

# APPENDIX – I

## INTERVENTION PACKAGE

The remedial teaching strategy for the selected mathematical competencies is describe as below

### Competency 1

1.Common errors done by the pupils:

- While telling the place value pupil can tell hundred thousand after ten thousand instead of lakh.

*Remedial teaching;*

- To (understand) explain the place value chart and the sixth place value through examples

*Activities to be done to develop the sub competencies*

*Pictorial Representation*

- Showing pictures of Banana/areca/coconut plantations or people in (kumbh) mela etc from news papers and asking questions as to how to read and write the number of plants / people involved.

Asking questions about the amount of money with rich people –meaning of lakh in the word lakhpathi (millionaire).

Drilling problems.

Drilling Problems	Ten thousand	Thousands	Hundreds	Tens	ones
		9	8	7	6
			7	6	9
	1	0	6	4	5
↑ New place value name is Ten Thousand					

Lakh	Ten thousand	Thousand	Hundred	Tens	ones
	8	1	5	0	9
	7	0	4	9	5
4	1	5	2	9	0
↑ New place value name is Ten Thousand					

Lakh	Ten thousand	Thousand	Hundred	Tens	ones
	3	4	5	6	7
	6	4	3	2	1
1	3	8	8	8	8
↑ New place value name is Lakh					

To read a number we have to list place values. These place values are called ten thousand, lakh and ten lack places.

Ten lakh	Lakh	Ten thousand	Thousand	Hundred	Tens	ones
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↑New place value name is Ten Lack

2. Likely mistakes / errors by students:

- Mistake in marking commas
- Mistakes in reading large numbers
- Mistakes in writing numbers where '0' is to be written in between other digits

*Remedial teaching*

- Students were asked to practice marking commas – Starting from the right, first three digits , then two digits per period
- Making the student to identify the right most period as ones period, the one to its left as thousand period, and the next to the left as lakhs period—till this is internalized by each child.
- The students were given practice in writing zeros for periods not mentioned while reading.

Ex: Three lakhs sixteen

lakhs period 3

Thousand period – nil—00

Ones period 16 =>016

Lakhs Thousands Ones

3 00 016

=> 3, 00,016

Activities required for developing sub competency

*Group based involvemental*

*Use of play cards/ flash cards*

Paint Different colors to groups

Group	Lakhs		Thousand		One's		
	Ten lakh	Lakh's	Ten thousand and	Thousand	Hundred's	Ten's	One's
Places							
Numbers							
Place							
Value							

Different colors may be used for different period headings. Three cards for each digit may be prepared .

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Sample Card - →

a)  $478639 = 4,78,639 \Rightarrow 4$  in the lakhs period, 78 in thousands period, 639 in ones period

$\therefore$  Four lakhs seventy eight thousand six hundred and thirty nine

a)  $\therefore 3000405 = 30,00,405 = 30$  in the lakhs period, 00 in thousand period (not reading), 405 in ones period

$\therefore$  Thirty lakhs four hundred and five.

a) Five lakhs ninety two thousands and eight = 5 in lakh's period, 92 in thousands period,

008 in ones period.

∴ 5, 92,008

B) Sixty four lakhs and nine=64 in lakhs period, 00 in thousand period, 609 in ones period

∴ 64, 00,009

### Simulation

Play 1	Ten lakh's		Ten lakh's	
	Lakh's		Lakh's	
	Ten thousand		Ten thousand	
	Thousand		Thousand	
	Hundred		Hundred	
	Ten's		Ten's	
	One's		One's	

Number Construction game---- How to play:

Form two groups of 10 students each. In each group , every members represents a distinct digit from 0 to 9.( Student may wear a badge showing the digit represented by them. When the teacher says or (writes on the board) a number (containing maximum seven digits), student in each group have to stand in order such that the number is correctly formed. The group which first forms the number correctly wins.( Imp: Use a number in which no digit repeats).

### 3. Likely mistakes/Errors:

- While expanding, there may be confusion or mix up of '+' and 'X' symbols . students may interchange face value and place value

#### *Remedial Teaching*

- Explain with examples that expanding Mean writing as the sum of the place values
- Face value – value of the digit on its own- not when used in a number. Place value is the value acquired by the digit due to the place it occupies in the number
- These ideas may be explained with suitable examples

Activities for developing the sub competencies

*Group based presentation-*

*Token reward reference*

*Illustrations using pocket board*

Using the pocket board to learn place , face value and place value concepts explaining with arrow marks that

Ten times one is ten

Ten times ten is hundred

Ten times hundred is thousand

Ten times thousand is ten thousand

Ten times ten thousand is lakh

Ten times lakh is ten lakh

place	Ten Lakh	Lakh	Ten Thousand	Thousand	Hundreds	Ten	One
	10,00,000	1,00,000	10,000	1,000	100	10	1
	10X1,00,000	10X10,000	10X1,000	10X100	10X10	10X1	1
36,58,724							
Face value of the digit	3	6	5	8	7	2	4
Place value of the digit	3X10,00,000	6X1,00,000	5X10,000	8X1,000	7X100	2X10	4X1

### Using Number Expansion Chart

Place	Value of the place	Face value of the digit	Place value of the digit
Ten lakhs	10,00,000	2	2X10,00,000 = 20,00,000
Lakhs	1,00,000	3	3X 1,00,000 = 3,00,000
Ten Thousand	10,000	4	4X 10,000 = 40,000
Thousands	1,000	5	5X 1,000 = 5,000
Hundreds	100	6	6X 100 = 600
Tens	10	7	7X 10 = 70
Ones	1	8	8X 1 = 8
			23,45,678

$$23,45,678 = 20,00,000 + 3,00,000 + 40,000 + 5,000 + 600 + 70 + 8$$

Or

$$2 \times 10,00,000 + 3 \times 1,00,000 + 4 \times 10,000 + 5 \times 1,000 + 6 \times 100 + 7 \times 10 + 8 \times 1$$

Face value = digit

Place value of a digit = face value of the digit  $\times$  value of the place

Expanding = sum of the place values of the digits

We come across large numbers in many different situations. For example, while the number of children in your class would be a 2-digit number, the number of children in your school would be a 3 or 4-digit number.

1. The number of people in the nearby town would be much larger. Is it a 5 or 6 or 7-digit number?
2. Do you know the number of people in your state? How many digits would that number have?

What would be the number of grains in a sack full of wheat? A 5-digit number, a 6-digit number or more?

4. Likely mistakes / errors by the students:

- Recognizing numbers with larger digits as larger

Wrong usage of ' $>$ ' and ' $<$ ' symbols.

Remedial teaching:

- Using examples like

1000 and 9999

5000001 and 898764



- The meaning of smaller number and larger number to be explained
- The symbols ' $<$ ' and ' $>$ ' are to be read using the direction of 'smaller' contained in them

Activities for developing the sub competencies

***Group based involve mental***

***Using maps***

Showing maps of different areas and also as explained in part I illustrating that adding two numbers, the sum obtained is larger than the addends.

Through such activities the following concepts are to be developed

- 1) A number with more number of digits is larger.
- 2) Among numbers having equal number of digits, the one having a larger digit at a higher or equal place is larger

Later to order given ( more than two numbers) let the students pick the smallest and write as the first number, pick the smallest among the rest and write as the 2<sup>nd</sup> number and so on to set the ascending order.

***Using panel boards and flashcards***

Using panel board, reinforce the learning regarding the use of ' $>$ ' and ' $<$ ' symbols

- Write numbers on flash card. Let two students stand with those numbers. A third student is given ' $>$ ' card and asked to stand between them showing ' $>$ ' or ' $<$ ' symbol as the case may be
1. What is  $10-1=?$
  2. What is  $100 - 1 =?$
  3. What is  $10,000-1=?$

4. What is  $1,00,000-1=?$
5. What is  $1,00,00,000-1=?$
6. Give five examples where the number of things counted would be more than 6-digit number.
7. Starting from the greatest 6-digit number, write the previous five numbers in descending order.
8. Starting from the smallest 8-digit number, write the next five numbers in ascending order and read them.

One can extend this idea to numbers upto lakh as seen in the following table. (Let us call them placement boxes). Fill the entries in the blanks left.

Number	TLakh	Lakh	TTh	Th	H	T	O	Number Name	Expansion
7,34,543	—	7	3	4	5	4	3	Seven lakh thirty four thousand five hundred forty three	-----
32,75,829	3	2	7	5	8	2	9	-----	$3 \times 10,00,000$ $+ 2 \times 1,00,000$ $+ 7 \times 10,000$ $+ 5 \times 1000$ $+ 8 \times 100$ $+ 2 \times 10 + 9$

Similarly, we may include numbers upto crore as shown below :

Number	TCr	Cr	TLakh	Lakh	TTh	Th	H	T	O	Number Name
2,57,34,543	—	2	5	7	3	4	5	4	3	.....
65,32,75,829	6	5	3	2	7	5	8	2	9	Sixty five crore thirty two lakh seventy five thousand eight hundred twenty nine

Through which teacher extract the solution to the following problems

○ Identify the smaller number:

a) 21563 and 48975

b) 1,00,000 and 99,999

● Identify the larger:

4,50,361 and 11,98,769

● Arrange in the ascending order

47,631 38,647 96,501 80,113

● Arrange in the descending order

4,947 1,67,963 28,631 25,63,401

5. Likely mistakes /errors by students:

- Students may see the digit at the place required to be rounded rather than the next lower place.
- 2.Students may make digits including the required place zero.

*Remedial Teaching:*

- Students should be told to carefully look for the next lower place.
- Lower place digits are to be made zero.

### **Activities for Developing the Sub-Competencies**

#### ***Group Based Presentation***

A trader is to receive money from two sources. The money he is to receive is Rs 13,569 from one source and Rs 26,785 from another. He has to pay Rs 37,000 to someone else by the evening. He rounds off the numbers to their nearest thousands and quickly works out the rough answer. He is happy that he has enough money

### **Illustrations**

Children were made aware of situations such as marriage, air etc where large number of people gathers. In such situations, the exact number of people cannot be counted. Instead, estimation is done. For example, in a particular marriage function, there were approximately (about) 2000 people.

When we say that a rich person has about Rs 12,00,000 with him, we have estimated the amount to the lakh's place.

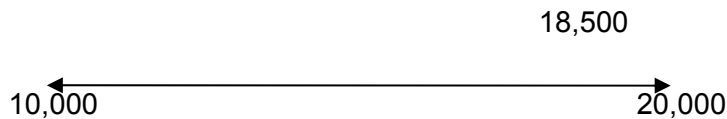
When we say that a school has an approximate student strength of 1240, we have estimated the strength to the tens place. We say that the value is rounded to the tens place.

### **Using charts**



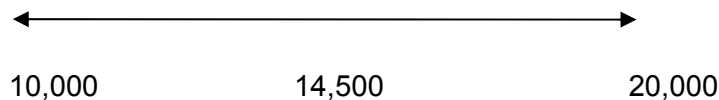
In the above figure, 11,500 is nearer to 10,000 than to 20,000.

$\therefore 11,500 \approx 10,000.$



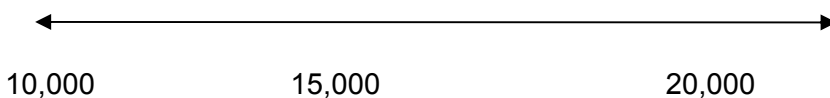
Here 18,500 is nearer to 20,000

$\therefore 18,500 \approx 20,000$



Here, 14,500 is nearer to 20,000

$\therefore 14,500 \approx 20,000$



Here, 15,000 is equidistant from both 10,000 and 20,000. Such numbers are rounded to the higher number.

$$15,000 \approx 20,000.$$

### ***Using flash cards***

i) Round 34,674 to the ten thousands place.

Here, the digit at the next lower place to the required place is 4 (at the thousands place)

$$4 < 5$$

∴ The digit at the ten thousands place is retained as it is and all the smaller places to make zero.

$$34,674 \approx 30,000$$

ii) Round 1, 76,165 to the lakhs place.

Here the digit at the next lower place (ten thousands) is 7.  $7 > 5$

∴ The digit at the lakhs place is increased by 1 and all the lower places made zero.

$$1,76,165 \approx 2,00,000$$

iii) Round 35, 60,784 to the ten lakhs place.

Here, the digit at the next lower place (lakhs place) is 5

∴ We add 1 to the digit at the ten lacs place and make the digits at all lower places zero.

$$35,60,784 \approx 40,00,000$$

Likely mistakes /errors by students:

- There may be confused in marking the commas (for separating the periods) in the correct positions

Remedial Teaching:

Explaining with examples with the help of chart regarding 5<sup>th</sup> and 6<sup>th</sup> places  
Repeatedly telling that while in the Indian system the periods with 3,2,2  
digits(from the right), in the international system, it is 3,3,3.

Activities for development of the sub competencies

### Using pocket board or slide board

Explaining the similarities and differences with examples using pocket board/slide board.

Explain with examples of converting from one system to another by putting different digits in the pockets

Changing places	Indian	International
6 <sup>th</sup> place	Lakh	Hundred thousand
7 <sup>th</sup> place	Ten lakh	million

### Competency 2

1.Likely mistakes /errors by students:

- They may make mistakes in identifying the numerals

*Remedial Teaching:*

- To recollect the knowledge / concept through activities

Activities for developing the sub competencies

*Group based involvemental*

### **Using flash cards and paper cuttings**

Preparing different flash cards of numerals and helping the students to use them independently, telling the students to collect the paper cuttings of numerals that appear in news papers.

Regionally we use different languages to talk and write. To indicate the letter \_\_\_ of alphabets we use symbol \_\_\_ in Hindi and symbol \_\_\_ in Kannada. Similarly to represent the numbers we use different symbols in different languages.

For Ex: To represent the number of fingers in a hand we use the symbol \_\_\_ in Kannada, \_\_\_ in Hindi/ Devanagari and V in roman systems. We call these symbols as numerals. Internationally used numerals are 0,1,2,3,4,5,6,7,8,9

Match the Following

A	B
10	Roman
X	Hindu, Arabic (International System)
10	Devanagari
20	Kannada

### **Using clocks/ Time table**

We have been using the Hindu-Arabic numeral system so far. This is not the only system available. One of the early systems of writing numerals is the system of Roman numerals. This system is still used in many places.

For example, we can see the use of Roman numerals in clocks; it is also used for classes in the school time table etc.



### **Using flash cards**

Find three other examples, where Roman numerals are used. The Roman numerals

## The Roman numerals

I, II, III, IV, V, VI, VII, VIII, IX, X

denote 1,2,3,4,5,6,7,8,9 and 10 respectively. This is followed by XI for 11, XII for 12,... till XX for 20. Some more Roman numerals are:

I V X L C D M

15 10 50 100 500 1000

The rules for the system are:

- If a symbol is repeated, its value is added as many times as it occurs: i.e. II is equal 2, XX is 20 and XXX is 30.
- A symbol is not repeated more than three times. But the symbols V, L and D are never repeated.
- If a symbol of smaller value is written to the right of a symbol of greater value, its value gets added to the value of greater symbol.

$$VI = 5 + 1 = 6, \quad XII = 10 + 2 = 12$$

$$\text{And LXV} = 50 + 10 + 5 = 65$$

- If a symbol of smaller value is written to the left of a symbol of greater value, its value is subtracted from the value of the greater symbol.

$$IV = 5 - 1 = 4, \quad IX = 10 - 1 = 9$$

$$XL = 50 - 10 = 40, \quad XC = 100 - 10 = 90$$

- The symbols V, L and D are never written to the left of a symbol of greater value, i.e. V, L and D are never subtracted.

The symbol I can be subtracted from V and X only.

The symbol X can be subtracted from L, M and C only.



2. .Likely mistakes /errors by students:

- They may make mistakes in recognizing the hours and minutes

**Remedial Teaching**

- Students should be told to adapt the time concept in every new situation

Activities for development of the sub competencies

**Using clocks/stop watches**

1) Three friends read time from a clock. Who is right?

Do you like sky watching? If Yes, then this one should interest you.

a) At what time does the sun rise at your place?

b) When does the sun set?

Does the sun rise and set at the same times every day?

3) How long does your school assembly take?



How long is your lunch break?

How long is your games period?

Is it the same as all the other periods?

4) Draw where the hands will be.

a) 15 minutes after 5'o clock.

\_\_\_\_\_



b) 30 minutes after 8'o clock.

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### Competency 3

1. Possible mistakes committed by students:

- They may assign –ve numbers and write + sign.
- They may try to solve the problem in the same given order

#### ***Remedial teaching:***

- When we add the negative number there will not be any change in the sign. Teach this well
- If we add the positive and negative quantities first and then subtract then we can solve the problem easily

### Activities for developing the sub competency

#### **Group based presentation**

#### *Expenditure and savings of a salaried person*

1. A person gets 8540 Rs as his monthly salary. He spends 1100 Rs for house rent, 2150.75 Rs for food items, 350.50 Rs. For children's education, 946.75 Rs for milk and electricity and 575.25 Rs for entertainment and other purposes, then what is the remaining money with him.

Solution: Find the total expenditure and subtract it from the salary.

Step 1: First calculate the sum of all expenditures. List them and add them according to their places.

House Rent	1100.00
------------	---------

Food Items	2150.75
------------	---------

Children education	350.50
Milk and Electricity	946.75
Entertainment and Other	575.25
Total Expenditure	5113.25
Step 2: Monthly income	8540.00
Total Expenditure	5113.25

2. Samson traveled 5 km 52 m by bus, 2 km 265 m by car and the rest 1km 30 m he walked. How much distance did he travel in all?

Solution : Distance travelled by bus = 5 km 52 m = 5.052 km

Distance travelled by car = 2 km 265 m = 2.265 km

Distance travelled on foot = 1km 30m = 1.030km

Therefore, total distance travelled is

5.052 km

2.265 km

+ 1.030km

8.347 km

Therefore, total distance travelled = 8.347 km

Subtract 1.32 from 2.58

Monthly savings      3426.75

Drill Problem:

- 1) For a function 75 kg sugar is brought. in that 13.500 kg is used for payasam,28.750 kg for laddu, 17.250 kg is used for jilebi preparation. Then how much sugar is remaining?

- 2) In the 150 quintal rice produced in a year, the farmer used 13.5 quintal for consumption in house, 1.5 quintal for seeds and sells the remaining. How much quintal rice did he sell?

### **Simplify**

- 1)  $6342.75 - 2324.50 + 3452.75 - 1234.50$
- 2)  $28.436 \text{ kg} + 59.642 \text{ kg} - 18.250 \text{ kg}$
- $65.865 \text{ ltr} - 15.435 \text{ ltr} - 12.645 \text{ ltr} + 32.100 \text{ ltr}$

2. Possible mistakes committed by students:

- They may not convert the basic units and operate
- They may try to do division first

### **Remedial teaching:**

- Make them understand the importance of the conversion of basic units in any operation.
- If we have to find total number then we have to multiply first or if there is a bracket then solve the thing inside the bracket first.

