



Textbook cum Workbook

(Revised)

English Medium

Third Standard Part - II

Karnataka Text Book Society (R.) 100 Feet Ring Road, Banashankari 3rd Stage, Bengaluru-85

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Chapter-6

Division

After studying this chapter you can

- explain division from context of equal grouping and sharing,
- relate division with multiplication,
- compute division facts
 - _ by grouping,

by using multiplication tables.

Equal disribution and grouping:

1.Raju was not well. So he went to the doctor. The doctor examined and gave 8 tablets and advised him to take two tablets daily.

Now tell me, how many days he will take those 8 tablets.

1st day he takes 2 tablets = $\begin{bmatrix} 8 \\ -2 \\ 6 \end{bmatrix}$ 2nd day he takes 2 tablets = $\begin{bmatrix} 6 \\ -2 \\ 6 \end{bmatrix}$ 3rd day he takes 2 tablets = $\begin{bmatrix} -2 \\ 4 \end{bmatrix}$ 4th day he takes 2 tablets = $\begin{bmatrix} -2 \\ 4 \end{bmatrix}$ He will take those 8 tablets in 4 days. $\begin{bmatrix} -2 \\ 2 \end{bmatrix}$

• 8 can be grouped into 4 groups each having 2. $\frac{-2}{0}$

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4 groups of 2 is 8.



2. Latha had 12 balloons. She wanted to distribute them equally among her 4 friends. How many balloons does each one get ?









Every multiplication form has a corresponding division form.

. Divis	ion a	and multipl a	lication are related to one another.
Example :	1.	6 x 2 = 12	12÷2=6 12÷6=2
N	2.	4 x 7 = 28	28÷7=4 28÷4=7 24÷3=8
	3.	8 x 3 = 24	✓ 24÷8=3

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I. Fill in the blanks :-

- 1. If 7x3=21 then, $21 \div 3 = \dots$
- 2. If 9x6=54 then, $54 \div 6 = \dots$
- 3. If 5x8=40 then, $40 \div \dots = 5$
- 4. If $5x^2=10$ then, $10 \div 2 = \dots$
- 6. If 7x9=63 then, $63 \div \dots = 1$
- II. Match the division form with the multiplication form by drawing a line.



III. For each multiplication form write the corresponding division form:

$$8 \ge 4 = 32$$
 $32 \div 4 = 8$
 $32 \div 8 = 4$

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3.	7 x 6 = 42	\langle
4.	8 x 7 = 56	
5.	10 x 5 = 50	\langle

Divide by grouping

Akbar had 12 pens. He puts all of them equally into 4 pen stands. How many pens does he put in each pen stand?

Start by putting 1 pen in each penstand.



Put the remaining 4 pens in such a way that there is one in each pen stand



Then 12 can be divided into 4 group of 3 pens each. . 12 ÷ 4 = 3

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Downloaded from https:// www.studiestoday.com Exercise 6.3

- I. Group the following and write the division form for each.
- Total eggs = 16
 Eggs in each group = 4
 Number of groups = 4
 - $... 16 \div 4 = 4$
- Total Apples = 30
 Apples in each group = 6
 Number of group = _____
- 3. Total Pots = 9
 Pots in each group = 3
 Number of groups = ____

Total candles = 40 Candles in each group = 5 Number of groups _____

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Total Tops = <u>18</u>.
 Tops in each group = <u>2</u>.
 Number of group =_____.



- II. Write the division form using the multiplication table.
- 1. 16 girls are there 2) 16 (8 2 in each team. How many teams are there? $16 \div 2 = 8$ Ans : 8 teams.
- 2. 18 trees are there in3 rows.How many trees are there in each row?

Ans

3. 36 toffees are there4 for each boy.How many boys are there?

Ans

10 pieces of bread are there.2 pieces in each sandwich.How many sandwiches can be prepared?

Ans

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Ans

5. 64 Soldiers are there8 in each row.How many rows are there?

III. Divide the following and colour the answer given in the picture with any one colour.



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Activity 3

Play with numbers



John, Radha, Gowri, Prakash and Jyothi have collected tamarind seeds fallen on the ground under a tamarind tree. Observe the number of tamarind seeds they have in the figure. Calculate mentally and answer the following.

- John and Radha together have 38 tamarind seeds. Say true or false _____
- How many tamarind seeds do Gowri and Prakash together have?
- How many more tamarind seeds does Radha have than Jyothi?
- If the number of tamarind seeds that Gowri and John have to be equal, then John has to collect 7 more seeds say true of false?
- If the number of tamarind seeds that Radha and Jyoti have to be equal, how many more seeds should Jyothi collect ?_____
- Prakash and Gowri together have 68 seeds. If Gowri has 24 seeds then how many seeds does Prakash have?

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Like this, the game can be continued by adding any number from 1 to 9. This game can either be played by 2 students or 2 teams, The one who reaches 100 first is the winner.

Calculate mentally. Write true or false.

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1)
$$10 + 10 = 20 + 5 = 25 + 6 = 31$$

2) $50 - 5 = 45 - 10 = 35 - 4 = 30$
3) $25 + 3 = 28 + 4 = 32 + 5 = 39$
4) $60 - 3 = 57 - 5 = 52 - 6 = 46$
5) $40 + 9 = 49 + 8 = 57 + 7 = 64$

Downloaded from https:// www.studiestoday.com Calculate Mentally and fill in the blanks.



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Exercise 7.1

- I. Solve mentally. Put $\sqrt{}$ if it is true and \times if it is false as shown.
- $10 + 5 = 15 \checkmark$ 12 + 7 = 20Х 2) 1) 4) 15 + 19 = 2418 + 10 = 283) 6) 20 - 6 = 45) 20 - 15 = 157) 18 - 7 = 128) 35 - 9 = 26 9) 40 - 30 = 1010) 29 - 5 = 24 11) 32 + 18 = 4812) 38 + 8 = 5614) 42 12 = 20 13) 50 - 32 = 28
- 15) 25 + 35 = 60
- II. Calculate mentally. Write true ✓ or false (x) as shown.

16) 59 + 7 = 66

- 1) Fifteen + Nine = Twenty four
- 2) Twenty Eight Ten
- 3) Fifteen Ten \neq Five
- 4) Twenty four + Sixteen = Fifty
- 5) Forty five Twenty five = Twenty
- III. Calculate mentally and write the answers.
- 1) Nine + Twelve = Twenty one
- 2) Eleven + Thirteen = _____
- 3) Twenty four Eight = _____
- 4) Sixty two + Fifteen = _____
- 5) Thirty one Ten = _____

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Calculate mentally. Match by drawing lines. IV.

'A'

- 20 14-66 1) 2) Eighteen + Twelve 80 3) Fourtyfive + Thirtyfive 06 29 + 74) 30 25
- Ninety Twentyfour 5)
- Calculate mentally and write the answer. V.
- 10 + 8 =1) 2) 20 3) 15 -4) 38 6) 40 - 6 = 18 + 95) 8) 39 + 8 = 7) 25 - 6 =
- 10)27 8 =42 + 8 =9)

Calculate mentally and write the answer. VI.

- 1) You have 18 marbles. You won 17 more marbles in a game. How many marbles do you have now?
- 2) You have 45 chocolates to distribute to your friends on your birthday. If you gave away 32 chocolates, how many chocolates are remaining?

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- 3) You have 48 tamarind seeds. If you lose 25 tamarind seeds in a game, how many tamarind seeds do you have now? _____
- 4) There are 87 ice-candies in a box. If 9 more icecandies are added to the box, how many ice-candies are there in the box ? _____
- 5) There are 60 laddus in a sweet shop. If 29 laddus are sold, how many laddus are remaining?



A monkey is jumping up the ladder. First time he climbs 2 steps, second time he climbs 4 steps, third time he climbs 8 steps. Then, how many times should the monkey jump to climb a ladder of 32 steps?

W



Twice the value of 10 = 20 Twice the value of 15 = 30Twice the value of 11 = ... Twice the value of 30 = 60Twice the value of 13 = 26 Twice the value of 40 = ...Twice the value of 19 = ... Twice the value of 21 = 42Twice the value of 27... Twice the value of 17 = ...

