 sq.m (iii) 40 sq.cm (iv) 54 sq.m
3. ₹1,20,000 4. 24cm; 36 sq.cm; 28cm; 40 sq.cm 5. ₹ 8,400

2. Numbers

Exercise 2.1

1. (i) 30 (ii) 70 (iii) 90 (iv) 80
2. 70 3. 90; 1 4. 50;1 5. 190 6. 100 7. 200 8. 11, 13

3. Measurements

Exercise 3.2

1. (i) 90 cu.cm (ii) 3600 cu.cm (iii) 3, 75, 000 cu.cm
(iv) 1000cu.cm (v) 1 cu.cm.
2. (i) 480 cu.cm (ii) 45cm (iii) 3cm (iv) 20 cm (vi) 3m
3. 1200 bricks 4. 8000 sacks

Exercise 3.3

1. i) Millilitre ii) Kilolitre, 1000 iii) 7030l iv) 5400ml v) 1l 300ml
2. (i) 4500 ml - 4 l 500 ml
(ii) 3250 ml - 3 l 250 ml
(iii) 6500 ml - 6 l 500 ml
(iv) 8200 ml - 8 l 200 ml
(v) 7050 ml - 7 l 50 ml



3. i) 450 l 500ml ii) 3400 l 3ml iii) 287 l 080ml
4. i) 12 kl 485 l ii) 5 kl iii) 4 l 655ml
5. i) 25 l 600ml ii) 17 l 800ml iii) 26 l 500ml iv) 40 l 200ml
6. i) 3 l 40ml ii) 10 l 300ml iii) 3 l 70ml iv) 5 l 70ml
7. 6 l 250ml 8. 34 l 800ml 9. 68 l 600ml 10. 5l 100ml

4. Algebra

Exercise 4.1

1. $(6+6) = (8+4) = (9+3)$ 2. $(8+8) = (18-2) = (8 \times 2) = (32 \div 2)$

Exercise 4.2

1. (i) True (ii) True (iii) False (iv) False (v) False (vi) True
(vii) True (viii) False (ix) True (X) True
2. (i) $>$ (ii) $=$ (iii) $<$
3. (i) 9 (ii) 1, 2 (iii) 1, 2, 3, ... (iv) 0 (v) 2 (vi) 4, 5, 6

5. Money

Exercise 5.1

1. (i) ₹ 40 (ii) ₹ 10,500 (iii) ₹ 770 (iv) ₹ 45.25
2. (i) c (ii) d (iii) b (iv) a
3. (i) ₹ 26,246.75 (ii) ₹ 1,30,412.50 (iii) ₹ 18,309.25
4. (i) ₹ 1,186.75 (ii) ₹ 473 (iii) ₹ 16,226.50
5. ₹ 49,553.25 6. ₹ 41,500 7. ₹ 3,85,838 8. ₹ 8,355

Exercise 5.2

1. (i) ₹ 375 (ii) ₹ 8.01 (iii) ₹ 7 (iv) ₹ 1,550
2. (i) ₹ 4,93,625 (ii) ₹ 4,757.76 (iii) ₹ 4,348.44
(iv) ₹ 11.59 (v) ₹ 997.5 (vi) ₹ 36.1
3. ₹ 75 4. ₹ 90 5. ₹ 4,608 6. ₹ 250 7. ₹ 140

6. Fractions

Exercise 6.1

1. (i) 4 (ii) 21 (iii) 22 (iv) 1
(v) 7 (vi) 2 (vii) 4 (viii) 3
2. $\frac{9}{18}, \frac{12}{18}, \frac{12}{18}, \frac{4}{18}, \frac{14}{18}, \frac{30}{18}$
3. $\frac{2}{5}, \frac{2}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}$

Exercise 6.2

1. (i) $\frac{8}{32}, \frac{12}{32}$ (ii) $\frac{14}{35}, \frac{5}{35}$ (iii) $\frac{20}{50}, \frac{15}{50}$ (iv) $\frac{12}{42}, \frac{7}{42}$
(v) $\frac{4}{12}, \frac{9}{12}$ (vi) $\frac{25}{30}, \frac{24}{30}$ (vii) $\frac{7}{56}, \frac{24}{56}$ (viii) $\frac{9}{54}, \frac{24}{54}$

Exercise 6.3

1. (i) > (ii) > (iii) < (iv) < (v) < (vi) > (vii) > (viii) = (ix) < (x) >

Exercise 6.4

1. (i) $\frac{4}{5}$ (ii) $\frac{4}{7}$ (iii) $\frac{7}{12}$ (iv) $\frac{10}{9}$ (v) $\frac{5}{15}$
(vi) $\frac{6}{7}$ (vii) $\frac{10}{10}$ (viii) $\frac{3}{9}$ (ix) $\frac{5}{8}$ 2. $\frac{5}{8}$ 3. $\frac{4}{5}$

Exercise 6.5

1. (i) $\frac{3}{7}$ (ii) $\frac{1}{8}$ (iii) $\frac{4}{9}$ (iv) $\frac{4}{11}$ (v) $\frac{3}{13}$
(vi) $\frac{2}{10}$ (vii) $\frac{5}{12}$ (viii) $\frac{6}{15}$ 2. $\frac{3}{10}$

Exercise 6.6

1. (i) $\frac{4}{7}$ (ii) $\frac{15}{8}$ (iii) $\frac{42}{11}$ (iv) $\frac{42}{50}$ (v) $\frac{45}{32}$ 2. 200 ml

Exercise 6.7

1. (i) Zero point five (ii) Zero point eight (iii) Three point five
(iv) Six point nine 2. (i) 0.4 (ii) 1.2 (iii) 2.3 (iv) 14.6
3. (i) $\frac{389}{10}$ (ii) $\frac{98}{10}$ (iii) $\frac{104}{10}$ (iv) $\frac{8}{10}$