### **Activities for developing the sub competency**

- 1) Every bag has 20 kgs of rice . There are 4.5 bags . The total cost of rice is 1440 Rs. Then what is the cost of 1 kg of rice.

### **Solution:**

First list the data given

Total bags == 4.5

The weigh of rice in every bag == 20 kg

Cost of total rice === 1440Rs

Total weight of the rice =  $20 \times 4.5 = 90.00$  kg

90 kg rice cost = 1440 Rs, then

$$\begin{array}{r} 16 \\ \hline 90 \overline{)1440} \\ \underline{90} \phantom{00} \\ 540 \\ \underline{540} \\ 000 \end{array}$$

The cost of 1 kg rice is  $1440 \div 90 = 16$  Rs.

B) Drilling problems:

- 1) Suresh bought 6 kg of fruit for 22.5 Rs each and he equally distributed (sold) it among 5 people. How much money every one should pay Suresh?
- 2) If we bring 16.5 packets having 10 pens each and distributed it among 55 people how many pens will every one get?

### Simplify

1.  $(22.5 \times 4) \div 5$
2.  $(350 \text{ min} \times 4 \text{ days}) \div 60 \text{ min}$
3.  $(46.84 \times 36) \div 48$

### **3.Possible mistakes committed by students:**

- calculating the product of quantity and rate
- calculating the total
- writing the total in letters

#### ***Remedial teaching:***

- Making the students understand using different model bills group based involvemental activity

Previously students will have some experience of going to shops and purchasing things and they might have seen the bills

Eg: Grocery shop bill, cloth store bill, stationary book shop bill, medical store bill , etc

To tell students to collect these bills , showing these bills to students and by giving it to students telling them to make a list of information's given in the bill.

Eg: 1) bill number and the date of the bill

- 2) Name of the shop
- 3) Name of the purchaser
- 4) Number of items purchased
- 5) Description of items and quantity
- 6) Rate of the item
- 7) Product of quantity and rate
- 8) Total amount in digits and in sentence
- 9) Counter sign of shop keeper

While listing out these things we can give an activity of writing a bill.

Kavana Book Depo and General Stores				
Nehru Road, Shimoga				
Bill No :0012			Date : 28/11/2008	
Shri/Smt      Satheesh, Shimoga				
S.No	Details	Quantity	Rate	Rs
1	200 page exercise book	10	12	120.00

**Drill sums:**

karunakar purchases the following items for his school cooperative society

Crayans                      1 pack                      Rs. 12.50/ pack

Copy book 4                                      Rs.6.30/ book

Pens                              2                              Rs.5.50/pen

Paper                              2 dozen                              Rs.6/dozen

Write the details in a bill

Write the details in a bill

On 28/11/2008 Deepa purchases 2.8 kg apples in 35 Rs/kg rate , grapes 3 kg as 40 Rs/kg , 3 kg banana as 12 Rs/kg rate from a cooperative society. Enter the details in the bills and prepare the bill

Fruits Cooperative Society				
B H Road, Shimoga				
Bill No : 25			Date : 28/11/2008	
Shri/Smt      Deepa, Shimoga				
S.No	Details	Quantity	Rate	Rs
1				

#### Competency 4

1. Possible mistakes committed by students::

- While writing the equivalent fractions students may multiply / divide the numerator and denominator with different numbers.

*Remedial Teaching:*

- While multiplying or dividing a fraction stress upon the point to multiply or divide by the same number and give more drill sums in examples

Activities for developing the sub competencies

*Group based presentations*

*Using circular card boards/ Thermofoils*

Cutting the Cake :



Rajni's Father brought a cake. She divided the cake into 4 equal parts – for herself, her brother Raju her father and her mother.

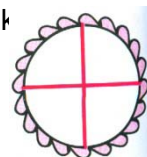
- Colour each share with different colours



- How much does each get?

- Mother gave her share of cake to Raju. Now colour the toktal part that Rajni will get.

- Out of 4 parts Rajni will get \_\_\_\_\_ parts which is equal to half of the cake  
can write it as  $\frac{2}{4}$  or  $\frac{1}{2}$

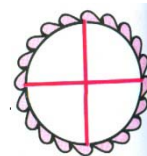


Before Rajni's mother gave her share to Rajni, she has only  $\frac{1}{2}$  of half the cake which was  $\frac{1}{4}$  of the total cake.

- Colour the share Raju got.



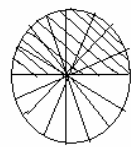
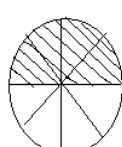
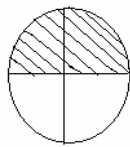
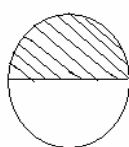
- How much of the cake do Rajni and Raju together get? Colour their share.  
Altogether they get 3 parts out of 4. So we can write it as  $\frac{3}{4}$ .



*Group based invovemental*

*Using card board/colour paper cut outs*

To write equivalent fractions to  $\frac{1}{2}$



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

$$\frac{2}{4}$$

$$\frac{3}{6}$$

$$\frac{6}{12}$$

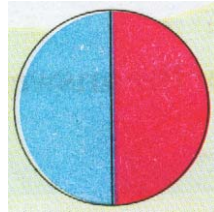
All the circles are similar and shaded position is also same but there is only difference in the parts of it.

Note: you can teach this concept by using cutouts of card board or color papers

Coloured Parts

Complete These

This circle is divided into two equal parts.

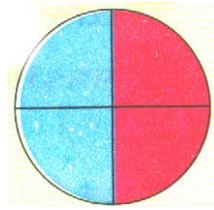


Out of \_\_\_\_\_ equal parts

one part is coloured blue.

Here the circle is divided into \_\_\_\_\_

equal parts. Out of \_\_\_\_\_ equal parts,

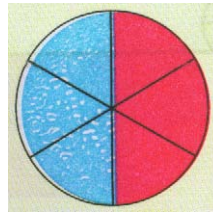


\_\_\_\_\_ parts are coloured blue.

Here the circle is .....

.....

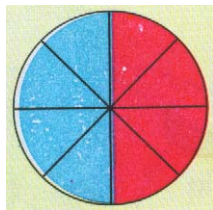
.....



Here the circle is .....

.....

.....



So we can say that  $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$

*Group based presentations*

*Using pictorial representations*

**Cutting the Halwa:**

Ramesh bought a piece of Halwa for his children Rani and Sita

The divided it equally for them

- This piece is too big. We can't cut it, They said so the divide \_\_\_\_\_ into half again.  
Now how many pieces will Rani get?



- What part of the Halwa is it \_\_\_\_\_



- Make it every smaller, dad they asked so he  
again cut the Halwa into smaller pieces.



OK, Thank you, Dad

- Now how many pieces will each get?
- What part of the Halwa in each piece now?
- If Ramesh had cut the Halwa in to 6 equal parts now how many pieces would each man got? Look at your answer for question 1 to 4 and write

*Peer group study session*

***Using copies of the grid***

**Play This Game**

You can play .this game with your friends.

Take many copies of the grid as shown here.


Consider any fraction, say  $\frac{1}{2}$ .

Each one of you should shade  $\frac{1}{2}$  of the grid.

In a proper fraction the denominator shows the number of parts into which the whole is divided and the numerator shows the number of parts we have taken out. Therefore, in a proper fraction the numerator is always less than the denominator.

fractions  $\frac{3}{4}, \frac{1}{2}, \frac{5}{8}$ , are all proper fractions

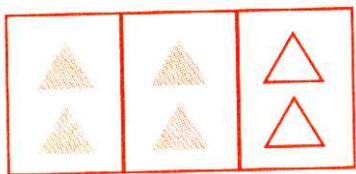
The fractions, where the numerator is bigger than the denominator are called improper fractions.

Thus, fractions like  $\frac{3}{2}, \frac{12}{7}, \frac{18}{5}$ , are all improper fractions

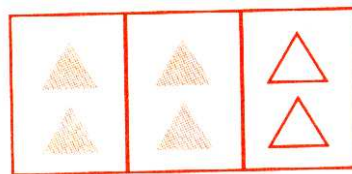
Mixed Fractions. A mixed fraction has a combination of a whole and a part.

Another Way

Is there any other way to obtain equivalent fractions? Look at Fig



$\frac{4}{6}$  is shaded here.



$\frac{2}{3}$  is shaded here.

These include equal number of shaded things i.e.  $\frac{4}{6} = \frac{2}{3} = \frac{4 \div 2}{6 \div 2}$

### ***Peer group study session***

To get equivalent fractions by multiplying both numerator and denominator with the same number.

$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

$$\frac{1}{2} = \frac{1 \times 4}{2 \times 4} = \frac{4}{8}$$

$$\therefore \frac{1}{2} = \frac{2}{4}$$

$$\frac{1}{2} = \frac{1 \times 6}{2 \times 6} = \frac{6}{12}$$

By dividing both numerator and denominator with the same number we get equivalent fractions.

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

$$\frac{4}{8} = \frac{\frac{4}{4}}{\frac{8}{4}} = \frac{1}{2}$$

$$\frac{6}{12} = \frac{\frac{6}{6}}{\frac{12}{6}} = \frac{1}{2}$$

Definition: By multiplying or dividing the numerator and denominator of a fraction by the same non zero number we get equivalent fractions.

Identification the fraction which does not belong to the group

$$1) \frac{2}{3}, \frac{4}{6}, \frac{3}{8}, \frac{10}{15}$$

*Group based presentations*

***Using pictorial representations***

Consider  $\frac{1}{2}$  and  $\frac{1}{3}$  as shown in the below Fig. A the portion of the whole corresponding to  $\frac{1}{2}$

is clearly larger than the portion of the same whole corresponding to  $\frac{1}{3}$

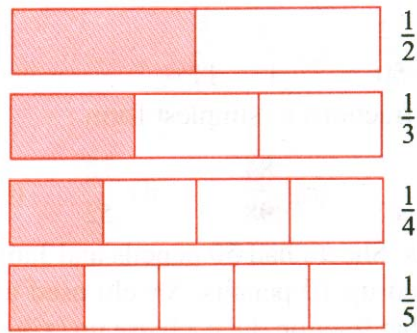


Fig A

So  $\frac{1}{2}$  is greater than  $\frac{1}{3}$

Look at more examples

In Fig b(i) we have 2 quarter parts of the figure shaded. This means we have 2 parts out of 4 shaded or  $\frac{1}{2}$  of the figure shaded.

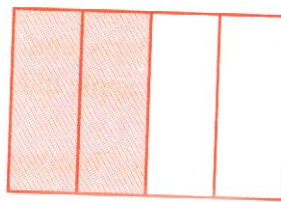
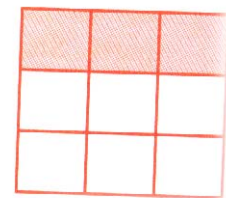


Fig B (i)



(ii)

That is

Look at Fig B(ii)

Fig B (ii) demonstrates

What do we learn from the above examples? The sum of two or more like fractions can be obtained as follows :

Step 1 Add the numerators.

Step 2 Retain the (common) denominator.

Step 3 Write the fraction as:

Result of Step 1

Result of Step 2

1. add with the help of a diagram

$$(i) \frac{1}{8} + \frac{1}{8} \quad (ii) \frac{2}{5} + \frac{3}{5} \quad (iii) \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$$

(i) 2. Add  $\frac{1}{12} + \frac{1}{12}$ . How will we show this pictorially? Using paper folding?

3. Make 5 more examples of problems given in 1 and 2 above.

Solve them with your friends

Let us, thus, add  $\frac{3}{5}$  and  $\frac{1}{5}$

$$\text{We have } \frac{3}{5} + \frac{1}{5} = \frac{3+1}{5} = \frac{4}{5}$$

So, what will be the sum of  $\frac{7}{12}$  and  $\frac{3}{12}$ ?

Finding the balance

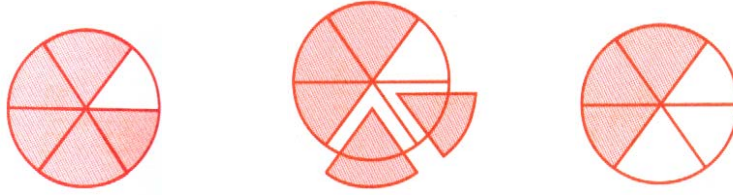
(Sharmila had  $\frac{5}{6}$  of a cake. She gave  $\frac{2}{6}$  out of that to her younger brother. How much cake is left with her?)

A diagram can explain the situation (Fig). (Note that, here the given fractions are like fractions).

$$\text{We find that } \frac{5}{6} - \frac{2}{6} = \frac{5-2}{6} = \frac{3}{6} \text{ or } \frac{1}{2}$$

(Is this not similar to the method of adding like fractions?)





Thus, we can say that the difference of two like fractions can be obtained as follows:

Step 1 Subtract the smaller numerator from the bigger numerator.

Step 2 Retain the (common) denominator.

Step 3 Write the fraction as : Result of Step 2

Result of Step 1

Can we now subtract  $\frac{3}{10}$  from  $\frac{3}{8}$

2. Possible mistakes students may commit

- They can wrongly understand the place value.
- While saying the face value they may say from right side.

***Remedial Teaching:***

- Teach them the importance of Decimal place and explain them that the value decreases towards right.
- In whole number go from right to left, in decimals go from left to right

Activities for developing the sub competencies

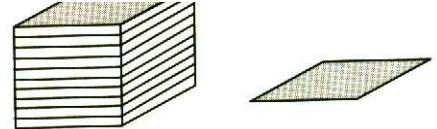
*Group based involmental*

**Using rectangle strips or blocks**

A rectangle strip is divided into 10 parts and 1 part is shaded that means 1 part in 10. If we write it in fraction form  $\frac{1}{10}$  if we write it in decimal form  $\frac{1}{10} = 0.1$

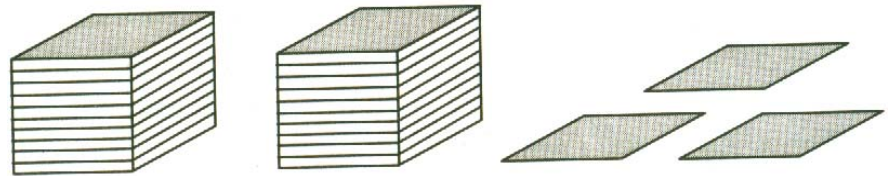
One block divided into 10 equal parts means

each part is  $\frac{1}{10}$  (one-tenth) of a unit,



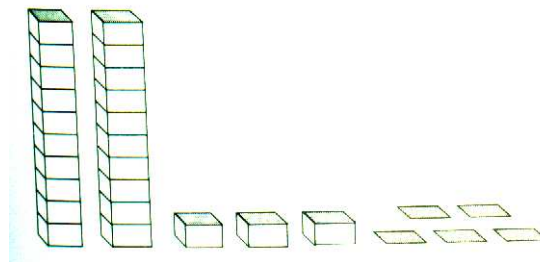
2 parts show 2 tenths and 5 parts show 5 tenths and so on. A combination of 2 blocks and 3 parts (tenths) will be recorded as:

Ones	Tens
(1)	$\left(\frac{1}{10}\right)$
2	3



It can be written as 2.3 and read as two point three.

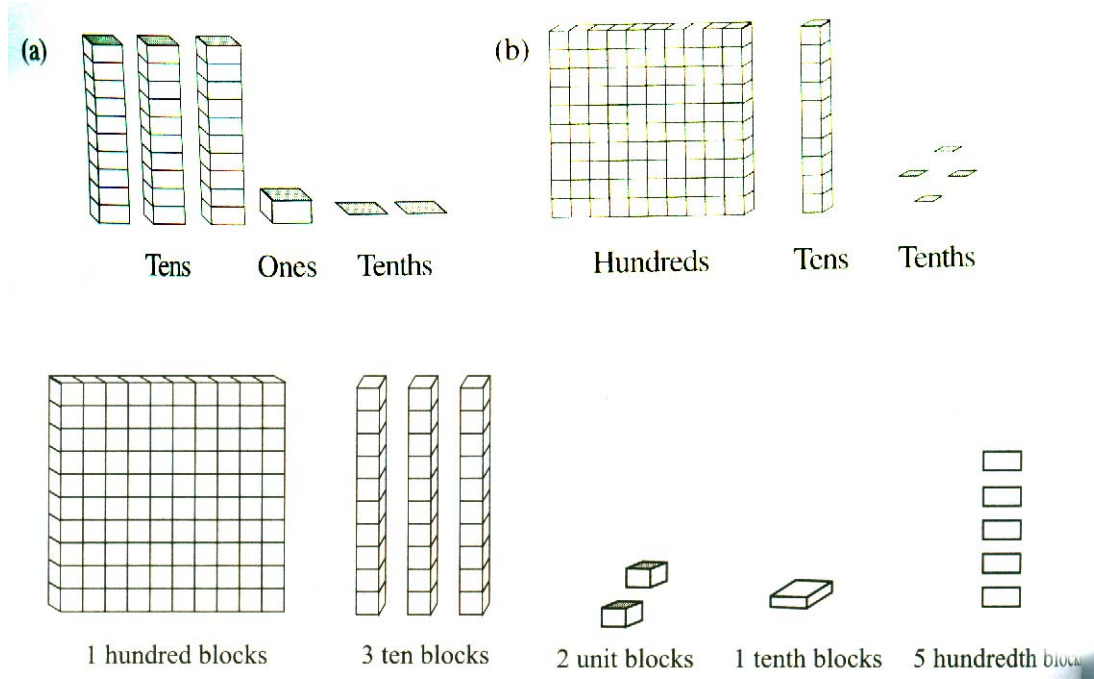
Let us look at another example where we have more than 'ones'. Each tower represents 10 units. So, the number shown here is :



i.e  $20 + 3 + \frac{5}{10} = 23.5$

This is read as 'twenty three point five'

Fill the table using block information



Hundreds (100)	Tens (10)	Ones (1)	Tenths (10)

**Points of the Strips :**

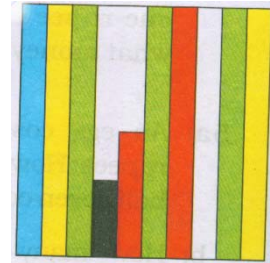
Look at this picture write what part of the strip in each green piece. Write the part for a piece of each

Colourful Design

What part of this sheet is coloured blue

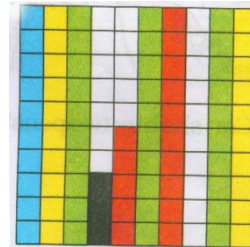
What part of the sheet is green?

Which colour covers 0.2 of the sheet ?



Now Look at this sheet each strips is divided into 10 equal boxes. How many boxes and there in all.