Double remaining numbers mentally by yourself ownloaded from https:// www.studiestoday.

Observe

- When we multiply a given number by 2, then it becomes double.
- When we add the same number to itself, it gets doubled.

For each number given below the gate, write its doubled numbers in the upper part of the gate.



If the cat Twinkle wants to drink milk, it has to cross the gates one by one. The gates opens only when it writes twice the number given on each gate. Help Twinkle to write the correct answer.

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Whoever gives the wrong answer he/she is the loser of the game.

Exercise 7.2

1) Find out the appropriate lid for the Vessel : A number is written on each lid and a corresponding doubled number is written on the Vessel. By drawing lines, match the lids with proper Vessel.



 $35 \rightarrow$

 $40 \rightarrow$

 $45 \rightarrow$

 $48 \rightarrow$

3) Write twice the given number as shown in the model : Model : Winsteen Thirty eight

Model : Nineteen - Thirty eight.

18 -

19/

20

1) Twenty –

12

13 -

 $14 \rightarrow$

 $15 \rightarrow$

2) Twenty six –

- 3) Thirty eight –
- 4) Thirty two \rightarrow
- 5) Twenty seven \rightarrow
- 6) Forty Four \rightarrow

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4) Multiply the given number by 2 mentally and write the answer in the box

x	7	9	12	24	36	43	49	50	100
2									

Do and play :

Take 2 cardboard sheets and cut them into smaller and bigger wheels as shown in the picture. Write numbers on the smaller wheel and twice the number on bigger wheel as shown in the figure below. Place the smaller wheel on bigger wheel and join them by thread at the center. Now match the number on smaller wheel with its corresponding doubled number on bigger wheel.





Fractional Numbers

After studying this chapter you can

- Identify half, one fourth and three-fourth of a whole number and relate to real life situation.
- Identify the symbolic form of half $(\frac{1}{2})$ quarter $(\frac{1}{4})$ three fourth $(\frac{3}{4})$ and explain their meanings,



Half, quarter, three fourth

Kiran's mother gave him one roti to feed the dog Tommy. His sister Jyothi came and started quarreling with Kiran for feeding the dog. Then mother came, enquired reason for the quarrel and told each of them to feed the dog with half a roti.





See the picture and identify the half parts



- * Half of the glass is filled with water.
- * Half of the glass is empty.
- * Half of the square is coloured.
- * Half of the square is not coloured.
- * Half of the circle is coloured red.
- * Half of the circle is coloured green.

Some Pictures are given below. Can you divide all the possible pictures into two equal parts using a dotted Line?



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Observe the half parts of the letters given below and complete it by writing the remaining half.

Model :

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- * If we keep one half on the other half, they co-incide each other.
- * In two equal parts, each part is called as a half.
- * If we join two halves, we get a whole.

Learn by doing :

Take four pages of same shape as shown below. Now, draw lines as indicated in the picture. Is each part a half of the page?



How much is a quarter ? Know it

How to divide this bread into four equal parts for these four kittens?



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* Among four equal parts, one of the part is filled with oil. That means, quarter of the drum is filled with oil.



The square is divided into four equal parts and one of the parts is coloured. That means, quarter of the square is shaded.

*



Before lighting the candle there were four equal parts. One of the part is melted. That means, quarter of the candle is melted.



*

*

- How much of the chocolate did putty eat? There were four equal parts and she ate one part. This means, she has eaten a quarter.
 - 1)
 2)
 This chocolate has four equal parts
 - The shaded portion of the picture is not a quarter why ?

Remember

- * In four equal parts, each part is called a quarter.* Half of a half is called a quarter.
- * In a whole there are four quarters.

Know Three-fourth by folding a paper.

- A sheet of paper is taken and is divided into four equal parts.
- * One of the equal parts is filled with green colour. You know that the coloured part is a quarter.
- * The remaining three equal parts are coloured red. Now, how many parts of the paper are in red colour?

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Observe the pictures given below:

- * The glass has four equal parts, three parts are filled with water.
- * The cake has four equal parts. One part is eaten.
- * The apple is divided into four equal parts and one part is eaten.

Remember

- * Among four equal parts, three parts are called three-fourth.
- * Three quarter together forms the three-fourth.

Observe the picture and recall :





Three quarter (three-fourth)

Two quarter (one half)

Four quarter (one whole)

Exercise: 8.1

I. Write the indicated parts as shown in the example.



- * shaded part = half
- * Unshaded part = half

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- V. Shade the pictures as directed :
- 1) Shade half of the picture.

2) Fill three-fourth of the beaker with colour.

3) Colour quarter of the picture.

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VI. Divide the pictures into two equal parts by drawing a line and colour half of it :



VII. Draw lines and shade quarter in each of the pictures given below.



VIII. Draw the pictures of your liking and mark the fractions given below.

Example : Quarter

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1) Half-

2) Quarter-

3) Three- fourth-

Numerical representaion of half, quarter, three fourth

Recognising and understanding the fractions $\frac{1}{2}$ (Half), $\frac{1}{4}$ (Quarter), $\frac{3}{4}$ (three-fourth) in Numeric form



* Number of equal parts in the picture = Two.

* Number of parts shaded = One.

* the shaded portion is called as half.

* Numerical form of half is $\frac{1}{2}$.

- * Number of equal parts in the picture = Two.
- * Shaded portion=One.
- * Fractional form of the shaded portion = $\frac{1}{1}$.
- * Then, what does this fraction

mean ?

If we divide one object into two equal parts, then, each equal part is represented by (half) $\frac{1}{2}$

1) * Number of equal parts in the picture are four * Shaded portion is one * Shaded portion is called a quarter.

2)

Quarter is represented as

* Number of equal parts in the picture are four.

* Number of shaded part is one.

* Fractional form of the shaded portion is.

* What does this mean?

When an object is divided into four equal parts, each equal part is called as a quarter and is represented by $\frac{1}{4}$

Now, let us try to understand, what is $\frac{3}{4}$?



1)

2)

* Number of equal parts in the picture are four.

* Number of shaded portions are three.

* In fraction, the shaded portion is represented as $\frac{3}{4}$ (three-fourth.)

* Three-fourth is written symbolically as

* Number of equal parts are four

* Number of shaded part is one

* How is the shaded portion represented in fraction?

* It is represented as ___.

When an object is divided into four equal parts, three equal parts together form the three-fourth. $(\frac{3}{4})$

- * If an object is divided into two equal parts, then each equal part is represented by $\frac{1}{2}$.
- * If an object is divided into four equal parts, then each single part is represented by $\frac{1}{4}$.
- * If an object is divided into four equal parts, then three parts together is represented by $\frac{3}{4}$.



III. Shade the given pictures as directed.



- 2) T_{1} and f_{2}
- 3) Three-fourth part
- V. State the meaning of the given fractions as shown below :
 - 1) Half \rightarrow Dividing an object into two equal parts and taking one part. = $\frac{1}{2}$

MVV STU

- 2) Quarter 🔿
- 3) Three-fourth \rightarrow

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VI. Express the given figures in fractional form : Example :



1)



Activity :

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Playing dice with friends

Take a dice. Take flash cards and write $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$ on it. Stick the flash cards on the opposite sides of the dice. Now, make atleast five sets of flash cards representing these fractions.

Form a group of three students and play. Keep the flash cards in the middle of the group. Play the dice, take the flash card having the same value as it is on the dice. Pass on the dice and play in succession until all the flash cards kept at the middle are finished. Who ever has chosen the proper one and maximum number of cards properly, is the winner of the game.



Money

After studying this chapter you can

- * convert rupees to paise using play money,
- * add and subtract amounts using column addi tion and subtraction without regrouping,
- * acquint with simple rate charts and bills.

Convertion of rupees to paise

Activity : Prepare play notes and coins.

- * Place a coin on the table and a thin plain sheet on it
- * By holding the sheet tightly, rub the paper with a pencil to get the impression of the coin.
- * Repeat this activity with different coins to get their impression.
- * Now, cut the coin impresions carefully to obtain paper coins.



cut white sheet into different shape of notes.