Is each box  $\frac{1}{100}$  part of the sheet.



How many blue boxes are there \_\_\_\_\_ is blue equal to  $\frac{10}{100}$  of the sheet. We saw that blue is

also equal to  $\frac{1}{10}$  of the sheet. We wrote it as 0.1 of this stock can we say  $\frac{10}{100} = \frac{1}{10} = 0.10 = 0.1?$

Think : Can we wise then \_\_\_ as 0.1 of the rupee

How many boxes are red? What part of the sheet is this?

Can we also write it as 0.15 of the sheet?

Now  $\frac{3}{100}$  of this sheet is blue and we can say 0.\_\_\_\_\_ sheet is black.

How many white boxes are there in the sheet?

What part of the second sheet is white?

*Group based presentations*

### **Using growth charts**

Growth Chart of a plant :

Amit sowed a few seeds of moong dal in the ground. The height of the plant grow to 1.4 cm in the first four days. After that it started growing faster.

Amit measured the height of the plant after every four days and put a dot on the chart. For example if you look at the dot marked on the fourth day, you can see on the left side scale that it is 1.4 cm high.

Now look at the height of each dot in cm and check from the table if he has marked the date correctly.

Day	Length of the plant (in Cm)
0	0
4	1.4
8	5.3
12	9.5
16	10.2
20	10.9

To know the value of decimal place:

In decimal system every place is 10 times more and less. Tens place is  $\frac{1}{10}$  of hundreds place, singles place is  $\frac{1}{10}$  of tens place. Similarly decimal place also.

Comparison of decimal numbers:

*Group based presentations*

***Using square sheet of papers***

Can you tell which is greater, 0.07 or 0.1?

Take two pieces of square papers of the same size. Divide them into 100 equal parts. For 0.07 we have to shade 7 parts out of 100.

Now,  $0.1 = \frac{1}{10} = \frac{10}{100}$ , so, for 0.1 shade 10 parts out of 100.

$$0.07 = \frac{7}{100}, 0.1 = \frac{1}{10} = \frac{10}{100}$$

This means  $0.1 > 0.07$ .

25.75 , 25.43 , 25.64 , 25.45

Here the numbers have the same single and tens place (When we go from left to right side the number which has bigger if decimal place is same there the number which has bigger number is next place is bigger). Thus,

$25.43 < 25.45 < 25.64 < 25.74$

In the tenth's place 25.75 has the largest digit (7). Hence, it is largest member. Next largest is 25.64. Among 25.43 and 25.45, 25.45 has a larger digit(5) in the hundredth's place. Hence it is larger.

Hundred	Tens	Single	Tenth	Hundredth
$1000 \times \frac{1}{10}$	$100 \times \frac{1}{10}$	$10 \times \frac{1}{10}$	$1 \times \frac{1}{10}$	$\frac{1}{10} \times \frac{1}{10}$

Note: Using beads we can easily explain the place value.

*Group based presentations*

***Using pictorial representation***

David was measuring the length of his room. He found that the length of his room is 4 m and 25 cm.

He wanted to write the length in metres.

Can you help him? What part of a metre will be one centimeter?

$$1 \text{ cm} = \left(\frac{1}{100}\right) \text{ m or one-hundredth of a metre.}$$

$$\text{This means } 25 \text{ cm} = \frac{25}{100} \text{ m}$$

Now  $\left(\frac{1}{100}\right)$  means 1 part out of 100 parts of a whole. As we have done for

$\frac{1}{10}$  let us try to show this pictorially.

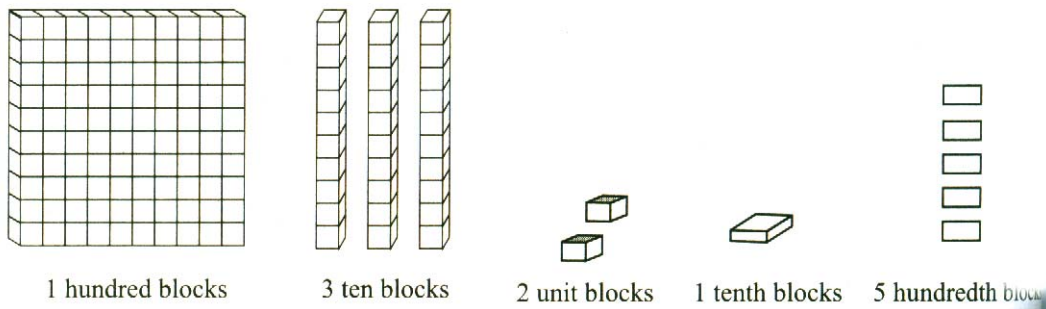
Take a square and divide it into ten equal parts. What part is the shaded rectangle of this square?

1 it is  $\frac{1}{10}$  or one-tenth or 0.1, see Fig (i).

Now divide each such rectangle into ten equal parts. We get 100 small squares as shown in Fig (ii) and then what fraction is each small square of the whole square?

Each small square is (ii) or one-hundredth of the whole square. In decimal notation, we write  $\left(\frac{1}{100}\right) = 0.01$  and read it as zero point zero one.

Example: Fill the blanks in the table using 'block' information given below, and write the corresponding number in decimal form.



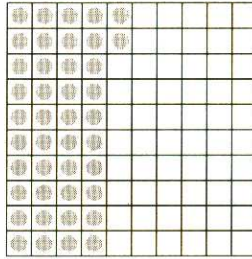
**Solution :**

Hundreds (100)	Tens (10)	Ones (1)	Tenths $\frac{1}{10}$	Hundredths $\frac{1}{100}$
1	3	2	1	1

The number is  $100 + 30 + 2 + \frac{1}{10} + \left(\frac{5}{100}\right) = 132.15$



Example: Fill the blank in the table and write the corresponding number in decimal form using 'block' information given below.

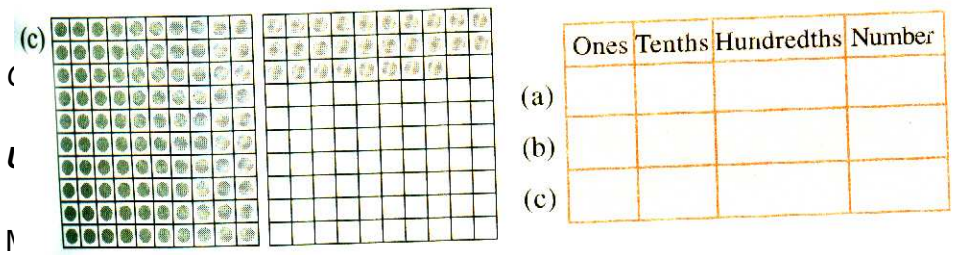
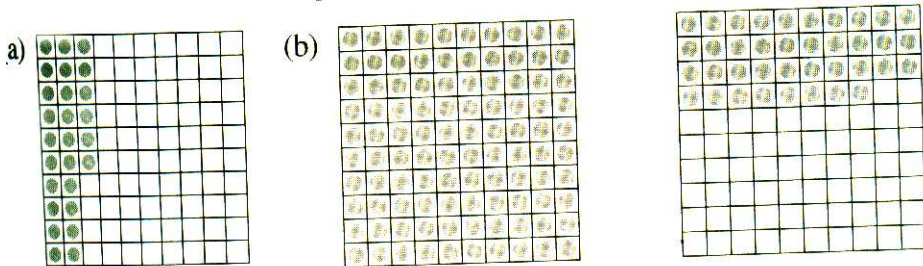


Ones	Tenths	Hundredths
(1)	$\frac{1}{10}$	$\frac{1}{100}$

Ones	Tenths	Hundredths
(1)	$\frac{1}{10}$	$\frac{1}{100}$
1	4	2

Solution :

Therefore, the number is 1.42.



Box-1

Box-2

Box-3

Rupee $\frac{1}{2}$	5 paise	Rupees 0.75
Rupee $\frac{1}{10}$	25 paise	Rupee 0.50
Rupee $\frac{5}{100}$	99 paise	Rupee 0.05
Rupee $\frac{3}{4}$	50 paise	Rupee 0.10
Rupee $\frac{79}{100}$	75 paise	Rupee 0.25
Rupee $\frac{1}{4}$	10 paise	Rupee 0.99

1) Write 8 meter 40 centimeter in decimal form

This becomes 8.4. 8m is in meter form. 40cm is  $\frac{40}{100}$  m. (1m = 100 cm) therefore, 8.40 or 8.4m.

2) Write 50 paise in rupees form

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

$$50 \text{ paise} = \frac{50}{100} \text{ Rs} = 0.50 \text{ Rs}$$

Drill sums:

1) Write in decimal form:

$$a) \frac{5}{10} \quad b) \frac{9}{10} \quad c) \frac{45}{100} \quad d) \frac{62}{100} \quad e) \frac{75}{100} \quad f) \frac{4}{10} \quad g) \frac{7}{10}$$

2) Write these decimals in increasing order:

$$a) 15.34, 16.46, 15.74, 15.22$$

$$b) 25.93, 24.33, 25.60, 25.73$$

3) Write these decimals in decreasing order:

a) 36.20 , 36.45 , 36.10 , 37.0

b) 42.44 , 42.46 , 43.0 , 42.90

Write the following in rupees form:

a) 42 paisa b) 25 paisa c) 75 paisa d) 50 paisa

### 3. Expected mistakes done by students

- Making mistake in writing the value in % form.
- Making mistake in converting the % value to fraction.
- Mistake in converting and writing in fraction form.

#### Remedial teaching.

- A value equivalent to hundred of a value or number is called percentage.
- Identity the percentage number, explaining the meaning of word percentage & identifying the percentage symbol.
- Writing in the percentage form using the percentage symbol.
- Converting percentage into fraction and fraction into percentage.
- Converting percentage into decimal form and decimal form into percentage form.
- Finding the percentage value.
- Identify the usefulness of percentage form.

## Activities

### Group based presentations

Students would have listened to the word percentage in day to day life. Percentage discount sale in shops, percentage extra may be heard by students. Students know the percentage marks they obtained using these evolve the concept of percentage.

In a school 60 students have passed among 75. In another school 24 have passed among 30. If we want to compare the score and say which one is better we cannot say it by seeing students numbers. We should convert these results into a common base. We take 100 as the common base. We call the number which is based on 100 as percentage.

1) Among 75 students, 60 are passed.

$$\therefore \text{For 100 students} = \frac{60}{75} \times 100 = 80\%.$$

We read it as 80 percent.

2) Among 30 students, 24 are passed.

$$\therefore \text{For 100 students} = \frac{24}{30} \times 100 = 80\%.$$

We read it as 80 percent.

We can recognize that the result of both the schools are same. Similarly using different variety of examples teach them the concept of percentage, percentage symbol and the way of reading and writing it.

Write using symbols.

$$40 \text{ percent} = 40\%$$

$$50 \text{ percent} = 50\%$$

$$65 \text{ percent} = 65\%$$

### Read these

20%, 25%, 12%, 42%, 38%, 27%, 75%.

Using easy numbers evolving the concept of percentage.

Ex : If 3 is for 50 then 6 is for 100 = 6%

If 4 is for 50 then 8 is for 100 = 8%

If 8 is for 50 then 16 is for 100 = 16%

If 20 is for 50 then 40 is for 100 = 40%

If 1 is for 10 then 10 is for 100 = 10%

If 2 is for 10 then 20 is for 100 = 20%

If 1 is for 25 then 4 is for 100 = 4%

If 25 is for 25 then 100 is for 100 = 100%

Note : Similarly make the students to calculate the percentage of marks obtained in the unit test and making then to write it in percentage form.

### Solve these problems

- 1) If a saree of Rs.600 is sold for a discount of 20% then what is the selling price of the saree?

$$\text{Discount} = \frac{20}{100} \times 600 = 120$$

Selling price = Mentioned price – discount

$$600 - 120 = \text{Rs.}480/-$$

- 2) Last year rate of a book was Rs.8. If we increase the rate by 25% this year then what is the raise in the price of the book.

Increase per hundred = 25

$$\text{Increase for 1} = \frac{25}{100}$$

$$\text{Then increase for Rs.8,} = \frac{25}{100} \times 8 = 2 \text{ Rs.}$$

Activities to develop the sub objectives.

Complete the following table.

Quantity	Percentage	Appropriate Value
125	15	-
85	20	-
36	25	-

Additional problems.

Find the appropriate percentage forms.

- 1) 80% of 115 m
- 2) 90% of 190 km
- 3) 75% of 15 ltr
- 4) 20% of 12 hrs
- 5) 50% of 675 kg.
- 6) A persons monthly income is Rs.6,000/-. He uses 40% of it for household purpose. Then what is the amount of money used for household purpose.

### Drill sums

- 1) Explain the percentage value on what does it mean by 100 th of a value.
- 2) Write these fractions in percentage form  
a)  $\frac{15}{100}$  b)  $\frac{9}{19}$  c)  $\frac{21}{100}$  d)  $\frac{27}{100}$
- 3) Write these percentages in fraction form  
a) 11%, b) 21%, c) 49%, d) 64%, e) 69%.

### Competency 5

Possible mistakes students may commit:

- While writing down the decimals they may not write them according to the place values.
- They may not convert minutes in to hours while adding.
- While adding decimals to next place they may commit mistake

### Remedial Teaching:

- While adding decimals having a ready reconer of place value.
- Because its 60 min per hour convert minutes into hours and add
- After the whole numbers put point and write zeros if there are no decimal places.

Activities for developing the sub competencies

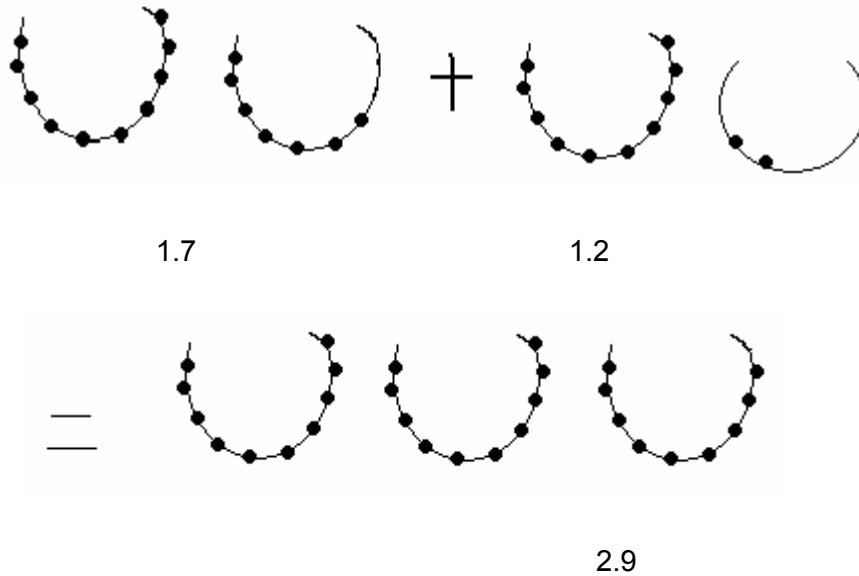
*Group based presentations*

### ***Using buds and square sheet of paper***

- 1) Add 1.7 and 1.2

Through activities show the addition of small decimal numbers then ask them to do the addition of the large number.

Take buds (or buttons used in shirts), A bunch of 10 is considered as whole number and other as the decimal number and addition is done.



Do This

Add 0.35 and 0.42.

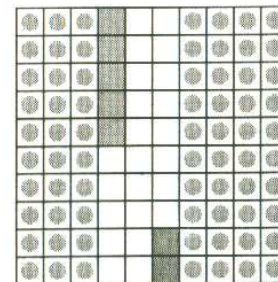
Take a square and divide it into 100 equal parts.

Mark 0.35 in this square by shading

3 tenths and colouring 5 hundredths.

Mark 0.42 in this square by shading

4 tenths and colouring 2 hundredths.



Now count the total number of tenths in the square and the total number of hundredths in the square.

Therefore,  $0.35 + 0.42 = 0.77$

Thus, we can add decimals in the same way as whole numbers.



Example 13 Samson traveled 5 km 52 m by bus, 2 km 265 m by car and the rest 1km 30 m he walked. How much distance did he travel in all?

Solution : Distance travelled by bus = 5 km 52 m = 5.052 km

Distance travelled by car = 2 km 265 m = 2.265 km

Distance travelled on foot = 1km 30m = 1.030km

Therefore, total distance travelled is

5.052 km

2.265 km

+ 1.030km

8.347 km

Therefore, total distance travelled = 8.347 km

**3) Add the following 304.75 +118.50 + 498.00 + 217.50**

Thousands	Hundreds	Tens	Ones	Tenth	Hundredth
	3	0	4	7	5
	1	1	8	5	0
	4	9	8	0	0
	2	1	7	5	0
1	1	3	8	7	5

### Addition using place value table

4) 2 hours 50 minutes + 3 hrs 25 min + 3 hrs 15 min+2 hrs 20 min

Hours	Minutes
2	50
3	25
3	15
2	20
11	50

Note : per hour it is 60 minute ,so add the minutes and convert them into full hour and then we can add it to next place. if we divide the minutes by 60 the dividend is full hour and remainder is minutes.

### Drilling sums

- 1) Ganesh traveled 3.240 kms by walk, 124.550 kms by bus and 329.725 kms by train. What is the total distance traveled by him?
- 2) In a year a farmer spends 12352.75 Rs for fertilizers, 3452.50 Rs for pesticides and 5352.50 Rs for labors. What is the total amount spent by him?
- 3) For the midday meal programme in a school they use 10.406 kg rice first day, second day 10.700 kg rice and 11.200 kg rice on third day, then what is the total amount of rice spent in the three days?
- 4) A worker works in a farm for 9hrs 45 min on first day, 8 hrs 30 mins on second day , 8hrs 15mmins on third day and 7hrs 45mins on the fourth day. Then what is the total time of work done by him(express it in hours)

**Add the following**

- 1) Rs245.5 + Rs 23.75 = -----
- 2) 238.2 ltr +306.250 ltr =-----
- 3) 3hrs 20 min + 4 hrs 45 min = -----
- 4) Rs 232 + Rs 145.50 = -----

2.Possible mistakes done by students:

- Mistake in writing the place value
- They may wrongly understand the minutes to hr conversion

**Remedial Teaching:**

- Using table as in addition and subtraction
- While converting 1 hr into decimal place taking it as 60 min

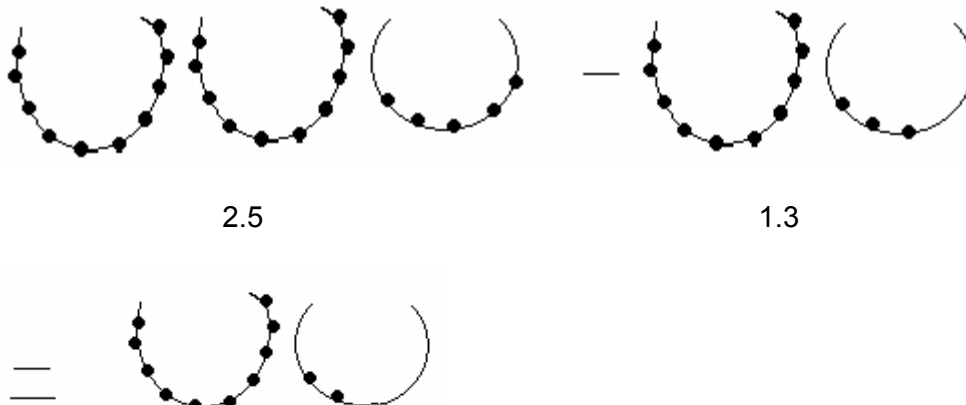
Activities for developing the sub competencies

*Group based presentations*

**Using buds**

Similar to addition, consider the bunch of ten buds as whole number and the bunch having less than ten buds as decimal number.

- 1) subtract 1.3 from 2.5



1.2

2) Subtract 1.32 from 2.58

**This can be shown by the table.**

Ones	Tenths	Hundredths
(1)	$\frac{1}{10}$	$\frac{1}{100}$
2	5	8
- 1	3	2
1	2	6

Thus,  $2.58 - 1.32 = 1.26$

Therefore, we can say that, subtraction of decimals can be done by subtracting hundredths from hundredths, tenths from tenths, ones from ones and so on, just as we did in addition.

Let us subtract 1.74 from 3.5.

Ones	Tenths	Hundredths
(1)	$\frac{1}{10}$	$\frac{1}{100}$
3	5	0
- 1	7	4
1	7	6

Subtract in the hundredth place.

Can't subtract!

so regroup

thus,  $3.5 - 1.74 = 1.76$

try These

1. Subtract 1.85 from 5.46;
2. Subtract 5.25 from 8.28 ;
3. Subtract 0.95 from 2.29 ;
4. Subtract 2.25 from 5.68.

5.Rs 208.300 - Rs149.430

Hundred	Tens	Ones	Tenth	Hundredth	Thousandth
2	0	8	3	0	0
1	4	9	4	3	0
0	5	8	8	7	0

Drill Sums:

- 1) A fruit seller brought 135 kg of chikku for sale. If 127.75 kgs of fruits are sold out , what is the remaining quality of fruits
- 2) Monthly income of Ganesh is Rs 7435.50 . If he spends Rs 4373.75 . How much money is remaining with him?
- 3) Shekar daily reads for 5 hrs 30 mins . He spends 1 hr 45 mins fir mathematics in the same time. Then what is the time spent by him to read the remaining subjects?

Subtract the following

- 1) Rs165.25 - Rs 86.75 = \_\_\_\_\_
- 2)375.420 kg – 148.500 kg = \_\_\_\_\_
- 3)308.450 ltr – 22.330 ltr = \_\_\_\_\_
- 4) 4 hrs – 1 hr 15 min = \_\_\_\_\_

3. Possible mistakes done by students:

- They may multiply including the point and they may not carry it to next place  
(eg.  $2.5 \times 2 = 4.10$ )
- While placing the decimal point they may place it from left side.

*Remedial teaching :*

- While multiplying neglect the decimal point and place it after multiplication.
- As soon as finish the multiplication count the decimal points and place it.

Activities for developing the sub competencies

***Group based presentations***

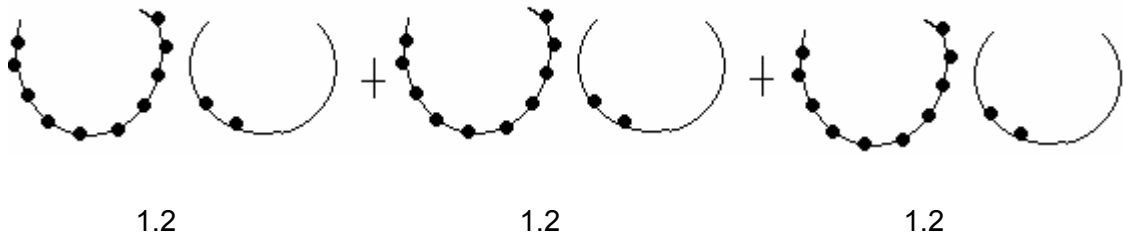
***Using buds***

Multiply 1.2 by 3

1.2 X 3 means multiplying 1.2 by 3 or adding the multiplicand three times.

i.e.  $1.2 + 1.2 + 1.2 = 3.6$

Take two bunch of buds where bunch of 10 beads is one and bunch of 2 beads is 0.2.



3.6

i.e.  $1.2 \times 3 = 3.6$

Note: In multiplication of decimal numbers we have to count the number of places in the multiplicand and multiplier and we have to place the point in the product than total number of places and we have to place it from right side

**Drill sums:**

- 1) A wooden box contains 12.500 kg of apple .If there are similar 27 boxes then what is the total weight of apples?
- 2) The cost of 1 kg of Banana is 16.50 Rs then what is the cost of 24.5 kg of Banana?
- 3) The length of a rectangle shaped field is 32.5 m and breadth is 18.5 m . Find out the area of the field.

**Multiply the following**

- 1)  $1.2 \times 5$    2)  $3.4 \times 6$    3)  $6.2 \times 1.2$    4)  $2.5 \times 3.2$    5)  $398.5 \times 12.5$
- 6)  $399.5 \times 45.6$

4. Possible mistakes done by students:

- They may count the number of places in the quotient and keep the decimal point without taking the remainder.

***Remedial teaching:***

- Put the decimal point in quotient and proceed further division and give more drill sums.

Activities for developing the sub competencies

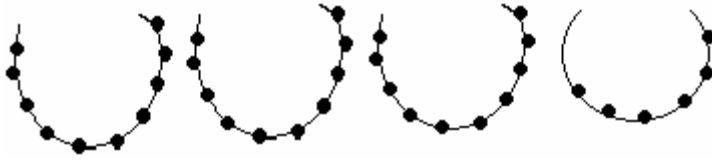
*Group based presentations*

*Using buds*

Divide 3.6 by 3



3 Bunch of 10 buds each and a bunch of 6 buds is equal to 3.6



Because we have to divide 3.6 by 3 if we make 3 groups of equal size then it becomes 1 bunch of 10 beads and 2 beads in each group.

$$\therefore \frac{3.6}{3} = 1.2$$

a) Activities to improve sub objective:

1.2

\_\_\_\_\_

3) 3.6

3

\_\_\_\_\_

06

6

\_\_\_\_\_

0

Note: To take the next number after the decimal point in dividend put a point in the quotient and then get it.

**Drill sums:**

- 1) If 12 kgs of mango costs Rs186 , then what is the cost of 1 kg mango?
- 2) If 37.5 m cloths equally divided among 15 people what is the length that each will get?
- 3) A contractor distributes Rs 6241.5 among 73 labourers equally . What is the amount got by each one?

**Divide the following**

- 1)  $25.5 \div 5$    2)  $42.6 \div 5$    3)  $135.6 \div 5$    4)  $235.8 \div 5$

**Competency 6**

Possible mistakes done by students:

- they may add both numerator and denominator
- They may add the fraction without converting them to common denominator

*Remedial Teaching*

- First tell them to identify the common denominator and then tell them to add only the numerators and explain them the change happening if we add the denominator.
- Giving more drill sums regarding the addition by converting them to common denominator

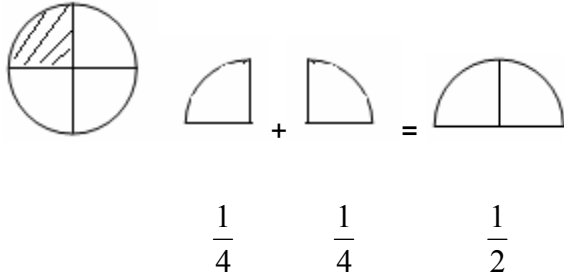
Activities for developing the sub competencies

***Group based presentations******Using thermocol circular shapes***

- 1) Addition of fractions having common denominator.

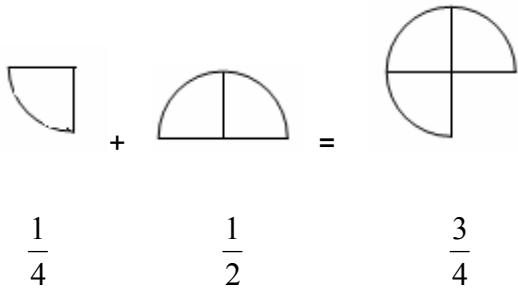
A circle is divided in to four parts then taken each part ( $1/4$ ) and adding.

$$\frac{1}{4} + \frac{1}{4} = 1 + \frac{1}{4} = \frac{2}{4} = \frac{2}{4} = \frac{1}{2}$$



2) Addition of fractions having uncommon denominator.

$$\frac{1}{4} + \frac{1}{2} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4} \left( \frac{1}{2} = \frac{1}{4} + \frac{1}{4} \right) = 1 + \frac{1}{4} = \frac{5}{4}$$

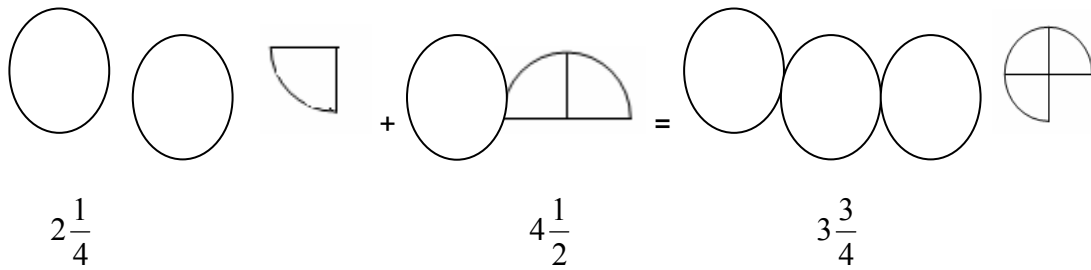


$$\frac{1}{4} + \frac{1}{2} = \frac{1}{4} + \frac{2}{4} \left( \frac{1}{2} = \frac{2}{4} \right) = \frac{1 \times 2}{2 \times 2} = \frac{2}{4} = 1 + \frac{2}{4} = \frac{3}{4}$$

*Eg.*  $\frac{1}{8} + \frac{4}{8} = \frac{1}{8} + \frac{4}{8} = \frac{5}{8}$

Note : using card board cuttings of circles we can teach the concept effectively.

Similarly



$$2\frac{1}{4} + 1\frac{1}{2} = (2+1) \frac{1}{4} + \frac{1}{2} \text{ (adding whole number and fraction separately)}$$

$$= 3\left(\frac{1}{4} + \frac{2}{4}\right) \text{ converting the denominator into common denominator.}$$

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

Drill sums:

- 1) Ramu drinks  $\frac{1}{2}$  lt milk and his brother drink  $\frac{1}{4}$  lt daily than what is the total amount of milk drunk by them?
- 2) Shubha ate  $2\frac{1}{4}$  dosa and her father ate  $4\frac{1}{4}$  dosa in the morning . what is the total dosa ate by them?
- 3) Abdulla everyday play  $1\frac{1}{4}$  hours at home,  $1\frac{1}{4}$  hrs at school and  $1\frac{1}{2}$  hrs at home in the evening. What is the total time he play in a day?
- 4) Ramu's mother gave  $1\frac{3}{4}$  apple to Ramu,  $1\frac{1}{4}$  apple to his friend Suresh,  $1\frac{1}{2}$  apple to his friend Shamu then what is the total apple given to them?

Add the following

1)  $\frac{2}{5} + \frac{3}{5}$  2)  $\frac{1}{6} + \frac{2}{3}$  3)  $\frac{3}{7} + \frac{4}{7}$  4)  $\frac{5}{13} + \frac{8}{13}$  5)  $1\frac{3}{4} + 2\frac{1}{2}$  6)  $2\frac{1}{4} + 3\frac{3}{4}$  7)  $5\frac{1}{2} + 5\frac{1}{4}$  8)  
9)  $3\frac{3}{4} + 2\frac{3}{4}$  10)  $5 + 3\frac{1}{2}$

2. Possible mistakes done by students:

- They may subtract both numerator and denominator.
- They may once again subtract the mixed fractions after subtracting the whole number and fraction separately.


*Remedial Teaching*

- Ask them to identify the common fraction and then ask them to subtract smaller number for larger one.
- You may teach them to convert mixed fraction into improper fraction and subtract.

Activities for developing the sub competencies

**Group based presentations**

**Using circular card boards or thermacoals**

1) Divide a circle into 4 equal parts apply blue color to three parts and 

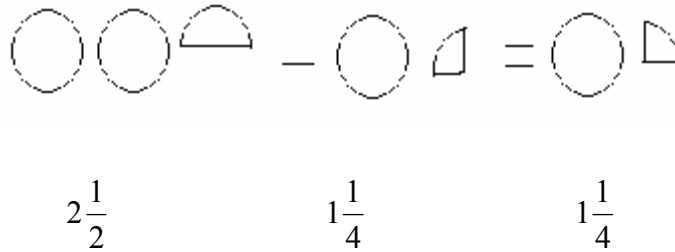
Red color to one part.

If we write the whole colored portion it is  $\frac{4}{4}$ . In that if we subtract the blue colored portion  $\frac{3}{4}$  we get the red colored portion.

$$\text{i.e. } \frac{4}{4} - \frac{3}{4} = \frac{4-3}{4} = \frac{1}{4}$$

Eg:  $\frac{2}{13} - \frac{1}{13} = \frac{2-1}{13} = \frac{1}{13}$

2)



=  $(2-1) + \frac{1}{2} - \frac{1}{4}$  converting it into common denominator.

=  $(2-1) + \frac{2}{4} - \frac{1}{4}$

=  $1 + \frac{2-1}{4} = 1\frac{1}{4}$

Drill sums:

- 1) Suhas has  $4\frac{1}{2}$ Rs. If he gives  $2\frac{1}{4}$ Rs to his brother then what is the remaining money?
- 2) Sham's cow gives  $11\frac{1}{2}$  ltr milk per day. If he sells  $9\frac{1}{2}$ ltr milk what is the remaining milk with him?
- 3) In a land of area  $3\frac{3}{4}$ acres,  $1\frac{1}{2}$ acres is used to cultivate banana. The remaining land to grow Areca plants. In what area araca plants are growing?

Subtract the following

1)  $\frac{2}{11} - \frac{1}{11}$  2)  $\frac{5}{6} - \frac{1}{6}$  3)  $\frac{5}{8} - \frac{3}{8}$  4)  $6\frac{3}{4} - 2\frac{1}{4}$  5)  $7\frac{1}{4} - 3\frac{1}{4}$  6)  $3\frac{1}{2} - 1$  7)  $5\frac{3}{4} - 2\frac{1}{4}$

3. Possible mistakes done by students:

- After multiplying they may not write it in simple form
- They may subtract when we say part of a part

*Remedial teaching:*

- Similarly like in equivalent-fractions ask them to divide numerator and denominator with the same number.
- When we say part of a part then give more drill sum of that sort.

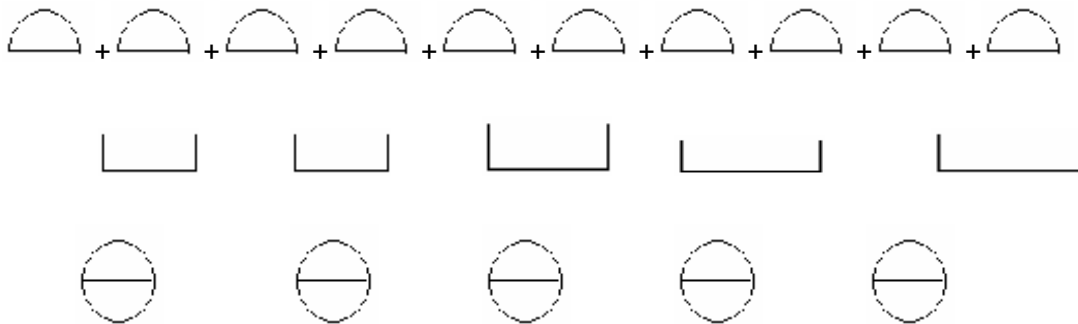
Activities for developing the sub competencies

**Group based presentations**

**Using circular card boards or thermacoals**

Prepare 10 half circles of same radius using cardboard then give each to one student and tell them to find out how many circles are formed as 2 for one circle. Then explain them that multiplication is repeated addition ie

1)



$$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$$

$$= \frac{1}{2} \times 10 = \frac{1}{2} \times \frac{10}{1} = \frac{10}{2} = \frac{\frac{10}{2}}{\frac{2}{2}} = \frac{5}{1} = 5 \text{ circles}$$

- 2) Shekar has  $\frac{1}{2}$  apple if he ate half of it what is the part that he ate?



In the four parts of the circle 2 parts ( $\frac{1}{2}$ ) is blue colored. The half of the blue part is red colored. Totally  $\frac{1}{4}$  of the circle is red colored.

**Drilling problems:**

- 1) In a class 80 students are there, among them  $\frac{3}{4}$  of the students got first class
- 2) In mathematics .then what is the number of students getting first class?
- 3) In a hostel if  $\frac{1}{10}$  kg rice is needed to prepare meals for a child, what is the amount of rice required for 40 students?
- 4) In a farm there are 90 trees if  $\frac{2}{3}$  are mango trees what is the number of mango trees are there?
- 5) Raju had 8 marbles .he distributed  $\frac{3}{4}$  of them among his friends what is the number of marbles he distributed?
- 6) Krishna has  $\frac{3}{4}$  of a guava fruit if he eats  $\frac{1}{4}$  of it how much is remaining?