*





Write the value of notes on these pieces of paper. Now you have coins and notes to play.

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Identify the coins which are equivalent to different notes







1 rupee is equal to 100 paise. symbol of rupee is ₹



- * 2 rupee is equal to two 1 rupee coins.
- * \gtrless 2 equal to 1 rupee one coin and two 50 paise coins.
- * \gtrless 2 equal to four 50 paise coins.

2 rupees is equal to 200 paise



* 5 rupees is equal to five 1 rupee coins.

* 5 rupees is equal to two 2 rupee coins and one 1 rupee coin.

5 rupees is equal to 500 paise



- * 10 rupees is equal to two 5 rupee coins.
- * 10 rupees = Five 2 rupees coins.
- * 10 rupees = Ten 1 rupee coins.

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10 rupees is equal to 1000 paise

Exercise 9.1

- I. Fill in the blanks
- 1. 1 rupees has _____ 50 paise coins.
- 2. 2 rupees has _____ 1 rupee coins and _____ 50 paise coins.
- 3. There are _____50 paise coins in 1 rupee 50 paise.
- 4. There are <u>5</u> rupee coins in 10 rupees.
- 5. There are 5 rupee coins in 20 rupees.



How do you tell and write amount of money



- The shopkeeper says, orally the cost of the book is
 20 rupees 50 paise.
- * In word, it can be written as, Twenty rupees and fifty paise.
- * While writing in numbers, first write the rupee parts,
 place a dot (.) and then write the paise. 20 rupees
 50 paise can be written as ₹ 20.50

S1.No	Oral form	In words	numbers
1.	20 rupees	Twenty rupees and fifty	₹20.50
	50 paise	paise	
2.	75 paise	Seventy five paise	₹0.75
3.	1 rupee	One rupee	₹ 1.00
4.	10 rupees	Ten rupee and twenty	₹ 10.25
	25 parse	iive paise	
5.	50 rupees	Fifty rupees	₹ 50.00

Exercise 9.2

- I. Fill in the blanks.
- 1. The currency of India is
- 2. The smaller unit of rupee is
- 3. The symbol of rupee is
- 4. The number form of two rupees is _

II.Try this

S1.No	Oral form	In words	In numbers
1.		Sixty six paise	₹ 0.66
2.	1 rupee		₹ 1.00
3.	20 rupees 50 paise	Twenty rupees and fifty paise	
4.		Eighty rupees and seventy five paise	
5.	96 rupees 75 paise		

Converting rupees to paise.

You know that, 1 rupee = 100 paise.

To convert rupees into paise

You Know that 1 rupee = 100 paise

Examples (When only rupees are given)

- 2 rupees = $2 \times 100 = 200$ paise.
- 7 rupees = $7 \times 100 = 700$ paise.
- 8 rupees = 8× 100 = 800 paise.
- 10 rupees =10× 100 = 1000 paise.

Rupees -	Multiply by 100	paise
₹3	3 × 100	300 paise
₹5	5 × 100	500 paise
(₹6)	6 × 100	600 paise
₹9	9 × 100	900 paise

When a rupee is to be converted to paise, multiply it by 100

Conversion of rupee and paise into paises

Examples:

1 rupee 25 paise	= (1 × 100) + 25 = 100p + 25 p = 125 paise.
5 rupee 50 paise	= (5 × 100) + 50 = 500P + 50 P = 550 paise.

Method of Converting to Paise	Paise
(3 × 100) + 50	350 paise
300P + 50 P	A
350 paise	
(9 × 100) + 5	905 paise
900 P+ 5 P	N
	Method of Converting to Paise (3 × 100) + 50 300P + 50 P 350 paise (9 × 100) + 5 900 P+ 5 P 905 paise

When both rupees and paise are given and they have to be converted to paise, multiply only the rupee by 100 and add the paise to the product.

Conversion of rupee to paise orally

Sl.No.	Rupees	Paise
1.	₹ 5.00	500 Paise
2.	₹ 3.25	325 Paise
3.	₹ 6.55	655 Paise
4.	₹ 4.05	405 Paise
5.	₹ 6.19	619 Paise
6.	₹ 5.06	506 Paise
7.	₹ 0.95	95 Paise
8.	₹ 9.90	990 Paise

If we remove the dot between rupee and paise the number which remains represents paise.



I. Convert following into paise.

- 1) ₹ 3.00 = _____ 6) ₹ 2.25 =____
- 2) ₹ 7.00 = ____ 7) ₹ 6.25 = ____
- 3) ₹ 8.00 = ____ 8) ₹ 5.25 = __
- 4) ₹ 4.00 = _____ 9) ₹ 7.75 = ____
- 5) ₹ 6.00 = ____ 10) ₹ 9.50 = _

II. Fill in the blanks :

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S.no.	Rupee/ Paise	Paise
1)	1 Rupee	100 Paise
2)	5 Rupees	
3)	2 Rupees	
4)	1 Rupee 75 Paise	
5)	8 Rupees 90 Paise	
6)	5 Rupees 15 Paise	
7)	7 Rupees 25 Paise	
8)	8 Rupees 50 Paise	

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Addition and subtraction of money.

Understand how to add and subtract rupee and paise using columns.

Example 1: Add 26 rupees 40 paise and 31 rupees 20 paise.

		*	Write rupees in rupees
Rupees	paise		
26	40		column.
+ 31	20	*	Write paise is paise
57	60		column.
Answer	: ₹57.6	50 *	Add paise with paise
		X	and write the sum in
			paise column.
		*	Add rupee with rupee
	(())		and write the sum in
			rupee column.
Example 2 :		*	Add the numbers.
	₹	42 60 *	Write the point
⊥ ₹ 36.00		36,00	below point.
	⊤ ₹	<u>004.00</u> 78.60 *	Write the symbol
	XV	10:00	₹ to the answer.
Example	3 : Sub	tract 21 ru	pees 30 paise from 64
		_	rupees 80 paise.
Rupee	es paise	:	
64	80	4	* Write rupee in rupee
-21	30		column.
43	50		*Write paise in paise
Answe	r: ₹43.	50	column.

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Exmple 4 : Subtract ₹ 35.60 from ₹ 80.75

₹ 80.75 ₹ 35.60 ₹ 45.15

- * Subtract as you
- subtract numbers.
- * Place point below the point.
- * Write the symbol ₹ for the
- answer.

Observe the given articles and their price.



You and two of your friends have purchased some items as given above. Observe the price of the article and check whether the sum is correct.

- Total price of one pencil and one note book. * Total price of one ink bottle and one note book.
- * Find the sum of cost of one ink bottle and one ink

pen.

	20	50
+	25	50

Rupees

+

+

2

18

20

20

18

38

Rupees

46

paise

00

25

25

50

25

75

paise

00

Rupees paise

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Verbal problems

Read the prorblems given below. Understand how to solve verbal problems.

Example 1

Mary bought one pen for ₹ 10.25 and one note book for ₹ 18.25. How much money did she spend to buy the pen and notebook?

*Amount spent to buy a pen = ₹ 10.25 *Amount spent to buy a book = + ₹ 18.25 ₹ 28.50

*Total amount spent

Example 2

Bhavana has ₹56.75 in her piggy bank. she added ₹ 43.15 given by her grand father to the piggy bank. what is the total amount of money in the piggy bank?

- ₹56.75 * Amount in piggy bank *
- Amount given by grand father $= + \gtrless 43.15$ *
- Total amount of money in ₹99.90 the piggy bank

Example 3

Raju has ₹ 85.50. He spent ₹ 25.20 out of it to buy a ball. How much money is remaining with Raju?

*	Money Raju had	=	₹85.50
*	Money spent to buy a ball	=	-₹ <u>25.20</u>
*	Money remaining with Raju	=	₹ <u>60.30</u>

When you are solving verbal problems,

- 1. Write the given information as statements.
- 2. When you are asked to find the total, perform addition operation.
- 3. When you have to find how much remains, how much more or how much less, perform subtraction operation.