**Multiply the following**

1)  $\frac{4}{5} \times 30$  2)  $\frac{3}{7} \times 21$  3)  $20 \times \frac{3}{4}$  4)  $18 \times \frac{5}{6}$  5)  $\frac{3}{4} \times \frac{1}{2}$

6)  $\frac{3}{5} \times \frac{3}{4}$  7)  $\frac{5}{12} \times \frac{1}{2}$  8)  $\frac{2}{3} \times \frac{3}{10}$

4. Possible mistakes committed by students:

- While dividing they may multiply without taking the reciprocal.
- They may write the reciprocal of dividend than that of divisor.
- They may write the reciprocal of both dividend and divisor

**Remedial Teaching:**

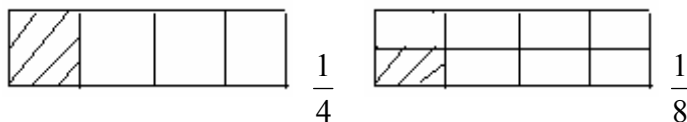
- Explain them that division means multiplying the dividend with the reciprocal of divisor.
- If we write the reciprocal of dividend show them the difference of value we get.
- Ask them to write the reciprocal of only the divisor and give more drilling sums

**Activities for developing the sub competencies**

**Group based presentations**

**Using Rectangular strips**

Divide  $\frac{1}{4}$  by 2



Take a rectangular strip. Divide it into 4 parts. Apply yellow color to one part. It will become  $\frac{1}{4}$  th. Divide every  $\frac{1}{4}$  into 2 equal parts and apply red color to one of the resulting part, then red colored portion will become  $\frac{1}{8}$  part. i.e  $\frac{1}{4} \div 2 = \frac{1}{8}$  or  $= \frac{1}{8} (\frac{1}{2} \text{ is reciprocal of } 2)$

Note: When you interchange numerator and denominator, you get the reciprocal of the number. Explain this to children.

$$3) \frac{5}{8} \div \frac{1}{4}$$

$$= \frac{5}{8} \times \frac{4}{1}$$

$$= \frac{20}{8}$$

$$= 20 \div \frac{4}{8} = \frac{5}{2} = 2\frac{1}{2}$$

Note : explain the students about converting  $\frac{5}{2}$  into mixed fractions

Drilling Problems:

- 1) If we distribute 8 kg of grapes as  $\frac{1}{4}$  kg per each person, to how many people we can distribute it?
- 2) There is 25 kgs of rice at home, daily if  $\frac{3}{4}$  kg is spent , then how many days are required to spend the total rice.

- 3) If we distribute 40 marbles in the ratio  $\frac{4}{5}$  then how many people we can distribute?

Divide the following:

1)  $\frac{3}{8} \div 12$       2)  $\frac{2}{5} \div 10$       3)  $8 \div \frac{2}{3}$       4)  $15 \div \frac{3}{5}$

5)  $\frac{2}{4} \div \frac{1}{8}$       6)  $\frac{3}{12} \div \frac{24}{15}$       7)  $\frac{1}{2} \div \frac{1}{4}$

### Competency 7

Possible mistakes committed by students

While measuring/reading angles of 60 degree they may measure/read 120 degrees wrongly.

*Remedial Teaching:*

Explain them that recognize the degrees in the protractor from left side while measuring angles from left side with the help of protractor and observe degree readings on the protractor from right side when measuring angle from right side.

## ***Activities for developing the sub competencies***

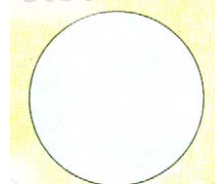
### ***Group based involmental***

### ***Using circular piece of paper***

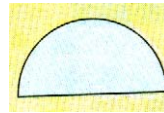
#### Angles

#### Activity making a degree clock

1. cut a circle out of paper



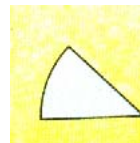
2. fold it into half



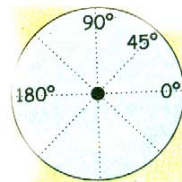
3. Fold it once again in to a quarter



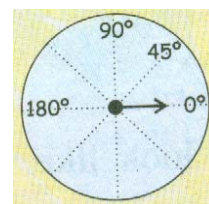
4. fold it once more



5. Open the paper. You will see lines like this

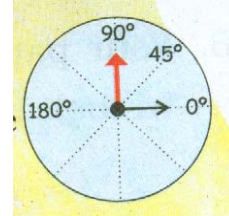


6. now mark 0°, 45°, 90° and 180° as shown



7. place it on an old card

8. from the centre draw one hand



9. Make a red hand with a thick paper and fix it in to the center with a drawing pin, so that it is free to move.

Your degree clock is ready

10. Use your degree clock to measure the right angle of your pencil box ----- is the measure of the right angle

11. can you guess how many degrees is the angle which is ----- ( $90^{\circ}$  is called right angle)

12.  $\frac{1}{2}$  of a right angle -----

13.  $\frac{1}{3}$  of a right angle-----

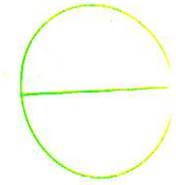
14. 2 times of a right angle -----

## Activity

### Preparing a protractor

Do This

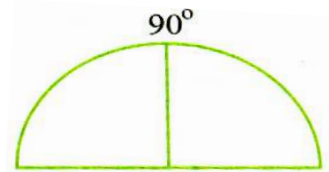
1. Cut out a circular shape using a bangle or take a circular sheet of about the same size.



2. Fold it twice to get a shape as shown. This is called a quadrant

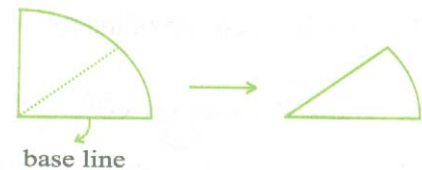


3. Open it out. You will find a semi-circle with a fold in the

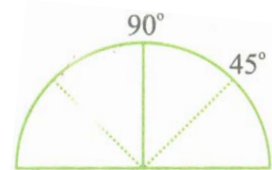


Mark  $90^\circ$  on the fold.

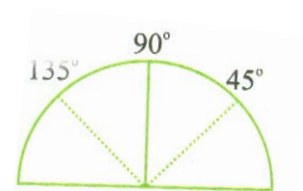
4. Fold the semicircle to reach the quadrant. Now fold the quadrant once more as shown. The angle is half of  $90^\circ$  i.e.  $45^\circ$ .



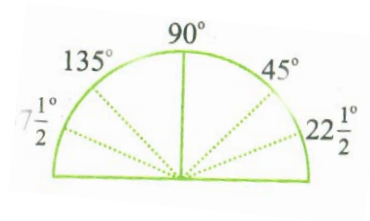
5. Open it out now. Two folds appear on each side. What is the angle upto the first new line? Write  $45^\circ$  on the first fold to the left of the base line.



6. The fold on the other side would be  $90^\circ + 45^\circ = 135^\circ$ .



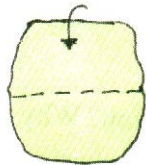
7. Fold the paper again upto  $45^\circ$  (half of the quadrant). Now make half of this. The first fold to the left of the base line now is half of  $45^\circ$  i.e.  $22\frac{1}{2}^\circ$ . The angle on the left of  $135^\circ$  would be  $157\frac{1}{2}^\circ$ .



You have got a ready device to measure angles. This is an approximate protractor.

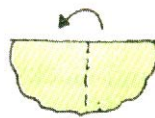
### Activity

#### Preparing RA -tester



Step 1

Take a piece of  
Paper



Step 2

Fold it somewhere  
in the middle



Step 3

Fold again the straight  
edge. Your tester is

Ready

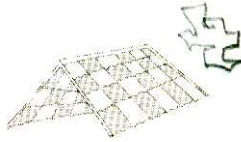
Observe your improvised 'right-angle-tester'. [Shall we call it RA tester?] Does one edge end up straight on the other?

Suppose any shape with corners is given. You can use your RA tester to test the angle at the corners.

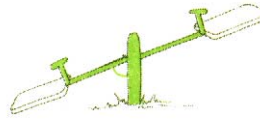
Do the edges match with the angles of a paper? If yes, it indicates a right angle.

Other names

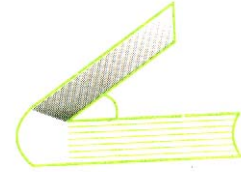
An angle smaller than a right angle is called an acute angle. These are acute angles.



Roof top



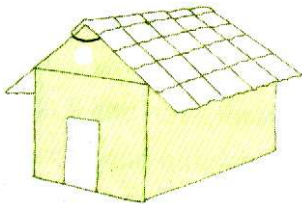
Sea-saw



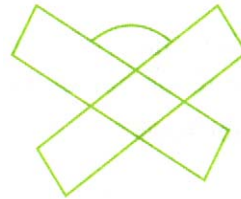
Opening book

Do you see that each one of them is less than one-fourth of a revolutions? Examine them with your RA tester.

If an angle is larger than a right angle, but less than a straight angle, it is called an obtuse angle. These are obtuse angles.



House Book



Reading desk

Your RA tester may help to examine.

Identify the obtuse angels in the previous examples too.

A reflex angle is larger that a straight angle.

It looks like this. (See the angle mark)





## **2. Possible mistakes committed by students**

- They may commit mistakes while measuring angles.
- Tell the sides by single letter
- Commit mistakes while naming the angles

### **Remedial Teaching**

- Practice them how to use protractors effectively.
- Explain them to recognize the sides by two letters.
- First tell them to identify the angles through single letter or three letters along with symbols and confirm them through various examples.

### **Using square sheet of paper**

#### **Activities for developing the sub competencies**

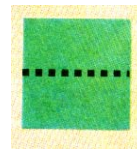
#### **Group based involmental**

#### **Angle in a paper Aeroplane**

1. Take a square sheet of paper



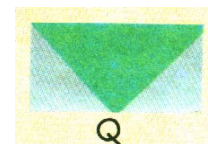
2. fold it in half and open it



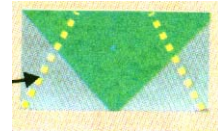
3. Fold the corners to the centre. Your paper looks like this



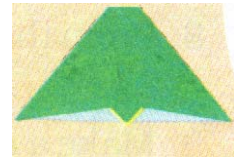
4. Fold the green triangle such that P touches Q



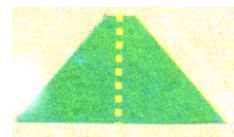
5. Fold the top two corners of main rectangle along the dotted lines



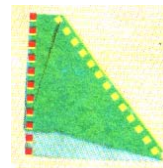
6. Your paper will look like this. There is a small triangle in the picture which has to be folded up.



7. Turn it over and fold it in half along the dotted line



8. Now, to make a wing fold the yellow edge over the red edge.



9. Turn of and do the same on the other side as well



10. Your plane is ready to fly. How well does it fly ? name the angles as A,B, and C

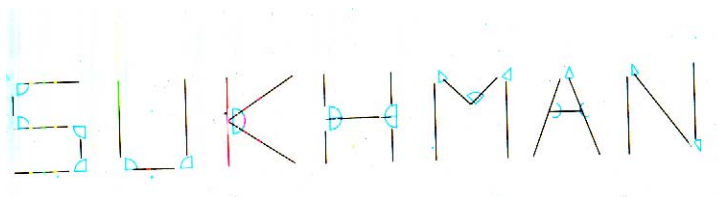
Find the angles of  $45^{\circ}$  and  $90^{\circ}$  when you open your plane.

***Group based involemental***

***Use of card board/ thermocoals***

**Angles in names**

You know, there are angles in the letters of our names too.



In my name there are 11 right angles there are also 10 angles less than a right angle

*Activities for developing the sub competencies*

*Group based involmental*

**Using square sheet of paper**

*Activity*

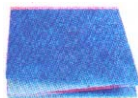
a) Take a square sheet of paper.



b) Fold it in half.



c) Fold it once more and press it.



d) Open the last fold so that the sheet is folded in half.



e) Take one corner and fold it to meet the dotted line.



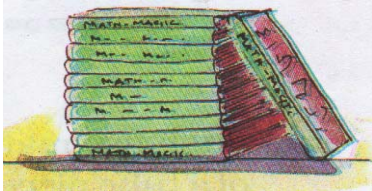
On the paper you will find lines making a right angle, an angle less than a right angle and an angle more than a right angle. At the same time name the angles through letters A,B,and C.

Look for each of the angles and mark them with different colours.

## Activity

### Activity using mathematics books

- a) Put 10 Math – Magic books on top of each other. Keep one book slanting make a slide



- b) Now do this with six books.

- 🚦 Roll a ball from the top. From which slide does the ball roll down faster?

Which slide has the smaller angle?

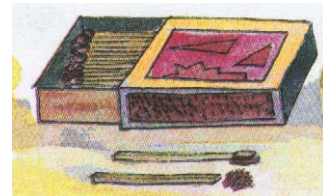
## Activity

### Using match sticks

#### . Changing Shapes

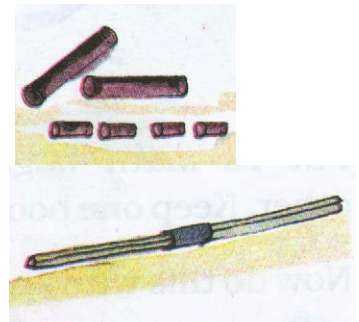
- Things you need – used (or new) matchsticks.

Piece of rubber tube used in cycle valves.



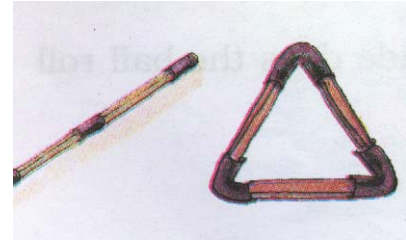
- i. Clean the black end of the matchsticks.

- ii. Cut small pieces of the tube (about 1 cm long)

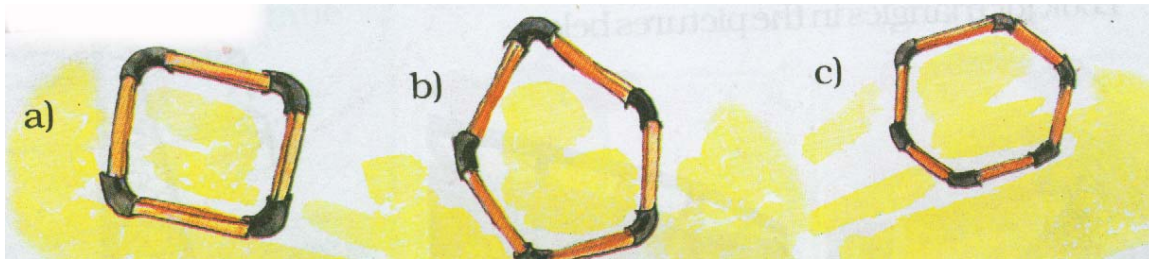


Push two matchsticks into each end of a tube piece.

iii. Add more matchsticks to form a triangle.



Now make these 4,5,6 sided shapes by using tube pieces and matchsticks.







\* Find out how many angles are there in each of these shapes. Mark them.

Now push each shape downwards with the tip of your finger.

Does the angle change when pushed down by the finger?



\* Find out and write your results in the table given.

Shape	Change in angle Yes/no
	
	
	
	

## **APPENDIX – II**

### **TEACHER’S QUESTIONNAIRE**

Sir,

I have carried out a research for my Ph.D degree on the topic, “Diagnosis Based Remediation on Attainment of MLL in Mathematics among V Standard Students from Shimoga district”. Here three questionnaires have been constructed for the purpose of the research. The first questionnaire is for the teachers, second for the students to gather their personal informations and the third questionnaire is set to know the attainment levels of students in first semester mathematical competencies for class V. This questionnaire consists of 24 questions followed by spaces provided for writing answers. Kindly convince the students to write the answers for all the questions in the space provided for answering the question, and also I humbly seek your full support and cooperation to complete my research in time.

Yours sincerely

Prakasha, K.

Dear Students,

This test is designed in an attempt to ascertain how well you have mastered mathematical competencies of first semester. You are required to answer given questions in a space provided below every question. Each question carries one mark. You need to give your honest response. Your valuable response will be appreciated and would be kept confidential. Hence I expect you to write answers in a given space to get clarity on your attainment of mastery on MLL competencies in Mathematics.

## Teachers' Questionnaire

1. Name of the Teacher:
2. School name and address:
3. Age:
4. Gender: Male / Female
5. Educational Qualifications: Degree / Certificate:
6. Specialisation: Science / Arts / Commerce
7. School type: Single Teacher / Two Teachers / Multi-Teachers (Multigrade / Monograde):
8. Location of your school: City / Corporation / Municipal / Rural
9. Number of teachers who teach V standard:
10. Your teaching subjects:
11. Your teaching classes:

## APPENDIX – III

### STUDENT'S QUESTIONNAIRE

- 1) Name :
- 2) Age : \_\_\_\_\_ Year \_\_\_\_\_ Months.
- 3) Local address of the student : Urban / Rural
- 4) Educational Qualification of
  - a) Father
  - b) Mother
- 5) a) Father's occupation
  - b) Mother's occupation
- 6) Source of Income for the family : Business / Property / Agriculture / Govt. Job / Self Employment / Other
- 7) Student is a first generation learner : Yes / No.
- 8) Birth order of the student :
- 9) How many brothers : Elder brothers : Younger brothers :
- 10) How many sisters : Elder Sisters : Younger sisters :
- 11) Are your brothers pursuing Education? Yes / No.
- 12) Which standard are they studying.
- 13) Are your sisters pursuing Education? Yes / No
- 14) Which standard are they studying?
- 15) Do you have all the text books ? Yes / No
- 16) If No. which books are not there ?
- 17) Put ( ✓ ) mark in front of appropriate place.

Subject	Like	Dislike	Difficult	Easy
Kannada				
Mathematics				
Social Science				
Science				



18) Your favorite subject :

19) Subject you don't like :

20) How much time in a week do you spare for different subjects ?

Subject	Kannada	Mathematics	Social Science	Science

21) How often you study the following subjects ?

Subject	Same day	Next day	Meet in a week	in Tuition	Before Exams
Kannada					
Mathematics					
Social Science					
Science					

22) How many hours do you study independently at home?

23) Do you go for tuition lessons ?

Yes / No

24) If you are going, How many hours ?

One hour a day / two hours a day / weekly three hours

25) Which subjects do you study daily?

26) Who does assist you for studies at home?

Father / mother / both / brothers / sisters / others

27) For which subject do you need assistance

28) Which sort of assistance do you expect?

a) In doing the home work.

b) Help in doing difficult work

29) Write the name and address of the school where you passed your 4<sup>th</sup> standard.

## APPENDIX – IV

### STUDENT'S QUESTION PAPER

Pre-test

Mathematics: V Standard Question answer paper.

School Name :	City / Town / Rural :
Students Name :	Roll No. :
Gender : Male / Female	Standard :
Date : 08.01.2007 Time 75 Min.	Supervisor's sign :
Place :	

Note: 1) This is answer sheet with question.

2) Write the answers in the space given in question paper.

- 1) In the Indian system, what is the name of the seventh place?
- 2) Write the number equivalent to this expansion   
 $3 \times 10000 + 5 \times 1000 + 0 \times 100 + 7 \times 10 + 2 \times 1$
- 3) Write these numbers in descending order   
41,52,378, 41,52,738, 41,52,837, 41,52,387
- 4) 3, 7, 0, 5, 1 (each digit to be used only once) write the smallest possible number using the digits.
- 5) What is the number got when 99999 is approximated to Tenth place.
- 6) 17, 12, 13, 16, 19 write these numbers in Hindu-Arabic style.

7) In the clock, Hour, Minute, Second hand are on which numbers.



hour hand : \_\_\_\_\_

Minute hand : \_\_\_\_\_

Second hand : \_\_\_\_\_

8) Which is the smallest number to be added to the numerator of  $\frac{4}{5}$  to get an improper fraction?

9) As shown in the figure cut the watermelon into 8 equal parts. If you eat  $\frac{3}{8}$  of it and give the remaining to your brother, what is the share got by your brother?



10) Among the 60 students of your class, If  $\frac{2}{3}$  are girls then what is the number of boys ?

11) If we distribute  $3\frac{3}{4}$  ltr milk equally among 3 people, how much milk does everyone get?

12) 1 unit + 3 tenths + 5 hundredths  
write it in decimal form

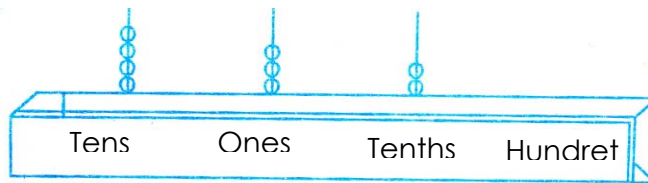
13) If 9 is at hundredth place in a decimal number what is its place value?

14) 10.1, 0.01, 0.10, 101.00 write these in descending order

Descending order : \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

15) If 25 students of a class join together and give a Mahatma Gandhi's photo costing Rs.87.50 to the school then how much money every student has to contribute.

16) The money you have is shown in the abacus below. If you spend Rs.4.40 then how much money is remaining with you?

17) Fill in the blanks with appropriate numbers

Percentage	Decimal	Fraction
40%	0.4	
60%		$\frac{3}{5}$
	0.1	$\frac{1}{10}$

18) Convert 7025 gm into kg.

19) If you buy 3 post cards for 50 Ps each and 4 inland letters for Re 1. Each, What is the total money you have to pay?

20) If a rope of 38.4 m is divided into 6 equal parts, what is the length of each piece?

21) You are a provisional store owner. Check the bill produced in your shop. If any mistakes are there correct it.

Vasant provisional stores

Name : Sumitra

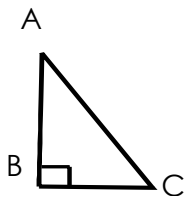
Date : 01.01.2007

Sl. No.	Details	Quantity	Rate	Total	Total
1	Sugar	5 Kg	20.00	100.00	
2	Rice	10 Kg	15.00	100.00	
3	Jaggary	2 Kg	15.00	30.00	
			Total	230.00	
Two hundred and thirty Rupees only. Place : Signature :					

22) You are facing East. If you turn left towards North, then what is the angle of the turn?

23) Draw an obtuse angle without the help of a protractor.

24) What type of an angle is angle C.



## ANSWER KEY

- 1) Ten lakh
- 2) 35, 072
- 3) 41,52,837, 41,52,738, 41,52,387, 41,52,378
- 4) 01357 or 1357
- 5) 1,00,000
- 6) 17, 12, 13, 16, 19
- 7) Time Hour - VIII (8)  
Minute – XII (12)  
Second – VI (6)

8) 1

9)  $\frac{5}{8}$

10) Total students in class = 60

Number of girls =  $\frac{2}{3}$  part

$$\therefore \text{Number of girls} = 60 \times \frac{2}{3} = 20 \times 2 = 40$$

$$\text{Number of boys} = 60 - 40 = 20$$

11) Total milk =  $3\frac{3}{3}$  ltr.

Number of people sharing the milk = 3

$$\text{Quantity of milk each gets} = 3\frac{3}{4} \div 3 = \frac{15}{4} \times \frac{1}{3} = \frac{5}{4} = 1\frac{1}{4}$$

12)  $1 + 0.3 + 0.05 = 1.35$

13) 0.09

14) 101.00, 10.1, 0.10, 0.01

15) Total Number of students in class = 25

Cost of the photo = Rs. 87.50

Money share of every one:  $87.50 \div 25 = \text{Rs.}3.50$

Or

Money share of every one = 3.50

16) Money I am having = 43.20

Money I spend = 4.40

∴ Remaining money = 38.80

17)

%	Decimals	Fraction
40%	0.4	2/5
60%	0.6	3/5
10%	0.1	1/10

Give full marks if two are correct..

18) 7.025 Kg

19) Cost of 3 post cards =  $0.50 \times 3 = 1.50$  Rs

Cost of 4 inland letters =  $1 \times 4 = 4$  Rs.

Total money to be paid = 5.50 Rs.

20) Length of the rope = 38.4 meter

No. of equal parts = 6

Length of every part =  $38.4 \div 6 = 6.4$  m

21) Vasanth Provision stores.

Sl. No.	Details	Quantities	Rate	Total
1	Sugar	5 Kg	20.00	100.00
2	Rice	10 Kg	15.00	150.00
3	Jaggary	2 Kg	15.00	30.00
			Total	280.00

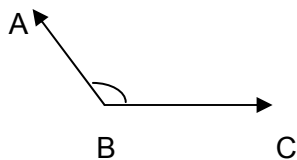
Rupees Two hundred and eighty only.

Place :

Signature

Give full marks if two are correct.

22) Right angle or  $90^\circ$ .



24) Acute angle.

## Post test

School name	Roll no :
Student's name	Class :
Gender: Male/ Female	Time :45min

Note: this is question answer paper

Write the answers in the space given

1. Writ one lakh one thousand eleven in numeral form

2. Elaborate (Expand) 908706 according to place value

3. 32,15,203, 32,15,302, 32,15,032, 32,14,320, write these number in ascending order.

4. 5,7,8,0, using these numbers only once make the largest possible number

5. Approximate 974 and 497 to the tens place and then estimate their sum to the hundreds place

6. One thousand two hundred thirty four write this using Kannada digits.

7. Write the numbers 1 to 10 in Roman system



8.  $\frac{3}{4}, \frac{2}{3}, \frac{4}{5}, \frac{7}{6}$ , which fraction does not belong to the group

9. The length of the bamboo stick is  $3\frac{3}{4}$  cm. If we cut  $1\frac{1}{4}$  cm and remove what is the length of the remaining stick?

10. To prepare 1 cup of coffee  $\frac{1}{2}$  cup milk is required. How much milk is needed to prepare 8 cups of coffee?

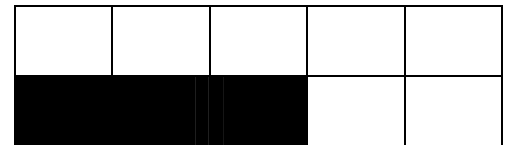
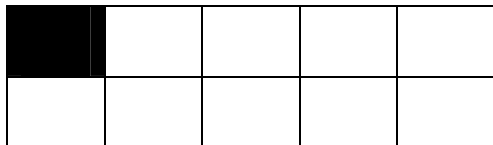
11. If  $3\frac{1}{2}$  Rs is distributed equally among 14 people what is the share got by each one?

12. See the picture and write the shaded part in decimal form



13. 7.634 here what is the place value of the digit 3.

14.



Write the shaded portion in decimal form and write them in ascending order.

15. In a school after distributing 50.75 m cloth 5.25m cloth is remaining. What was the original length of cloth?

16. If you have 5 coins of 50ps and 4 coins of 25ps what is the total money with you?

17. Fill in the blanks with appropriate number

Decimal	Faction	Percentage
0.50	$\frac{1}{2}$	-
0.25	-	25% <input type="text"/>
-	$\frac{3}{4}$	75% <input type="text"/>
		<input type="text"/>

18. 6 Rs+ 50Ps+75Ps= \_\_\_\_\_ paise?

19. In a water tank 575 ltr water can be filled. What is the remaining capacity of the tank if 500 ltr water is filled?

20. cost of one book is Rs 11.75 then what is the cost of 11 books?

21. Observe the bill carefully and fill in the blanks and correct it.

Saraswathi book centre

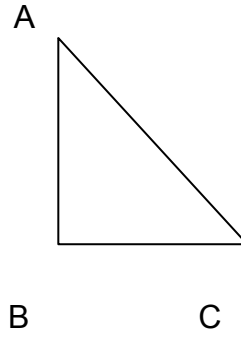
Name Sujaya

Date : 01.01.2006

Sl.No	Details	Quantities	Rate	Total
1	100page note	4	9	
2	book pen		10	20.00
3	pencil	2		4.00
	Total			

Total : sixty rupees only.

22. In this triangle  $\angle C$  is which angle



23. Which angle is formed between the hands of this clock

24. Using protractor make a 90 angle

## ANSWER KEY

### Mathematics V standard Answer key

- 1,01,011
- $9,00,000+0+8,000+700+0+6,$
- 32,14,320,      32,15,032,    32 ,15,203,    32,15,302
- 8,750
- 974 approximate to tens place = 970  
497 approximate to tens place = 500

$$\text{Total (sum) } = 1,470$$

$$\text{approximate to hundreds place } = 1,500$$

- 1234
- 1=I, 2=II,3=III,4=IV,5=V,6=VI,7VII, 8VIII, 9IX,10=X
- $\frac{7}{6}$
- Length of bamboo stick =  $3\frac{3}{4}$  cm =  $\frac{15}{4}$   
Length of stick removed =  $1\frac{1}{4}$  cm =  $\frac{5}{4}$

$$\text{Remaining length of the stick } = \frac{15}{4} - \frac{5}{4}$$

$$\frac{10}{4} = \frac{5}{2} = 2\frac{1}{2} \text{ cm}$$

(if answer is written directly consider it as correct answer)

- Milk required to prepare 1 cup of coffee =  $\frac{1}{2}$  cup  
 $\therefore$  Milk required for 8 cups of coffee =  $\frac{1}{2} \times 8 = 4$  cups
- Total money =  $3\frac{1}{2}$  Rs =  $\frac{7}{2}$  Rs  
No of people to be distributed = 14  
Share obtained by each =  $\frac{7}{2} \div 14 = \frac{7}{2} \times \frac{1}{14} = \text{Rs } \frac{1}{4}$

12. 0.4

13. 0.03

14. 0.1, 0.3, 0.4, 0.5

15. Distributed cloth = 50.75m

Remaining cloth = 5.25m

Total cloth = 56.00m

16. 50ps coins = 5  $\Rightarrow$   $0.5 \times 5 = \text{Rs } 2.50$

25ps coins = 4  $\Rightarrow$   $0.25 \times 4 = \text{Re } 1.00$

Total money  $\Rightarrow$  Rs 3.50

17.

Decimal	Fraction	Percentage
0.50	$\frac{1}{2}$	50%
.25	$\frac{1}{4}$	25%
0.75	$\frac{3}{4}$	75%

18. Rs 600 + Rs 50 + Rs 75 = Rs 725

19. Capacity of tank = 575 l.

Water filled = 500 l

Water still can be filled = 75 l.

20. Rate of one book = Rs 11.75

Rate of one book =  $11.75 \times 11$

= Rs 129.25

21. Saraswathi book centre

Name : Sujaya

Date : 1/1/2006

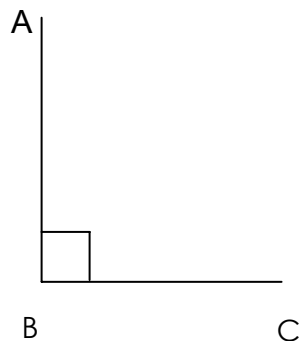
Sl no	Details	Quantities	Rate	Total
1	100page Not book	4	9	36.00
2	Pen	2	10	20.00
3	pencil	2	2	4.00
	Total			60.00

Total : sixty rupees only

22. Acute angle

23. Obtuse angle

24.



## APPENDIX – V

### TEACHER'S QUESTIONNAIRE (KANNADA VERSION)

ಮಾನ್ಯರೇ,

ನಾನು 'Diagnosis based Remediation on Attainment of MLL in Mathematics among V Standard Students from Shimoga District' ಎಂಬ ವಿಷಯ ಕುರಿತು ಶಿಕ್ಷಣ ಶಾಸ್ತ್ರದಲ್ಲಿ ಉ.ಆ ಪದವಿಗಾಗಿ ಸಂಶೋಧನೆ ಕೈಗೊಂಡಿದ್ದೇನೆ. ಈ ಉದ್ದೇಶಕ್ಕಾಗಿ 3 ಪ್ರಶ್ನಾವಳಿಗಳನ್ನು ರಚಿಸಲಾಗಿದೆ. ಮೊದಲನೆಯದು ಶಿಕ್ಷಕರಿಗಾಗಿ, ಎರಡನೆಯದು ವಿದ್ಯಾರ್ಥಿಗಳ ವೈಯಕ್ತಿಕ ಮಾಹಿತಿಗಾಗಿ. ಮೂರನೇ ಪ್ರಶ್ನಾವಳಿಯು 5ನೇ ತರಗತಿಯ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಗಣಿತ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಮೊದಲ ಅರೆವಾರ್ಷಿಕ ಅವಧಿಯ ಸಾಮರ್ಥ್ಯಗಳ ಮೇಲೆ ಪ್ರಶ್ನಾವಳಿಗಳನ್ನು ರಚಿಸಲಾಗಿದೆ. ಇದು ಪ್ರಶೋತ್ತರ ಪತ್ರಿಕೆಯಾಗಿದ್ದು ಪ್ರತಿ ಪ್ರಶ್ನೆಗೂ ಉತ್ತರಗಳನ್ನು ಖಾಲಿ ಬಿಟ್ಟಿರುವ ಸ್ಥಳಗಳಲ್ಲಿ ತುಂಬುವಂತೆ ಸಂಬಂಧಪಟ್ಟ ವಿದ್ಯಾರ್ಥಿಗಳ ಮನವೊಲಿಸುವುದರ ಮೂಲಕ ನನ್ನ ಅಧ್ಯಯನಕ್ಕೆ ದಯವಿಟ್ಟು ಸಹಕರಿಸಿ ಹಾಗೂ ಸಕಾಲದಲ್ಲಿ ಅಧ್ಯಯನವನ್ನು ಪೂರೈಸುವುದಕ್ಕೆ ನಿಮ್ಮ ಸಹಕಾರ ಅತ್ಯಾವಶ್ಯಕವಾಗಿರುವುದರಿಂದ ತಾವು ಸಹಕರಿಸಬೇಕಾಗಿ ಕೋರುತ್ತೇನೆ.

ನಿಮ್ಮ ವಿಧೇಯ,

(ಪ್ರಕಾಶ ಕೆ)

### ಪ್ರಶ್ನಾವಳಿ

ಪ್ರಾಥಮಿಕ ಶಾಲೆಯ 5ನೇ ತರಗತಿಯ ಗಣಿತ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಮೊದಲ ಅರೆ ವಾರ್ಷಿಕ ಅವಧಿಯ ಕಲಿಕೆಯ ಕನಿಷ್ಠ ಮಟ್ಟದ ಸಾಮರ್ಥ್ಯಗಳಲ್ಲಿ ನಿಮ್ಮ ಸಾಧನೆಯನ್ನು ಪರೀಕ್ಷಿಸಿ, ಸಾಮರ್ಥ್ಯಗಳ ಸಾಧನೆಗೆ ಅವಶ್ಯಕ ಅಂಶಗಳನ್ನು ಗುರುತಿಸುವುದು ಈ ಪ್ರಶ್ನಾವಳಿಯ ಉದ್ದೇಶ. ಎಲ್ಲಾ ಪ್ರಶ್ನೆಗಳೂ ಮುಖ್ಯವಾದ್ದರಿಂದ ಎಲ್ಲದ್ದಕ್ಕೂ ಖಾಲಿ ಇರುವ ಸ್ಥಳದಲ್ಲಿಯೇ ಉತ್ತರಿಸಿ. ಈ ಅಧ್ಯಯನ ಸಂಪೂರ್ಣ ಶೈಕ್ಷಣಿಕವಾದುದು ಹಾಗೂ ನಿಮ್ಮ ಪ್ರತಿಕ್ರಿಯೆಗಳನ್ನು ನನ್ನ ಸಂಶೋಧನೆಯ ವಿನಃ ಬೇರೆ ಯಾವುದಕ್ಕೂ ಉಪಯೋಗಿಸುವುದಿಲ್ಲ ಎಂಬ ಭರವಸೆ ನೀಡುತ್ತೇನೆ. ನಿಮ್ಮ ಸಹಕಾರಕ್ಕಾಗಿ ಧನ್ಯವಾದಗಳು.