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Exercise 9.4

I. Add the following.





- If Sanju spent ₹ 19.25 to buy chocolates and ₹ 6.25 to buy biscuits, what is the total amount spent by Sanju?
 - * Amount spent to buy chocolates
 - * Amount spent to buy biscuits
 - * Total amount spent by Sanju
- 2. Sonali's father gave her ₹ 80 and her mother gave her ₹ 25.25. what is the total amount of money sonali has?

=

- * Amount given by Sonali's father =
- * Amount given by Sonali's mother =
- * Total amount with Sonali

3. Shekar purchased an ice-cream by paying ₹ 7.25 and he also purchased a pen of cost ₹ 5.25. What is the total amount spent by Shekar?

4. Radha won a prize of ₹ 75.50 in a painting competition. She also won a prize of ₹ 20.50 in maths quiz competition. What is the total amount of money won by her ?

5. Manju purchased drawing sheets by paying ₹38.25 and he also purchased crayons by paying ₹ 20.50. What is the amount of money spent by him?

IV. Solve the following statement problems.

Rekha has ₹125.50 and she spent ₹13.75 to buy an ice- cream. How much money is remaining with her?
 * Total money with Rekha = ______
 * Money spent for ice cream = ______
 * Money remaining = ______

 Shashank has ₹ 125.50, he purchased a doll for his sisiter by paying ₹ 75.25. How much money remains with him?

* Money with Shashank =

- * Money spent to purchase a doll =
- * Money remaining with him =
- 3. If Jaya had ₹ 20.00 If she spent ₹15.50 to buy tomato how much money remains with Jaya?

4. You have ₹ 100.75. If you spend ₹ 50.25 to purchase chocolates on your birthday, how much money remains with you?

5. Your father gave ₹ 50.75 to you and ₹ 25.50 to your brother. How much more money did you recieve than your brother ?



Every shop displays a price list. It helps us to know the price of the things that we want to buy from that shop.

Now, look at the price list in this bakery.



Preeti visited this bakery. Help her to know the price. She wants to buy following things.

1 Veg puff = _____

1 Pound bread = _____

1 Chocolate = _____

			KS	T No 001234			
		Rec	eiept CST	No 007568			
	S	ri Te	extiles				
	M.G.	Road	Kalaburagi				
Bill	No: 15702		Date : 10	0-04-2016			
Nan	ne : Rajendra						
Sl no	Item description	Qty	Rate	Amount			
1.	Shirt	1	₹ 250.00	₹ 250.00			
2.	Saree	1	₹ 725.00	●₹725.00			
3.	Dress		₹ 375.00	₹ 375.00			
	Total		10	₹1350.00			
Vat 70.00							
₹ 1420.00							
(In	words : One thous	sand	Four hundred 1	`wenty only)			
Sign of the shopkeeper :							

The bill tells us

- * Name and address of the shop.
- * Receipt number and the date of purchase.
- * Name of the customer.
- * Details of the items purchased.
- * Cost of each items purchased.
- * Total amount to be paid is written both in number and words.
 - Sign of the shopkeeper.

Imran went to a stationary shop and purchased one 200 pages book, two 100 pages books and 5 pencils. Observe the price list and the bill given by the shopkeeper. Check whether it is correct.

Price list			
Item	Price per unit		
200 Page book	₹ 30-00		
100 Page book	₹ 15-00		
Eraser	₹ 5-00		
pen	₹ 10-00		
Pencil	₹ 4-00		

Receipt Rajaram Book Mart KST No 0243 Shivamogga CST No 0456

Bill I	No : 453	Date :	15-03-16					
Name : Imran								
S1.	Item	Quantity	Price	Amount				
	description		per unit					
1	200 Pages note	1	₹ 30.00	₹ 30.00				
	book							
2.	100 Pages note	2	₹ 15.00	₹ 30.00				
	book							
З.	Pencil	5	₹4.00	₹ 20.00				
			Vat 4%	₹ 3.20				
	Total	_		₹ 83.200				

(In words : Eighty three rupees and paise twenty only)

W

Sign of shopkeeper

CO

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Downloaded from https:// www.studiestoday.com Exercise 9.5

Fill in the blanks :

- 1. The slip we recieve from the shopkeeper containing the details of purchase is called a ______
- 2. The board displayed in a shop showing the price of each item is called _____
- 3. In a Receipt, the total amount to be paid should be written in numbers and _____
- * Observe the Receipt given below and answer the following questions.

				KST No 0453				
			C C	ST No 06567				
	Reciept							
Jagadamba Textiles								
Bengaluru								
Bil	ll No : 301		Date : 30-12-15					
Na	Name : Parvati							
S1	Item description	Otv	Price per unit	Amount				
no		Qty		milliount				
1.	Saree	1	₹ 450.00	₹ 450.00				
2.	Blouse piece	2	₹ 25.00	₹ 50.00				
3.	Hand kerchief	5	₹ 10.00	₹ 50.00				
	Vat 4%			22.50				
Total				₹ 572.50				
(In words : Five hundred seventy two Rupees and								
fifty paise only)								
Sign of the shopkeeper :								

- 1. What is the name of the customer?
- 2. What is the cost of the saree purchased? _____
- 3. What is the cost of one handkerchief?
- 4. What is the total amount to be paid to the shop keeper?
- 5. What is the Receipt number?____

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Activity: Go through the bills in your house and study the particulars.

Chapter-10	Measurement					
After studying this chapter you can						
* know tł	he need for a standard unit of measurement,					
* select i	nstruments according to measurement.					
* learn th	he use of measuring instruments,					
* acquire and me	e the skill of measuring objects in centimetre etre,					
* estimat	te the length of given objects.					
* measur scale,	re estimated length by using a measuring					
* find the measur	e difference between estimated and actual rement,					
* weigh o	objects using nonstandard weights,					
* know t	he unit of measuring weight,					
* know h nonsta:	now to find the capacity of objects using ndard units,					
* know ti	he unit of measuring volume,					
* know h	now to write day and date using calender,					
* acquire the hou	e the knowledge of finding time nearest to ur,					
* arrange	e daily events chronologically,					
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Preparation for festival

Jyothi goes to market with her father to buy flowers for Gowri-Ganesha festival. She observes as her father buys flowers.

Jyothi : Daddy, see here the flowers are so beautifull



Father : Asks flower seller to give flowers.

Flower vendor : How much shall I give sir?

Father : I want one fathom of flower

Flower vendor's son : Daddy, I will measure the flower with my hand

Father : No, No, let your father measure.

Jyothi : Father, the boy likes to measure, let him do it.

Father : No. Let your father measure.

Jyothi : Father, let him measure.

Father : No child, if his father measures, we get more flowers.

Father: Ok, each of you give one fathom of flower.

- Jyothi : How is it? Both father and son will give the same one fathom of flowers.
- Father : But, One fathom measured by flower vendor will be more than one fathom measured by his son (by comparing the two)

Jyothi : Oh yes, why didn't I realise this? why don't we use the same device (Scale) so that the measurements are equal.

Mesurement how ? how much ?

Kumar, Ramya, Salma and John are measuring the black board using handspan.



Teacher : Children, what are you doing?

Students : We are measuring the blackboard by our hand.

Teacher : Are the measurements same?

Students : No sir / (Madam)

Teacher : Take this scale. Now, every one measure the blackboard using the scale and fill this table.

Name of the students	When measured using	
	scale	
Kumar	20 times	
Salma	20 times	
Ramya	20 times	
John	20 times	

Observe the measurements. The measures are equal why? Think !

All students have used the same scale hence the measurements are equal

Downloaded from https:// www.studiestoday.com
Downloaded from https:// www.studiestoday.com Observe the scale.

The first number in this scale is

The last number in this scale is

The number of long lines in this scale is

The number of short lines between any two long lines is

Such 9 short lines and 1 long line together form a group of 10 lines. This group of 10 lines is equal to one centimetre. It is written as 1 cm. In a small scale there are 15 such groups, so, a small scale is 15cm long.

We can measure the length of several objects using this scale.

Observe the picture and learn the method of measuring the length.



I. Measure the length of the given pictures using a scale and write the length in the space provided.





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6.