## ಶಿಕ್ಷಕರ ಪ್ರಶ್ನಾವಳಿ

1. ಶಿಕ್ಷಕರ ಹೆಸರು :
2. ಶಾಲೆಯ ಹೆಸರು ಮತ್ತು ವಿಳಾಸ :
3. ವಯಸ್ಸು : ಲಿಂಗ : ಗಂಡು : ಹೆಣ್ಣು :
4. ವಿದ್ಯಾರ್ಹತೆ ಪದವಿ : ಸರ್ಟಿಫಿಕೇಟ್ :
5. ಶಾಲೆಯ ವಿಧ : ಏಕೋಪಾದ್ಯಾಯ : ದ್ವಿಉಪಾದ್ಯಾಯ : ಬಹುಉಪಾದ್ಯಾಯ :
6. ಶಾಲೆಯ ಯಾವ ಪ್ರದೇಶಕ್ಕೆ ಸೇರಿದ್ದು : ನಗರ / ಪಟ್ಟಣ ಪಂಚಾಯತ್ / ಗ್ರಾಮೀಣ :
7. 5ನೇ ತರಗತಿಯನ್ನು ಬೋಧಿಸುತ್ತಿರುವ ಶಿಕ್ಷಕರ ಸಂಖ್ಯೆ :
8. ನೀವು ತೆಗೆದುಕೊಳ್ಳುತ್ತಿರುವ ವಿಷಯಗಳು :
9. ನೀವು ತೆಗೆದುಕೊಳ್ಳುತ್ತಿರುವ ತರಗತಿಗಳು :



## APPENDIX – VI

### STUDENT'S QUESTIONNAIRE (KANNADA VERSION)

1. ಹೆಸರು:
2. ವಯಸ್ಸು : ----- ವರ್ಷ ----- ತಿಂಗಳು -----
3. ವಿದ್ಯಾರ್ಥಿಯ ಸ್ಥಳೀಯ ವಿಳಾಸ: ನಗರ : ಗ್ರಾಮ
4. ವಿದ್ಯಾರ್ಹತೆ : ಅ) ತಂದೆ: \_\_\_\_\_ ಆ) ತಾಯಿ: \_\_\_\_\_
5. ಅ) ತಂದೆಯ ಉದ್ಯೋಗ : \_\_\_\_\_  
ಆ) ತಾಯಿಯ ಉದ್ಯೋಗ : \_\_\_\_\_
6. ಕುಟುಂಬದ ಆದಾಯದ ಮೂಲಗಳು : ವ್ಯಾಪಾರ : ಪಿತ್ರಾರ್ಜಿತ ಆಸ್ತಿ : ವ್ಯವಸಾಯ  
: ಸರ್ಕಾರಿ ಉದ್ಯೋಗ / ಸ್ವಂತ ಉದ್ಯೋಗ / ಇತ್ಯಾದಿ ಇತರ ಕಸುಬು
7. ವಿದ್ಯಾರ್ಥಿಯು ಮೊದಲ ತಲೆಮಾರಿನ ವಿದ್ಯಾಭ್ಯಾಸಿಯೇ: ಹೌದು : ಇಲ್ಲ
8. ವಿದ್ಯಾರ್ಥಿಯ ಜನನ ಕ್ರಮಸಂಖ್ಯೆ :
9. ಎಷ್ಟು ಜನ ಸಹೋದರರು : ಅಣ್ಣಂದಿರು : \_\_\_\_\_ ತಮ್ಮಂದಿರು \_\_\_\_\_
10. ಎಷ್ಟು ಜನ ಸಹೋದರಿಯರು : ಅಕ್ಕಂದಿರು : \_\_\_\_\_ ತಂಗಿಯರು \_\_\_\_\_
11. ನಿಮ್ಮ ಸಹೋದರರು ವಿದ್ಯಾಭ್ಯಾಸ ಮಾಡುತ್ತಿದ್ದಾರೆಯೇ? ಹೌದು ಇಲ್ಲ
12. ಯಾವ ತರಗತಿಯಲ್ಲಿ ಓದುತ್ತಿದ್ದಾರೆ.
13. ನಿಮ್ಮ ಸಹೋದರಿಯರು ವಿದ್ಯಾಭ್ಯಾಸ ಮಾಡುತ್ತಿದ್ದಾರೆಯೇ ?
14. ಯಾವ ತರಗತಿಯಲ್ಲಿ ಓದುತ್ತಿದ್ದಾರೆ ?
15. ನಿಮ್ಮ ಹತ್ತಿರ ಎಲ್ಲಾ ಪಠ್ಯಪುಸ್ತಕಗಳು ಇದೆಯೇ ? : ಹೌದು / ಇಲ್ಲ
16. ಇಲ್ಲವಾದರೆ ಯಾವ ಪಠ್ಯಪುಸ್ತಕಗಳು ಇದೆಯೇ ? ಹೌದು / ಇಲ್ಲ
17. ಸರಿಯಾದ ಸ್ಥಳದಲ್ಲಿ (✓) ಚಿಹ್ನೆಯನ್ನು ಹಾಕಿ

ವಿಷಯ	ಇಷ್ಟ	ಇಷ್ಟವಿಲ್ಲ	ಕಷ್ಟ	ಸುಲಭ

18. ನಿಮ್ಮ ಅಚ್ಚು ಮೆಚ್ಚಿನ ವಿಷಯ :

19. ನಿಮಗೆ ಇಷ್ಟವಿಲ್ಲದ ವಿಷಯ :

20. ವಾರದಲ್ಲಿ ವಿವಿಧ ವಿಷಯಗಳಿಗೆ ಎಷ್ಟು ಸಮಯ ಮೀಸಲಿಡುತ್ತೀರಾ ?

ವಿಷಯ	ಕನ್ನಡ	ಗಣಿತ	ಸಮಾಜ ವಿಜ್ಞಾನ	ವಿಜ್ಞಾನ

21.

ವಿಷಯ	ಅದೇ ದಿನ	ಮರುದಿನ	ವಾರಕ್ಕೊಮ್ಮೆ	ಟ್ಯೂಷನ್ನಿನಲ್ಲಿ	ಪರೀಕ್ಷೆಗೆ ಮುಂಚೆ
ಕನ್ನಡ					
ಗಣಿತ					
ಸಮಾಜ ವಿಜ್ಞಾನ					
ವಿಜ್ಞಾನ					

22. ಮನೆಯಲ್ಲಿ ನೀವು ಸ್ವಂತವಾಗಿ ಎಷ್ಟು ಗಂಟೆಗಳು ಓದುತ್ತೀರಾ ?

23. ನೀವು ಪ್ರತ್ಯೇಕ ಪಾಠಕ್ಕೆ ಹೋಗುತ್ತೀರಾ ? ಹೌದು : ಇಲ್ಲ

24. ಪ್ರತ್ಯೇಕ ಪಾಠಕ್ಕೆ ಹೋಗುತ್ತಿರುವಲ್ಲಿ ಎಷ್ಟು ಗಂಟೆಗಳ ಕಾಲ ? ಪ್ರತಿನಿತ್ಯ ಒಂದು ಗಂಟೆ :

ಪ್ರತಿನಿತ್ಯ ಎರಡು ಗಂಟೆ : ವಾರಕ್ಕೆ ಮೂರು ಗಂಟೆ.

25. ಪ್ರತಿನಿತ್ಯ ಯಾವ ಯಾವ ವಿಷಯಗಳನ್ನು ಓದುತ್ತೀರಾ ?
26. ಮನೆಯಲ್ಲಿ ನಿಮಗೆ ಓದಿನಲ್ಲಿ ಯಾರು ಸಹಾಯ ಮಾಡುತ್ತಾರೆ : ತಂದೆ : ತಾಯಿ :  
ಇಬ್ಬರೂ : ಸಹೋದರರು : ಸಹೋದರಿಯರು : ಇತರರು
27. ಯಾವ ವಿಷಯಕ್ಕೆ ಸಹಾಯವನ್ನು ಬಯಸುತ್ತೀರಾ ?
28. ಯಾವ ರೀತಿಯ ಸಹಾಯ ಬಯಸುತ್ತೀರಾ ?  
ಅ) ಹೋಮ್ ವರ್ಕ್ ಮಾಡಲು.  
ಆ) ಕಷ್ಟದ ಕೆಲಸದಲ್ಲಿ ಬೇಕಾದ ಸಹಾಯ
29. ನೀವು ನಾಲ್ಕನೆಯ ತರಗತಿ ತೆಗೆಡೆಯಾದ ಶಾಲೆಯ ಹೆಸರು ಹಾಗೂ ವಿಳಾಸವನ್ನು ಬರೆಯಿರಿ.

## APPENDIX – VII

### STUDENT'S QUESTION PAPER (KANNADA VERSION)

Pre test

#### ಗಣಿತ – 5ನೇ ತರಗತಿ ಪ್ರಶ್ನೋತ್ತರ ಪತ್ರಿಕೆ

ಶಾಲೆಯ ಹೆಸರು :	ನಗರ / ಗ್ರಾಮೀಣ / ಪಟ್ಟಣ :
ವಿದ್ಯಾರ್ಥಿಯ ಹೆಸರು :	ಕ್ರಮ ಸಂಖ್ಯೆ :
ಲಿಂಗ: ಗಂ ಹೆ	ತರಗತಿ :

ಸೂಚನೆ : i) ಇದು ಪ್ರಶ್ನೆ ಸಹಿತ ಉತ್ತರ ಪತ್ರಿಕೆಯಾಗಿದೆ

ii) ಉತ್ತರಗಳನ್ನು ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿಯೇ ಖಾಲಿ ಬಿಟ್ಟಿರುವ ಸ್ಥಳದಲ್ಲಿ ಬರೆಯಿರಿ.

1) ಭಾರತೀಯ ಕ್ರಮವನ್ನು ಸೂಚಿಸುವ ಸ್ಥಾನ ಬೆಲೆ ಪಟ್ಟಿಯಲ್ಲಿ ಏಳನೇ ಸ್ಥಾನ ಯಾವುದು?

2)  $3 \times 10000 + 5 \times 1000 + 0 \times 100 + 7 \times 10 + 2 \times 1$  ಈ ವಿಸ್ತರಣೆಗೆ ಸಮಾನವಾದ ಸಂಖ್ಯೆಯನ್ನು ಬರೆಯಿರಿ.

3) 41,52,378, 41,52,738, 41,52,837, 41,52,387 ಈ ಸಂಖ್ಯೆಗಳನ್ನು ಇಳಿಕೆ ಕ್ರಮದಲ್ಲಿ ಬರೆಯಿರಿ.

ಇಳಿಕೆ ಕ್ರಮ : ....., ....., ....., .....

4) 3,7,0,5,1 ಈ ಅಂಕಗಳನ್ನು ಒಂದು ಸಲ ಮಾತ್ರ ಬಳಸಿ ಅತಿ ಚಿಕ್ಕ ಸಂಖ್ಯೆಯನ್ನು ರಚಿಸಿ.

5) 99999 ನ್ನು ಹತ್ತರ ಸ್ಥಾನಕ್ಕೆ ಅಂದಾಜು ಮಾಡಿದಾಗ ದೊರೆಯುವ ಸಂಖ್ಯೆ ಯಾವುದು ?

6) 17, 12, 13, 16, 19 ಇವುಗಳನ್ನು ಹಿಂದೂ ಅರೇಬಿಕ್ ಅಂಕಿಯಾಗಿ ಬರೆಯಿರಿ.

7) ತಾಸು, ನಿಮಿಷ, ಸೆಕೆಂಡುಗಳ ಕಡ್ಡಿಗಳು ಯಾವ ಸಂಖ್ಯೆಗಳ ಮೇಲಿನ ಎಂಬುದನ್ನು ಸಂಖ್ಯೆಯಲ್ಲಿ ಬರೆಯಿರಿ.



ಗಂಟೆ ಮುಳ್ಳು:.....

ನಿಮಿಷದ ಮುಳ್ಳು:.....

ಸೆಕೆಂಡಿನ ಮುಳ್ಳು:.....

8)  $\frac{4}{5}$  ಈ ಭಿನ್ನರಾಶಿಯ ಅಂಶಕ್ಕೆ ಯಾವ ಚಿಕ್ಕ ಅಂಕಿ ಸೇರಿಸಿದಾಗ ವಿಷಮ ಭಿನ್ನರಾಶಿ ದೊರೆಯುವುದು ?

9) ಚಿತ್ರದಲ್ಲಿ ತೋರಿದಂತೆ ಕಲ್ಲಂಗಡಿ ಹಣ್ಣನ್ನು 8 ಸಮ ಭಾಗ ಮಾಡಿ  $\frac{3}{8}$  ಭಾಗ ನೀವು ತಿಂದು ಉಳಿದ ಭಾಗವನ್ನು ಅಣ್ಣನಿಗೆ ಕೊಟ್ಟರೆ ಅಣ್ಣನಿಗೆ ಕೊಟ್ಟ ಹಣ್ಣಿನ ಭಾಗವೆಷ್ಟು ?



10) ನಿಮ್ಮ ತರಗತಿಯ 60 ಮಕ್ಕಳಲ್ಲಿ  $\frac{2}{3}$  ಭಾಗ ಹುಡುಗಿಯರಿದ್ದರೆ ಹುಡುಗರ ಸಂಖ್ಯೆ ಎಷ್ಟು ?

11)  $3\frac{3}{4}$  ಲೀಟರ್ ಹಾಲನ್ನು ಮೂರು ಜನರಿಗೆ ಸಮನಾಗಿ ಹಂಚಿದರೆ ಪ್ರತಿಯೊಬ್ಬರಿಗೆ ದೊರೆಯುವ ಹಾಲು ಎಷ್ಟು ?

12) 1 ಬಿಡಿ + 3 ದಶಾಂಶ + 5 ಶತಾಂಶ ಇದನ್ನು ದಶಮಾಂಶದಲ್ಲಿ ಬರೆಯಿರಿ.

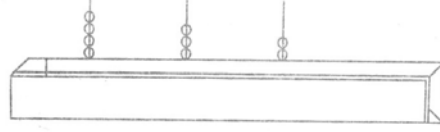
13) 9 ಇದು ಶತಾಂಶ ಸ್ಥಾನದಲ್ಲಿದ್ದರೆ ಇದರ ಸ್ಥಾನ ಬೆಲೆ ಎಷ್ಟಾಗುವುದು?

14) 10.1, 0.01, 0.10, 101.00 ಇವುಗಳನ್ನು ಇಳಿಕೆ ಕ್ರಮದಲ್ಲಿ ಬರೆಯಿರಿ.

ಇಳಿಕೆ ಕ್ರಮ : ..... , ..... , ..... , .....

15) ಒಂದು ತರಗತಿಯ 25 ಮಕ್ಕಳು ಸೇರಿ ರೂ. 87.50 ಬೆಲೆಯ ಮಹಾತ್ಮ ಗಾಂಧಿಯವರ ಭಾವಚಿತ್ರವನ್ನು ಶಾಲೆಗೆ ಕೊಡಬೇಕೆಂದಿದ್ದಾರೆ ಹಾಗಾದರೆ ಪ್ರತಿಯೊಬ್ಬ ವಿದ್ಯಾರ್ಥಿ ಕೊಡಬೇಕಾದ ಹಣ ಎಷ್ಟು ?

16) ನಿಮ್ಮಲ್ಲಿರುವ ಹಣವನ್ನು ಮಣಿಕಟ್ಟಿನಲ್ಲಿ ಬರೆಯಲಾಗಿದೆ. ಅದರಲ್ಲಿ ನೀವು ರೂ. 4.40 ಖರ್ಚು ಮಾಡಿದರೆ ನಿಮ್ಮಲ್ಲಿ ಉಳಿಯುವ ಹಣ ಎಷ್ಟು ?



17) ಬಿಟ್ಟು ಸ್ಥಳದಲ್ಲಿ ಸೂಕ್ತ ಸಂಖ್ಯೆಗಳನ್ನು ತುಂಬಿ:

ಶೇಕಡಾ	ದಶಮಾಂಶ	ಭಿನ್ನರಾಶಿ
40%	0.4	
60%		3/5
	0.1	1/10

18) 7025 ಗ್ರಾಂಗಳನ್ನು ಕಿ.ಗ್ರಾಂಗಳಿಗೆ ಪರಿವರ್ತಿಸಿ.

19) 50 ಪೈಸೆಗೆ ಒಂದರಂತೆ 3 ಅಂಚೆ ಕಾರ್ಡ್, 1ರೂ. ಗೆ ಒಂದರಂತೆ 4 ಅಂತರದೇಶೀಯ ಪತ್ರ ಕೊಂಡರೆ ನೀವು ಕೊಡಬೇಕಾದ ಒಟ್ಟು ಹಣ ಎಷ್ಟು ?

20) 38.4 ಮೀಟರ್ ಉದ್ದದ ಹಗ್ಗವನ್ನು 6 ಸಮ ತುಂಡು ಮಾಡಿದರೆ ಪ್ರತಿ ತುಂಡಿನ ಉದ್ದ ಎಷ್ಟು ?

21) ನೀವೊಬ್ಬರು ಕಿರಾಣಿ ಅಂಗಡಿ ಮಾಲಿಕರಾಗಿದ್ದು ನಿಮ್ಮ ಅಂಗಡಿಯಿಂದ ತಯಾರಾದ ಕೆಳಗಿನ ಸರಳ ಬಿಲ್ಲನ್ನು ಪರಿಶೀಲಿಸಿ.  
ತಪ್ಪಿದ್ದನ್ನು ಪಕ್ಕದಲ್ಲಿ ಸರಿಪಡಿಸಿ.

ವಸಂತ ಕಿರಾಣಿ ಅಂಗಡಿ

ಹೆಸರು : ಸುಮಿತ್ರಾ

ದಿನಾಂಕ: 01.01.2007

ಕ್ರ.ಸಂ	ವಿವರ	ಪರಿಮಾಣ	ದರ ರೂ.	ಒಟ್ಟು ರೂಪಾಯಿ	ಒಟ್ಟು ರೂಪಾಯಿ
1	ಸಕ್ಕರೆ	5 ಕೆ.ಗ್ರಾಂ	20.00	100.00	
2	ಅಕ್ಕಿ	10 ಕೆ.ಗ್ರಾಂ	15.00	100.00	
3	ಬೆಲ್ಲ	2 ಕೆ.ಗ್ರಾಂ	15.00	30.00	
				230.00	

ರೂಪಾಯಿ ಎರಡನೂರ ಮೂವತ್ತು ಮಾತ್ರ

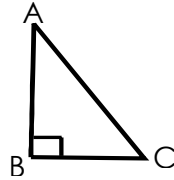
ಸ್ಥಳ :

ಸಹಿ

22) ಪೂರ್ವಕ್ಕೆ ಮುಖ ಮಾಡಿ ನಿಂತ ನೀವು ಎಡಗಡೆಯಿಂದ ಉತ್ತರಕ್ಕೆ ತಿರುಗಿದರೆ ಉಂಟಾಗುವ ಕೋನ ಯಾವುದು?

23) ಕೋನಮಾಪಕದ ಸಹಾಯವಿಲ್ಲದೆ ವಿಶಾಲ ಕೋನವನ್ನು ರಚಿಸಿ.

24) ತ್ರಿಭುಜದಲ್ಲಿ  $\angle$  ಅಯಾವ ಕೋನ ?



## ANSWER KEY

1. ಹತ್ತು ಲಕ್ಷ (ಅಥವಾ ದಶಲಕ್ಷ)
2. 35,072
3. 41,52,837, 41,52,738, 41,52,387, 41,52,378
4. 01357 ಅಥವಾ 1357
5. 1,00,000
6. 17,12,13,16,19
7. ತಾಸು - IV (8)

ನಿಮಿಷ -XII (12)

ಸೆಕೆಂಡು - VIII (4)

8. 1
9. 5/8
10. ತರಗತಿಯ ಒಟ್ಟು ಮಕ್ಕಳು = 60

ಹುಡುಗಿಯರ ಸಂಖ್ಯೆ =  $2/3$  ಭಾಗ

ಹಾಗಾದರೆ ಹುಡುಗಿಯರ ಸಂಖ್ಯೆ =  $60 \times 2/3 = 20 \times 2 = 40$

ಹುಡುಗರ ಸಂಖ್ಯೆ =  $60 - 40 = 20$



11. ಒಟ್ಟು ಹಾಲು =  $3\frac{3}{4}$  ಲೀಟರ್

ಹಂಚಲಾದ ಜನರ ಸಂಖ್ಯೆ = 3

ಪ್ರತಿಯೊಬ್ಬರಿಗೂ ದೊರೆಯುವ ಹಾಲು =  $3\frac{3}{4} \div 3 = \frac{15}{4} \times \frac{1}{3} = \frac{5}{4} = 1\frac{1}{4}$

12.  $1+0.3+0.05=1.35$

13. 0.09

14. 101.00, 10.0, 0.10, 0.01

15. ತರಗತಿಯಲ್ಲಿನ ಒಟ್ಟು ಮಕ್ಕಳು = 25

ಭಾವಚಿತ್ರದ ಬೆಲೆ = ರೂ. 87.50

ಪ್ರತಿಯೊಬ್ಬರು ಕೊಡಬೇಕಾದ ಹಣ =  $87.50 \div 25 =$  ರೂ.3.50

ಅಥವಾ

3.50

25	87.50
	75
	125
	125
	000

ಪ್ರತಿಯೊಬ್ಬರೂ ಕೊಡಬೇಕಾದ ಹಣ = 3.50

16. ನನ್ನಲ್ಲಿರುವ ಹಣ = ರೂ. 43.20 ರೂ  
 ಖರ್ಚು ಮಾಡಿದ ಹಣ = 4.40 ರೂ

ಉಳಿದ ಹಣ = ರೂ. 38.8 ರೂ

17.