7.

Junction

Have

you

observed the scale used in a cloth shop? They use a bigger scale. Why? Think!

It is not convenient to use a small one to measure longer objects

<image>

since it takes a long time to measure and becomes very inconvinient. So a bigger scale is used. This bigger scale is called a 'metre scale.'

An one metre scale will be 100 cm long.

So, 1 metre = 100 cm



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Put a \checkmark mark for suitable scale to measure the length of objects given below.

Objects	cm scale	Metre scale
Length of a pen	√	1
Length of a class room		
Length of the cricket bat		
Length of the play ground		S
Height of a door		
Length of a book		
Length of a saree		
Length of an eraser	UY	
Length of a pencil		

If available, use a metre scale or use a scale prepared by yourself and measure the following. Record the measures in nearest metre in the space provided.

- * Length of the blackboard in the class
- * Length of the table in the class
- * Length of the bench in the class
- * Width of the classroom door

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- * Distance from your place to the blackboard in the classroom
- * Distance between two walls of a room

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Exercise 10.2

I. In the picture, measure each coloured strip using a suitable scale and answer the following questions.



- * If the length of a green strip should be equal to blue strip, it has to be increased by _____
- * The difference between the lengths of white and yellow coloured strips is _____

II. In the given picture measure the sides and record as shown



III. Measure the length and breadth of your classroom and record it to the nearest metre.

- 1) Length of the classroom _____
- 2) Breadth of the classroom _____

Estimate and measure:

Observe the pictures and estimate the length. They check accuracy by measuring it.



Estimated length Exact length

Estimated length Exact length



Estimated length Exact length

Estimated height



Exact height

Estimated length Exact length



Estimated length Exact length



Estimate the height of 5 of your friends. Then measure and check the accuracy of estimated measurement.

students	Estima heigl	nted ht	Actual height
1			
2			
3			100
4	Ċ		
5			11.2
Estimate the le	Exercise	10.3 he give	N n lines. Measur
and check the	length usi	ng mea	suring tape.
1) Estimated leng	th	Actual	length
1) Estimated leng 2) Estimated leng Estimated leng 3) Estimated leng	th th	Actual Actual	length
1) Estimated leng 2) Estimated leng 3) Estimated leng 4)	th th th	Actual Actual Actual	length
 Estimated leng Estimated leng Estimated leng Estimated leng Estimated leng Estimated leng 	th	Actual Actual Actual Actual	length

II. Estimate the length of objects in your house and check whether your estimation is correct by measuring it.

4)

- **Example :** 1) Door _____
 - 2) Window _____ 5) ____
 - 3) Broom _____ 6) ____

Weight Who got more?

Deepa and Pushpa are sisters. They both went to a fair with their father. Deepa purchased 1 kilogram laddu, which is her favourite sweet. But Pushpa purchased 1 kilogram of butter biscuits. The packet of biscuits was much bigger than the packet of laddus. Deepa observed this and started to argue with her father that he had bought more for her sister.

- * Is Deepa's arguement correct?
- * Why Deepa is thinking like that?
- * Observe the object marked in the figure.
- * For what purpose it is used ?



The device/instrument used to weigh objects in shops and other business places is the weighing mechine.

Use the balance available in your school or borrow a balance from a shop.

Place a chalk box filled with pieces of chalk on one side and go on placing onions on the other side until both their weights become equal. Make a note of number of onions, in the table given. Repeat the above activity with different objects given in the table.

Serial number	Objects	Number of objects
1.	Onion	
2.	Tomato	
3.	Marbles	
4.	Potato	
5.	Books	

Write 5 situations where the weights are used for measurement.



Do by yourself

Place a Bottle filled with water on one side of a balance and place the following objects on the other side and fill in the blanks.

- 1) Number of onions equal to the weight of bottle
- 2) Number of marbles equal to the weight of bottle
- 3) Number of tomatoes equal to weight of bottle
- 4) Number of bananas equal to weight of bottle
- 5) Number of brinjals equal to weight of bottle

Exercise 10.4

1) In the given set of objects, put 'v' mark for the object whose weight is more.

1.	Mathematics book	\checkmark	Newspaper
2.	Pen		Geometrical instruments
3.	Wooden chair	1	Wooden table
4.	Volley ball		Tennis ball
5.	Coconut		Pumpkin

2) Estimate the weight of the pair of objects in your surroundings and classify them as shown in the table.

	Weight less than 1kg	Weight more than1kg
Ex: 1	Duster	pumpkin
2		
3		
4		

3) Estimate the weight of the following vegetables and arrange them in decsending order.

carrot, pumpkin, coconut, chilly

4) You might have seen these different types of balances. Learn who use them.



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5) Estimate the weight of the following objects and arrange them in ascending order.

bike, car, bus, cycle, Auto

Activity 1.

Make a list of 5 students who weigh more than you and 5 students who weigh less than you in the given table.

your weight = _____ kg

More v	veight:	Less v	veight
Name of student	weight	Name of student	Weight
× ^			
10			
N			
<i>V</i>			

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Activity 2.

Observe the model and fill in the blanks

Name of objects	More weight	Less Weight
Fruit	water melon	1) 2) 3)
Animal	1) 2) 3)	deer
Vegetable	cucumber	1) 2) 3)
Flower	1) 2) 3)	jasmine

Volume

Write the names of the containers and their uses in the table.



	Serial number	Name of the container	Use
	1	Plastic bottle	To carry water during Journey
	2		
	3)	
	4		
~	5		
	6		
	7		
	8		

Observe the given picture. Identify the containers that are numbered.





Observe the use of all the above containers, What is their common use?

All the containers in the above examples are used to store liquid/water. We store liquid/water/according to their volumes.

Let us Learn about the storage capacity of the following objects.

Activity 1 : Take two tumblers of different sizes and fill water into the containers given below and measure their storage capacity.

Name of the container	Capacity in a big glass	Small glass
Capacity of jug	glass	glass
Capacity of plastic bottle	glass	glass
Capacity of steel container	glass	glass

Activity 2: Take two tumblers of different sizes and a container. Fill the container with sand using the big tumbler then empty the container and fill the sand using small tumbler.

Capacity of the container :

In small tumbler = _____ tumblers.

In big tumbler = _____ tumblers.

In the above activitity, you can observe that sand has been filled more number of times with the small tumbler and less number of times with the big tumbler. Why?

When the container is filled with two different measuring instruments, the capacity of the container does not change. Since the capacity of the smaller instrument is less, it is recorded more number of times and the capacity of the bigger instrument is more hence it is recorded less number of times.

Take a pot and fill it with water using two different size mugs. fill up the following table. Repeat this activity taking bucket, and a small drum.

Name of the object	Small mug	Big mug	2
Pot Bucket	mugs mugs	mugs mugs	<u>e</u>
Small drum	mugs	mugs	

Exercise 10.5

Observe the containers given below and answer the questions.





Jug

Ö

Pot

Sintex

Glass



Water bottle



Water container

- 1) The object of least capacity is _____
- 2) The object of very high capacity is _____
- 3) The objects having greater capacity than the pot are _____ and _____
- Objects having capacity more than the bottle and less than the pot are _____ and _____
- 5) Object having capacity less than the tank and more than the pot is _____
- 6) Object having capacity more than the tumbler and less than the mug is _____

Activities :

2)

1) Name different containers used to store drinking water in your house.

Check how many pots of water are required to fill the steel drum used to store drinking water in your school.

3) Fill the following table.

Containers used to	Containers used to
store liquids	store soild things
1)	1)
2)	2)
3)	3)
4)	4)
5)	5)

Time

Observe the calendar of 2016 and answer the questions given below

- 1) How many Sundays are there in the month of May
- 2) Identify the date of the Sundays in the month of August ?
- 3) Name the months having 31 days

a) b) c) d)
e) f) g)
4) Name the months having 30 days.
a) b) c) d)
5) Name the month having less than 30 days

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January								
Мо	Tu	We	Th	Fr	Sa			
				1	2			
4	5	6	7	8	9			
11	12	13	14	15	16			
18	19	20	21	22	23			
25	26	27	28	29	30			
	Mo 4 11 18 25	Ja Mo Tu 4 5 11 12 18 19 25 26	Ju We 4 5 6 11 12 13 18 19 20 25 26 27	Jarustvette Mo Tu We Th 4 5 6 7 11 12 13 14 18 19 20 21 25 26 27 28	Joint J			

April

July Mo Tu We Th

25 26

Fr Sa

Fr Sa

21 22

27 28 29

Mo Tu We Th

Su

	February							
Su	Мо	Tu	We	Th	Fr	Sa		
	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							

May

August

Tu We Th

24 25

26 27

We Th

Sa

Fr Sa

12 13

Мо Tu

Mo

March						
Su	Мо	Tu	We	Th	Fr	Sa
		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	31		

June						
Su	Мо	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

September							
Su	Мо	Tu	We	Th	Fr	Sa	
1				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		

December Tu We Th Fr

27 28 29

/lo

 Sa

30 31

		0	ctob	er				1	Nov	vem	ber				
Su	Мо	Tu	We	Th	Fr	Sa	Su	Мо	Tu	We	Th	Fr	Sa	Su	Mo
						1			1	2	3	4	5		
2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5
9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19
23	24	25	26	27	28	29	27	28	29	30				25	26
20	24														

Federal Holidavs 2016

Jan. 1st	New Year's Day	July 4th	Independence Day	Nov. 24th	Thanksgiving Day
Jan. 18th	Martin Luther King Day	Sept. 5th	Labor Day	Dec. 25th	Christmas Day
Feb. 15th	Presidents' Day	Oct. 10th	Columbus Day	Dec. 26th	Christmas D. (obs.)
May 30th	Memorial Day	Nov. 11th	Veterans Day		

The main purpose of the calendar is to help us to mark and note the dates on which a particular event has happened or is going to happen. It is commonly practiced that first we write the day then the month finally the year.

Day/Month year

Example: We write the date of independence as 15/08/1947

Here : $15 \rightarrow$ Indicates the day. $08 \rightarrow$ Indicates the month. $1947 \rightarrow$ Indicates the year. The day school reopened after holidays is written as : 01/06/2016 $01 \rightarrow$ Indicates the day. $06 \rightarrow$ Indicates the month. $2016 \rightarrow$ Indicates the year.

To note any important date in the calender, we have to first note down the year, then the month and finally the day.

Eg : The begining date of 2016



Mark the given festivals by placing a circle round the dates in the calender. Also, write down the dates in the table given below.

S1. No	Festival	Day	Month	Date
1)	Pongal		January	14
2)	Shivarathri			N
3)	Ramzan			
4)	Good Friday			
5)	Gurunanak jayanthi			
6)	Workers Day			
7)	Teacher's Day			
8)	Children's Day			
9)	Gandhi Jayanthi			
10)	Christmas	1V		

Using a calender, write down the dates of the following celebrations.

Celebrations	Day	Month	Week	Date
Republic day				
Ugadi festival				
Ed Milad				
Ambedkar Jayanthi				
Kanaka Jayanthi				
Basava Jayanthi				
Independence Day				
Karnataka Rajyoshthova				
Diwali				
Bakrid				

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Activity :

1) Take a calender and write down all the redcoloured dates in the table below.

Day	Month	Week	Date
	C	•	Ċ
		X	

- 2) Write your date of birth : Day: ____ Month: ___ Year
- 3) In present year's calender, mark the birthdays of your 8 friends by writing their names against the dates.

T	Name of friend	Birth day date	Month	Year	
<i>Y</i>					
	looded from bt	toollyanan	v atudioa	todov o	

My Time

My sisiter Mamatha's, daily routine:

My sisiter Mamatha is studying in 10th standard. She gets up at **5** o' clock in the morning every day. She washes her face and sits for study at 5.30 a.m. She studies maths, science and English till 8 o' clock. Then, she reads the newspaper and tells the news to everyone in the family. Then, she goes to the kitchen to help mother. After that, she finishes her bath, pooja and breakfast and gets ready to school. Exactly at 9 o' clock she leaves the house with her friends to her school which is 3 km away from her house. She reaches the school by 9:30. Then she waters the plants in the school garden along with her friends. School bell rings at **10** o' clock. She attends the prayer with her friends. She also plays games and participates in the competitions. she returns home at **5** in the evening. She plays for 1 hour, She cleans the house within 20 minutes. She starts study at 6:30 She studies kannada and social science upto 8 o clock, she watches the news on T.V, exactly at 8 o' clock and goes back to study at 8.30 She studies Hindi till 9:30. Then, She finishes her dinner and goes to bed at night **10 o'** clock.

Observe Mamatha's daily activites and fill in the blanks :

- 1) Mamatha gets up in the morining at _____
- 2) In the morning, she studies till _____ time
- 3) She leaves her house for the school at _____
- Mamatha reaches school at _____
- 5) In the school, bell rings at _____
- 6) The prayer is for _____ time
- 7) She returns to home at _____
- 8) In the evening, she starts her studies at ____
- 9) She sleeps at _____ in the night.

Measuring Time



I am an instrument to measure time. I am called a clock or watch. My main purpose is to show time to everyone.

Two of my assistants work continiously to help me to show you time. The bigger one shows minutes. He is called minute hand or big hand. The other one is small. He shows hours. He is called hours hand or small hand. Both of them together help in showing time.

I have 12 equal parts. Each part is shown by a big line. These parts are marked using the numbers 1,2,3,4,5,6,7,8,9,10,11,12. They show hours.

There are small lines between two big lines. These lines show minutes.

If the bigger one crosses all the lines and finishes one complete round, he would have crossed 60 minute lines. At the same time, the smaller one will cross one big line.

Thus,

60 minutes = 1 hour

Every time the bigger hand crosses 60 small lines, the smaller hand will move to the next number (hour)

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See the hands and know the time :



ownloaded from https: eto Look at the pictures given below, fill in the blanks with correct time :

What is the time now?

The small hand has crossed 1 and is near 2. The time is approximately 2 0'clock.

The small hand has crossed 3 but still, it is near 3 only. So, the time is approximately 3 0'clock.



Small hand has crossed 5 and is closer to 6 So, the time is approximately

60' clock



The small hand has crossed 9. but it is closer to 9 only.

So, it is approximatily 9 o' clock

Observe the clock. Fill the empty blank with time, approximating to the nearest hour.





The approximate time is The approximate time is





The approximate time is The approximate time is

Do and learn : With the help of a clock having small and big hands by rotating the big hand observe the movement of small hand.

Arrange chronologically:

Acivity : Veeraiah is a successful farmer. Everyday, he wakes up at 6:00 in the morning. Till 7:30 in the morning he cleans his cowshed. By 8:30 he finishes his bath and worship. He takes breakfast at 9:00. Then, he goes to his farm and works there till 1 o' clock in the afternoon. He takes his lunch and rests under a tree. At 3 o' clock he goes to his garden. He completes all his work there and returns home at 5:30 in the evening. He refreshes himself and shares all his experiences with his family. At 8:30 in the night he has dinner. Then, he sits outside his house and discusses various topics like rain, crops and many other things with his fellow farmers. Then, the tired Veeraiah goes to bed at 10:30.

By studying Veeraiah's daily activities, fill the following blanks :

- **Example:** Wakes up at morning 6:00 O'clock.
 - morning 8:30.
- ____ morning 9:00 0'clock.
 - Works in the field at _____.
 - Goes to his garden at _____.
 - _____ Evening 5:30.
- _____ Night 10:30.