%	ದಶಮಾಂಶ	ಭಿನ್ನರಾಶಿ
40%	0.4	$\frac{2}{5}$
60%	0.6	$\frac{3}{5}$
10%	0.1	$\frac{1}{10}$

ಯಾವುದಾದರೂ ಎರಡು ಸರಿಯಿದ್ದರೆ  $\Rightarrow$  ಚಿಹ್ನೆ ಹಾಕಿ

18. 7.025 ಕಿ.ಗ್ರಾಂ

19. 3 ಅಂಚೆ ಕಾರ್ಡಿನ ಬೆಲೆ =  $0.50 \times 3 = 1.50$  ರೂ.

4 ಅಂತರ ದೇಶಿ ಪತ್ರದ ಬೆಲೆ =  $1 \times 4 = 4$  ರೂ

ಒಟ್ಟು ಕೊಡಬೇಕಾದ ಹಣ = 5.50 ರೂ.

20. ಹಗ್ಗದ ಉದ್ದ = 38.4 ಮೀಟರ್  
 ಒಟ್ಟು ಸಮಭಾಗಗಳು = 6

ಪ್ರತಿ ತುಂಡಿನ ಉದ್ದ =  $38.4 \div 6$

= 6.4 ಮೀಟರ್

ಅಥವಾ

6.4

6	38.4
	36
	24
	24
	00

21. ವಸಂತ ಕಿರಾಣಿ ಅಂಗಡಿ

ಕ್ರ.ಸಂ	ವಿವರ	ಪರಿಮಾಣ	ದರ ರೂ.	ಒಟ್ಟು ರೂ
1	ಸಕ್ಕರೆ	5 ಕಿ.ಗ್ರಾಂ	20.00	100.00
2	ಅಕ್ಕಿ	10 ಕಿ.ಗ್ರಾಂ	15.00	150.00
3	ಬೆಲ್ಲ	2 ಕಿ.ಗ್ರಾಂ	15.00	30.00
				280.00

ರೂಪಾಯಿ ಎರಡನೂರಾ ಎಂಬತ್ತು ಮಾತ್ರ

ಸ್ಥಳ :

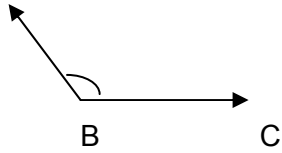
ಸಹಿ:

ಯಾವುದಾದರೂ ಎರಡು ಸರಿಯಿದ್ದರೆ  $\Rightarrow$  ಚಿಹ್ನೆ ಹಾಕಿ

22. ವಿಶಾಲಕೋನ

23. ಲಂಬಕೋನ

24. A



## Post test

ಶಾಲೆಯ ಹೆಸರು:

ಕ್ರಮ ಸಂಖ್ಯೆ

ವಿದ್ಯಾರ್ಥಿಯ ಹೆಸರು:

ತರಗತಿ

ಲಿಂಗ : ಗಂ ಹೆ

ಸಮಯ: 45 ನಿಮಿಷ

ಸೂಚನೆ: ಇದು ಪ್ರಶ್ನೆ ಸಹಿತ ಉತ್ತರ ಪತ್ರಿಕೆಯಾಗಿದೆ.

ಉತ್ತರಗಳನ್ನು ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆಯಲ್ಲಿಯೇ ಖಾಲಿ ಬಿಟ್ಟಿರುವ ಸ್ಥಳದಲ್ಲಿ ಬರೆಯಿರಿ

1. ಒಂದು ಲಕ್ಷದ ಒಂದು ಸಾವಿರದ ಹನ್ನೊಂದು ಇದನ್ನು ಸಂಖ್ಯಾ ಸೂಚಕದಲ್ಲಿ ಬರೆಯಿರಿ.

2. 908706 ಇದನ್ನು ಸ್ಥಾನ ಬೆಲೆ ಅನುಸರಿಸಿ ವಿಸ್ತರಿಸಿ ಬರೆಯಿರಿ.

3. 32,15,203, 32,15,302, 32,15,032 32,14,320 ಈ ಸಂಖ್ಯೆಗಳನ್ನು ಏರಿಕೆ ಕ್ರಮದಲ್ಲಿ ಬರೆಯಿರಿ.

ಏರಿಕೆ ಕ್ರಮ :

-----'

4. 5, 7, 8, 0, ಈ ಅಂಕಗಳನ್ನು ಒಂದು ಸಲ ಮಾತ್ರ ಬಳಸಿ ಅತಿ ದೊಡ್ಡ ಸಂಖ್ಯೆಯನ್ನು ರಚಿಸಿ.
5. 974 ಮತ್ತು 497 ಇವುಗಳ ಹತ್ತರ ಸ್ಥಾನದ ಅಂದಾಜು ಸಂಖ್ಯೆಯನ್ನು ಕೂಡಿಸಿ, ಮೊತ್ತವನ್ನು ನೂರರ ಸ್ಥಾನಕ್ಕೆ ಅಂದಾಜು ಮಾಡಿ.
6. ಒಂದು ಸಾವಿರದ ಎರಡನೂರ ಮೂವತ್ತಾಲ್ಕು ಇದನ್ನು ಕನ್ನಡದ ಸಂಖ್ಯೆಯಾಗಿ ಬರೆಯಿರಿ
7. 1 ರಿಂದ 10 ರ ವರಿಗಿನ ಅಂಕಗಳನ್ನು ರೋಮನ್ ಸಂಖ್ಯಾ ಸೂಚಕದಲ್ಲಿ ಬರೆಯಿರಿ.
8.  $\frac{3}{4}$ ,  $\frac{2}{3}$ ,  $\frac{4}{5}$ ,  $\frac{7}{6}$  ಇವುಗಳಲ್ಲಿ ಗುಂಪಿಗೆ ಸೇರದ ಭಿನ್ನರಾಶಿ ಯಾವುದು ?
9. ಒಂದು ಬಿದಿರಿನ ಕಡ್ಡಿಯ ಉದ್ದ  $3\frac{3}{4}$  ಸೆಂ.ಮೀ. ಇದೆ. ಅದರಲ್ಲಿ  $1\frac{1}{4}$  ಸೆಂ.ಮೀ. ಕತ್ತರಿಸಿ ತೆಗೆದರೆ ಉಳಿಯುವ ಕಡ್ಡಿಯ ಉದ್ದ ಎಷ್ಟು ?
10. ಒಂದು ಲೋಟ ಕಾಫಿಯನ್ನು ತಯಾರಿಸಲು  $\frac{1}{2}$  ಲೋಟ ಹಾಲು ಬೇಕು. 8 ಲೋಟ ಕಾಫಿಯನ್ನು ತಯಾರಿಸಲು ಎಷ್ಟು ಲೋಟ ಹಾಲು ಬೇಕು ?

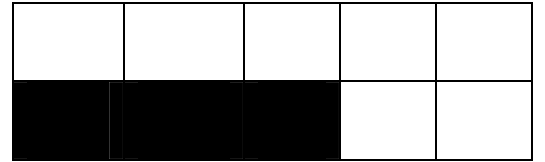
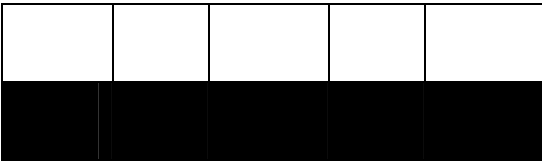
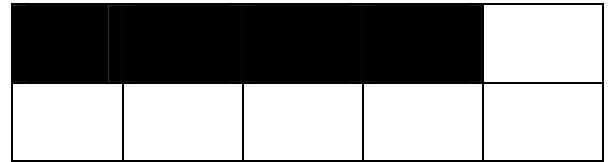
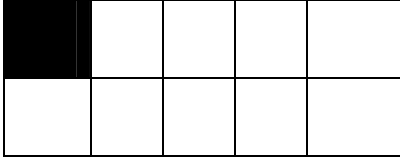
11.  $3\frac{1}{2}$  ರೂ. ಗಳನ್ನು 14 ಜನರಿಗೆ ಸಮನಾಗಿ ಹಂಚಿದರೆ ಪ್ರತಿಯೊಬ್ಬರಿಗೆ ದೊರಿಯುವ ಹಣವೆಷ್ಟು ?

12. ಚಿತ್ರ ನೋಡಿ ಬಣ್ಣ ತುಂಬಿದ ಭಾಗವನ್ನು ದಶಮಾಂಶದಲ್ಲಿ ಬರೆಯಿರಿ.



13. 7.634 ರಲ್ಲಿ 3 ರ ಸ್ಥಾನ ಬೆಲೆ ಎಷ್ಟು ?

14.



ಬಣ್ಣ ತುಂಬಿದ ಭಾಗವನ್ನು ದಶಮಾಂಶದಲ್ಲಿ ಬರೆದು, ಅವುಗಳನ್ನು ಆರೋಹಣ ಕ್ರಮದ ದಶಮಾಂಶದಲ್ಲಿ ಬರೆದಾಗ:

ಆರೋಹಣ ಕ್ರಮದಲ್ಲಿ ಬರೆದಾಗ :

15. ಶಾಲೆಯೊಂದರಲ್ಲಿ 50.75 ಮೀಟರ್ ಬಟ್ಟೆ ಹಂಚಿದ ನಂತರ 5.25 ಮೀಟರ್ ಬಟ್ಟೆ ಉಳಿದಿದ್ದರೆ ಇದ್ದ ಒಟ್ಟು ಬಟ್ಟೆ ಎಷ್ಟು?

16. ನಿಮ್ಮ ಹತ್ತಿರ 50 ಪೈಸೆಯ 5 ನಾಣ್ಯಗಳು, 25 ಪೈಸೆಯ 4 ನಾಣ್ಯಗಳಿದ್ದರೆ ನಿಮ್ಮಲ್ಲಿರುವ ಒಟ್ಟು ಹಣ ಹಣ ಎಷ್ಟು?

17. ಬಿಟ್ಟು ಸ್ಥಳಗಳಲ್ಲಿ ಸೂಕ್ತ ಸಂಖ್ಯೆಗಳನ್ನು ತುಂಬಿ:

ದಶಮಾಂಶ	ಭಿನ್ನರಾಶಿ	ಶೇಕಡಾ
0.50	$\frac{1}{2}$	
0.25		25%
	$\frac{3}{4}$	75%

18. 6 ರೂ. + 50 ಪೈಸೆ + 75 ಪೈಸೆ ಎಂದರೆ ಒಟ್ಟು ಎಷ್ಟು ಪೈಸೆಗಳು ?

19. ಒಂದು ನೀರಿನ ತೊಟ್ಟಿಯಲ್ಲಿ 575 ಲೀಟರ್ ನೀರನ್ನು ತುಂಬಬಹುದಾಗಿದ್ದು ಅದರಲ್ಲಿ 500 ಲೀಟರ್ ನೀರು ತುಂಬಿದ ನಂತರ ಅದರಲ್ಲಿ ಇನ್ನೂ ಎಷ್ಟು ಲೀಟರ್ ನೀರು ಹಿಡಿಯುತ್ತದೆ ?

20. ಒಂದು ಪುಸ್ತಕದ ಬೆಲೆ 11.75 ರೂ. ಆದರೆ 11 ಪುಸ್ತಕಗಳ ಒಟ್ಟು ಬೆಲೆ ಎಷ್ಟಾಗುವುದು ?

21. ಕೆಳಗೆ ಕೊಟ್ಟಿರುವ ಬಿಲ್ಲನ್ನು ಪರಿಶೀಲಿಸಿ ಖಾಲಿ ಬಿಟ್ಟಿರುವ ಸ್ಥಳವನ್ನು ಪೂರ್ಣಗೊಳಿಸಿ ಸರಿಪಡಿಸಿ:

ಸರಸ್ವತಿ ಪುಸ್ತಕಾಲಯ

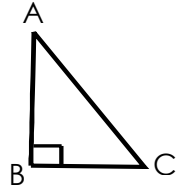
ಹೆಸರು: ಸುಜಯ

ದಿನಾಂಕ: 01. 01. 2008

ಕ್ರಮ.ಸಂ.	ವಿವರ	ಪ್ರಮಾಣ	ದರ ರೂ.	ಒಟ್ಟು ರೂಪಾಯಿ
1	100 ಪುಟಗಳ ನೋಟ ಪುಸ್ತಕ	4	9	
2	ಪೆನ್ನು		10	20.00
3	ಪೆನ್ಸಿಲ್	2		4.00
	ಒಟ್ಟು ಮೊತ್ತ			

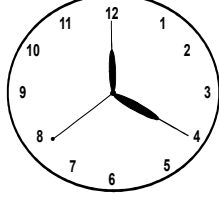
ಒಟ್ಟು ರೂ.ಗಳಲ್ಲಿ ಅರವತ್ತು ರೂಪಾಯಿಗಳು ಮಾತ್ರ

22. ತ್ರಿಭುಜದಲ್ಲಿ  $\angle$  ಯಾವ ಕೋನ ?





23. ಈ ಗಡಿಯಾರದಲ್ಲಿ ಎರಡು ಕಡ್ಡಿಗಳ ನಡುವೆ ಉಂಟಾಗುವ ಕೋನವನ್ನು ಹೆಸರಿಸಿ.



24. ಕೋನಮಾಪಕದ ಸಹಾಯದಿಂದ 90° ಕೋನವನ್ನು ರಚಿಸಿ.

## ANSWER KEY

1. 1,01,011
2. 9,00,000 + 0 + 8000+700+0+6
3. 32,14,320 ; 32,15,032; 32,15,203; 32,15,302
4. 8750
5. 974ರ ಹತ್ತರ ಅಂದಾಜು = 970  
497ರ ಹತ್ತರ ಅಂದಾಜು = 500  
  
ಮೊತ್ತ = 1470  
  
ನೂರರ ಅಂದಾಜು = 1500
6. 1934
7. 1= I 2= II 3= III 4= IV 5= V 6= VI 7= VII 8= VIII 9= IX 10= X
8. 7/6
9. ಬಿದಿರಿನ ಕಡ್ಡಿಯ ಉದ್ದ =  $3 \frac{3}{4}$  ಸೆಂ.ಮೀ =  $\frac{15}{4}$  ಸೆಂ.ಮೀ  
ಕತ್ತರಿಸಿದ ಕಡ್ಡಿಯ ಉದ್ದ =  $1 \frac{1}{4}$  ಸೆಂ.ಮೀ =  $\frac{5}{4}$  ಸೆಂ.ಮೀ  
  
ಉಳಿದ ಕಡ್ಡಿಯ ಉದ್ದ =  $\frac{15}{4} - \frac{5}{4}$   
  
 $= \frac{10}{4}$  ಸೆಂ.ಮೀ =  $\frac{5}{2} = 2 \frac{1}{2}$  ಸೆಂ.ಮೀ  
  
(ನೇರವಾಗಿ ಉತ್ತರ ಬರೆದಿದ್ದರೂ ಸರಿ ಎಂದು ಪರಿಗಣಿಸಿ)
10. ಒಂದು ಲೋಟ ಕಾಫಿ ತಯಾರಿಸಲು ಬೇಕಾಗುವ ಹಾಲು =  $\frac{1}{2}$  ಲೋಟ  
8 ಲೋಟ ಕಾಫಿ ತಯಾರಿಸಲು ಬೇಕಾಗುವ ಹಾಲು =  $\frac{1}{2} \times 8 =$  ಲೋಟ

11. ಒಟ್ಟು ಹಣ =  $3\frac{1}{2}$  ರೂ =  $7/2$  ರೂ

ಹಂಚಬೇಕಾದ ಜನರ ಸಂಖ್ಯೆ = 14

ಪ್ರತಿಯೊಬ್ಬರಿಗೆ ದೊರೆಯುವ ಹಣ =  $\frac{7}{2} \div 14 = \frac{7}{2} \times \frac{1}{14} = \frac{1}{4}$  ರೂ.

12. 0.4

13. 0.03

14. 0.1, 0.3, 0.4, 0.5

15. ಹಂಚಿದ ಬಟ್ಟೆ = 50.75 ಮೀ

ಉಳಿದ ಬಟ್ಟೆ = 5.25 ಮೀ

ಒಟ್ಟು ಬಟ್ಟೆ = 56.00 ಮೀ

16. 50 ಪೈಸೆಯ ನಾಣ್ಯಗಳು = 5  $\rightarrow$   $0.50 \times 5 = 2.50$  ರೂ.

25 ಪೈಸೆಯು ನಾಣ್ಯಗಳು = 4  $\rightarrow$   $0.25 \times 4 = 1.00$  ರೂ.

ಒಟ್ಟು ಹಣ  $\rightarrow$  3.50 ರೂ.

17.

ದಶಮಾಂಶ	ಭಿನ್ನರಾಶಿ	ಶೇಕಡಾ
0.50	1/2	50%
0.25	1/4	25%
0.75	3/4	75%

18. 600 ಪೈಸೆ + 50 ಪೈಸೆ + 75 ಪೈಸೆ

= 725 ಪೈಸೆ.

19. ತುಂಬಬಹುದಾದ ನೀರು = 575 ಲೀ

ತುಂಬಿದ ನೀರು = 500 ಲೀ

ಇನ್ನೂ ಹಿಡಿಯುವ ನೀರು = 75 ಲೀ

20. ಒಂದು ಪುಸ್ತಕದ ಬೆಲೆ = 11.75 ರೂ

11 ಪುಸ್ತಕಗಳ ಬೆಲೆ = 11.75 X 11

129.25 ರೂ.

21. ಸರಸ್ವತಿ ಪುಸ್ತಕಾಲಯ

ಹೆಸರು : ಸುಜಯ

ದಿನಾಂಕ: 1/1/2007

ಕ್ರ.ಸಂ.	ವಿವರ	ಪ್ರಮಾಣ	ದರ.ರೂ	ಒಟ್ಟು ರೂ.
1	100ಪುಟಗಳ ನೋಟಿ ಪುಸ್ತಕ	4	9	36
2	ಪೆನ್ನು	2	10	20.00
3	ಪೆನ್ಸಿಲ್	2	1.00	4.00
	ಒಟ್ಟು ಮೊತ್ತ			60.00

ರೂಗಳಲ್ಲಿ ಅರವತ್ತು ರೂಪಾಯಿಗಳು ಮಾತ್ರ

22. ಲಘುಕೋನ

23. ವಿಶಾಲಕೋನ