Activity 2 : Savitha has prepared a list of her daily activities. Column A contains a list of her activities Match this with the time in column B

	Α	В
1)	Wakes up from bed.	Morning 9:30
2)	takes bath.	Morning 6:00
3)	Goes to school.	Afternoon 3:00
4)	Lunch time in school.	Morning 7:00
5)	Playing time in school.	Night 10:00
6)	Leaves school.	Evening 6:00
7)	Study time in the evening.	Afternoon 1:30
8)	Sleeping time in the night.	Evening 4:30

Activity 3 :

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After returning from her holidays, Reshma tells her friend about the trip she had the previous week. She explains it as follows: "I and My parents returned from the trip on Sunday, We saw the new city of Bagalkot on Wednesday. I saw the Gol Gumbez of Vijayapur on Saturday. On Monday, the first day of our trip, we saw the caves of Badami. On Thursday, we went to Kudalasangama we spent Tuesday visting Ihole pattadakal which is 90 kms away from kudalasangama. The whole of Friday we spent good time at Alamathi Dam and the surrounding beautiful gardens"

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Fill the table below with what Reshma saw during her trip

Description of the tour	Day	
Opening day of the tour		
Day of visit to Ihole and Pattada Kallu		
Visit to Navanagara	10	
Visit to Kudalasangama		
Visit to Alamtti Dam		
Visit to Golgumbaz		
Last day of the trip		

Activity 4

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One day Rashid's mother went to her village before Rashid came from his school. She had written the job Charts to be done by Rashid the next day on cards in an arranged manner. Accidentally it fell down. Please help Rashid to arrange them in chronological order.

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Write your daily dairy systematically.

Chapter-11 Data Handling

After studying this chapter you can

- record data using tally marks,
- draw inference by analysing the data in the form of tallies,
- represent the data by a pictograph using proper scale,
- analyse and interpret the data in the pictograph.

Have you ever been to a zoo? Then, you might have seen different animals there. The picture of few animals are given, observe them.



Now, fill the below table

Name of the Animal	Number of animals	
Tiger		
Elephant		
Giraffe		$\mathbf{}$
Deer	226	

From the given picture :

- * The animal which is less in number is
- * The animal which is more in number is
- * The number of elephants exceeding the number of giraffe's are _____
- * The number of tigers less than the number of deer is
- * The total number of animals is _

Observe the pet animals in the given picture carefully.


Against each animals, draw tally corresponding to every single animal

Pet Animals	Tally marks (1 tally for one time)	
Fish	ll í	
Rabbit		
Cow	106	
Cat		
Dog	7 117	

* Verify whether the number of tallies corresponds to the number of animals.

Collected data/events are marked in table and can be verified.

Look at the balloons and put tallies :

Have you ever been to a fair? There, you would have seen people selling coloured balloons one such seller is shown below.



By looking at the colour of the balloons given in the above picture, Fill in the blanks using tally marks.

Balloons	Tallies
Red	
Blue	
Green	
White	
Others	

Answer the questions given below :

- * Colour of the balloons which is more in number _____
- * Colour of the balloons which is less in number _____
- * Total number of red and green balloons _____
- * Total number of balloons with the balloon seller

Observe the vehicles given above and fill the following table :



Vehicles	Tallies
Two-wheeler	
Three-wheeler	
Four-wheeler	

- * Number of two-wheeler vehicles
- * Number of three-wheeler vehicles
- * Number of four-wheeler vehicles
- * Number of two-wheelers more than the number of three wheelers are
- * Number of four-wheelers less than the number of two-wheelers are

Analysis of data and Interpretation.

Observe the table given below and answer the following questions :

Flowers	Tallies
Rose	
Tulip	
Hibiscus	
Jasmine	

Number of Jasmine flowers 4 (Number of Tallies =4)

- * Number of Rose flowers _____
- * Number of Tulips _____
- * The flower which is more in number _____
- * The flower which is least in number _____
- * Number of Jasmine flower exceeding the number of roses

^{*} Total number of flowers

Learn from the picture graph

Given below is a list showing the number of students attendence from one to fifth standard in Goverment Higher Primary school, Bagalkot.

Attendance List

Date : 1-6-2013

Class	Total number of students	Number of students present	Number of students absent
$1^{\rm st}$	22	18	4
2^{nd}	23	20	3
$3^{\rm rd}$	20	17	3
4^{th}	18	17	1
5^{th}	17	15	2
Total	100		

From the above list :

- * Number of students present in the school
- * Number of students absent from the school
- * Total number of students in the school

L		
_		
Ē	_	=

Class Number of students absent



Represent the number of absentees in the remaining classes in the pictograph as

Observe the pictograph and fill in the blanks.

- * The class having maximum number of absentees _____
- * The class having least number of absentees
- * Number of students absent in 5th standard

Given below is a pictograph showing the plants grown by the students of Government Higher primary school Simikeri :

Class	plants grown	- represent 2
3 rd	4++	plants
4 th	****	
5 th		
6 th	* * * * * * *	
7 th	* * * *	

Now, observe, this pictograph and answer the following questions :

Example : Number of plants grown by the students of 3rd standard 6

* Number of plants grown by the students of 4th standard class

* Number of plants grown by the students of 6th standard exceeding the plants grown by 7th standard class students

* Class, which has grown less number of plants

* Class, which has grown more numbeof Plants

Remember:

- * Observe the given data.
- * Mark tallies according to the observed data.
- * Draw a pictograph using proper scale.

Exercise 11.1

 Using the first letters of the days a week, mark tally. Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday.

First letter of the Day	Tally marks
S	
М	
Т	
W	$\mathbf{O}\mathbf{X}$
	\mathbf{O}
F	

2. Observe the pictograph given below and answer the questions that follow:



- * Number of students who like cricket _
- * Number of students who like Kabaddi _
- * Number of students who like Throw ball _
- * The game which is liked by maximum number of student is_____
- * The game which is liked by minimum number of students is _____

3. Column A has ridge guard, ladies finger, ball, Idli, apple, bat, mango, dosa, top, vada, pumpkin, kesaribath related items. Column B has the respective data tallies. Match them

'A'

- 1. Vegetables
- 2. Fruits
- 3. Food itemsa
- 4. Sports goods

B' /

Collect details of the students of your class who celebrate their birthday in which month of the year and represent it by a pictograph.

X											
J	F	Μ	Α	Μ	J	J	А	S	0	Ν	D
a	e	а	р	а	u	u	u	е	с	0	е
n	b	r	r	У	n	1	g	р	t	v	с
u	r	с	i		е	v	u	t	0	е	e
а	u	h	1		-	3	s	e m	b	m	m
r	а						t	b	е	b	b
y	r							e	r	e	e
5	У							r		r	r

5. Given below is a list of sweets, which the students of 3rd standard like. Observe Tally table and answer the following questions.

Sweets	Tallymarks			
Kesri Bath				
Mysore Pak				
Jilebi				
Dharwad peda				
Laddu				

- * Number of students who like kesri bath
- * Number of students who like jilebi
- * Number of students who like mysore pak
- * Number of students who like dharwad peda

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* Number of students who like laddu

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Patterns

After studying this chapter you

- identify the simple symmetrical shapes and patterns,
- make patterns and designs from straight lines and other geometrical shapes,
- identify odd and even number patterns along with additional operation, identify different number patterns.
- identify patterns of objects based on shape colour and size in their surroundings,

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* identify patterns in multiplication tables.





Simple symmetrical shapes and patterns:

Observe the pictures. Write 'yes' if the dotted lines divide the picture into two equal halves other wise write 'No'.









ownloaded from https: 2. Draw the remaining half of the given symmetrical figures : 3. Continue the given patterns :

 II. Draw different designs, and patterns using straight lines, and curved lines, obeserve the pattern.
Observe the picture design and copy the same in the space provided.



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2)
V. Using dots draw the designs as instructed.
• • • • • • • • •
\cdots
\cdots
VI. Using dots draw the designs as instructed.
1) Kite
2) Leaf
$\mathbf{x} \mathbf{O} \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot \cdot$
3) Boat
\mathbf{X}
4) Star

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Number patterns formed by odd and even numbers.

Number Table from 1 to 100

1	11	21	31	41	51	61	71	81	91
2	12	22	32	42	52	62	72	82	92
3	13	23	33	43	53	63	73	83	93
4	14	24	34	44	54	64	74	84	94
5	15	25	35	45	55	65	75	85	95
6	16	26	36	46	56	66	76	86	96
7	17	27	37	47	57	67	77	87	97
8	18	28	38	48	58	68	78	88	98
9	19	29	39	49	59	69	79	89	99
10	20	30	40	50	60	70	80	90	100

We can form different number patterns from the rows and columns.

Example

1, 2, 3, 4, 5, 6, 7,,, Numbers in the column increases by 1 **Example :**

1, 11, 21, 31, 41, 51,,,,,

Numbers in the row increases by 10

Example :

*

Observe the sum obtained by a adding the consecutive numbers in rows

55, 155, 255, 355, 455,,,

In this pattern the numbers, increase by 100.

Example :

*

Observe, the sum obtained by adding the ten numbers of the rows

 $1 + 11 + 21 + 31 + 41 + \dots + \dots + \dots + \dots + 91 = 460$ $2 + 12 + 22 + 32 + 42 + \dots + \dots + \dots + 92 = 470$ $3 + 13 + 23 + 33 + 43 + \dots + \dots + \dots + \dots + 93 = 480$ $= \dots$

9+19+29+39+49+ 59+69+79+89+99 = 540

Sum of ten number of the rows are like this.

460, 470, 480, 490, 500, 510,

In this pattern the numbers are increasing by 10.

Example :

1, 11, 21, 31, 41,,,

Example:

Number in the Second column end with 2. The Unit place of all numbers in this column is two

2, 12, 22, 32, 42,,

The numbers in the second column ends with 2

The same rule applies to the remaining columns also.

Example:

Observe the following patterns :

We get this pattern by adding 2 to the previous number.

Example:

1, 4, 7, 10, 13, 16,,,

2, 5, 8, 11, 14, 17,,,

We get this pattern by adding 3 to the previous number.

- * Number patterns can be formed by arranging the numbers in a particular way.
- * Pattern having odd numbers are called odd numbers pattern; patterns having even numbers are called even number patterns.
- * By adding 2 to odd numbers we get odd number patterns.
- * By adding 2 to even numbers, we get even number patterns.

Example :

This patterns is obtained by adding consecutive numbers.

1 + 2 = 3	1 + 2 + 3 = 6	1 + 2 + 3 + 4 = 10
2 + 3 = 5	2 + 3 + 4 = 9	2 + 3 + 4 + 5 = 14
3 + 4 = 7	3 + 4 + 5 = 12	3 + 4 + 5 + 6 = 18
4 + 5 = 9	4 + 5 + 6 = 15	4 + 5 + 6 + 7 = 22
5 + 6 = 11	5 + 6 + 7 = 18	5 + 6 + 7 + 8 = 26

Observe the pattern and fill up the blanks.

3, 5, 7, 9, 11,,,, 6, 9, 12, 15, 18,,,,

10, 14, 18, 22, 26,,,,

- * We get this pattern by adding any three consecutive numbers.
- * This pattern is obtained adding any three consecutive numbers.
- * Pattern obtained by adding two consecutive number increases by two.
- * Pattern obtained by adding 3,4 consecutive number increases by three and four.
- * Sum of 4 consecutive numbers is twice the sum of the two numbers in the middle.

Execrise - 12.2 **Complete the following number patterns :** Ι 1) 11, 12, 13, 14,,,, 2) 71, 81, 91, 101,,,, 7, 17, 27, 37,,,, 3) 31, 33, 35, 37,,,, 4) 20, 23, 26, 29,, 5) 21, 23, 25, 27, ..., ..., ...,, 6) 10, 12, 14, 16, 7) 55, 155, 255, 355,,,, 8) 490, 500, 510, 520, **,** , , , 9) 5, 8, 11, 14, 17,,, 10) Π Write the constructed logic for the following patterns as shown below. Model: 11, 12, 13, 14, 15,,, Constructed logic: Numbers increase by 1 in pattern. 2, 12, 22, 32,,,, 1) Logic: 10, 12, 14, 16. 18,,,, Logic : 3) 5, 10, 15, 20, 25,,,, Logic :

	Uau	ed II OIII Hups.// www.studiestoday.com			
4)	44,	144, 244, 344,,,,,			
	Log	ic:			
5)	11,	13, 15, 17,,,,			
	Log	ic:			
ш	Fill in the blanks :				
	1)	A is formed by arranging the num bers in a particular way.			
	2)	Patterns having odd number are called patterns.			
	3)	10, 13, 16, 19,,,			
	4)	40, 50, 60,,,			
	5)	7, 17, 27,,,			
	6)	9, 12, 15,,,,			
	7)	10, 12, 14,,,,			
	Different types of number patterns :				
Obs	erve	the following number picture and try to learn			

how the numbers are split.



The number pattern obtained is as follows.



Fill in the blanks by knowing the rule used 11-1, 12-2, 13-3, 14-4, 15-5,,,



Understand the spliting of number by addition and fill up blanks.

15 = 8 + 7, 9 + 6, 10 + 5, 11 + 4,, 25 = 12 + 13, 13 + 12, 14 + 11, 15 + 10,, 40 = 20 + 20, 21 + 19, 22 + 18, 23 + 17,

Understand by substracting the splitting pattern of number subtraction form.

30=60-30, 70-40, 80 - 50, 90-60,,,

40 = 50-10, 60-20, 70 - 30, 80-40,, ...

Number patterns pictorial form

Learn the following patterns



This is a pattern obtained by adding three consecutive odd numbers.





Pattern obained by adding four consecutive numbers. Downloaded from https:///www.studiestoday.com



wnloaded from https:// www.stu estoday II. For each given number, write the division form of subtraction. 25 = 50 - 25, 60 - 35,, 1) 2) 35 = 100 - 65, 90 - 55,,, 3) 45 = 55 - 10,, 4) 50 = 100 - 50,, 60 = 70 - 10,,,, 5) **III. Complete the following division patterns** 10 + 10, 9 + 11, 8 + 12,, ..., 1) 13 + 12, 14 + 11, 15 + 10,,, 2) 15 + 10, 14 + 11, 13 + 12,,, 3) 4) 100 - 10, 110 - 20, 120 - 30,, 5) IV. Complete the number patterns of pictorial form. 1) 2) 11 5 3 11 8 11 6



Different patterns around us according to shapes, colour, size

Observe the patterns of different designing tiles.



Observe the designs of the house roofs.





Observe the different designs of the windows.









Number patterns in a multiplication table. "Multiplication table from 1 to 10"

 \rightarrow Row \rightarrow

1	2	З	4	5	6	7	8	Q	10
T	4	0	Т	0	0	1	0	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

* Multiplication table from 1to10 is written in vertical lines.

* 1 to 10 multiplication table can be obtained in horizontal line also.

Exercise 12.5

Different patterns obtained from the multiplication table :

This number pattern is obtained by adding 1 to the previous number.

2) 2, 4, 6, 8, 10,

1, 2, 3, 4, 5

1)

This number pattern is obtained by adding 2 to the previous number

/ / /	
3)	3, 6, 9, 12, 15, 18,
	It is obtained by adding 3 to the previous number in the table 3.
4)	5, 10, 15, 20, 25,,,
	Patterns of digits in unit place.
	5, 0, 5, 0, 5,,
5)	8, 16, 24, 32, 40,48,56,64,72,80,
	Adding the digits in a number till we get a single
	digit.
	8, 1+6 2+4 3+2 4+0 4+8 5+6 6+4 7+2 8+0
	8, 7,6,5,4,12,11,10,9,8,
	8,7,6,5,4, 1+2 1+1 1+0 9 8
	8,7, 6, 5, 4, 3, 2, 1, 9 8
	Types of number formed 8, 7, 6, 5, 4, 3, 2, 1, 9, 8
6)	9, 18, 27, 36, 45, 54, 63
	9 1+8 2+7 3+6 4+5 5+4 6+3
	9,9,9,9,9,9,9,9, 9,
	Pattern form 9,9,9,9

Exercise 12.6

I. Complete the number pattern

- 1) 3, 6, 9, 12, 15,
- 2) 40, 36, 32, 28,
- 3) 5, 10, 15, 20, 25,
- 4) 60, 54, 48, 42,
- 5) 100, 90, 80, 70, 60,

II. Write the number pattern obtained by multiplication table 10.

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Find out the formation of number pattern obtained by Multipication table 9.

