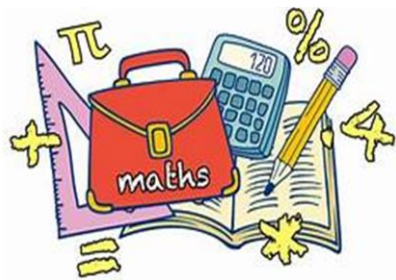


Teachers' Handbook of Learning Outcomes



CLASS-I

MATHEMATICS

FORWARD

Samagra Shiksha, Education Department, UT Chandigarh has prepared Teachers' handbook based on learning Outcomes at Elementary level in Hindi, English, Mathematics, EVS, Science & Social Science.

This Handbook will enable the teachers to ascertain learning skills more accurately in these subjects. While making the document it has been ensured that the learning need of the children with different learning level-pre Basic, Basic, Proficient & Advanced, are being catered & the academic progress of the students can be monitored by Faculty Incharges, Cluster Resource Coordinators & further by Head of the school.

The material in the document can be used as an assessment tool for Elementary classes & to keep a track of achievement of the learning level.

Teachers' handbook will not only help teachers to focus on teaching learning process but also facilitate State functionaries in their role towards ensuring quality education in schools

To make it user-friendly, simple language has been used as far as possible across the document. To help the teacher understand and achieve the learning outcomes as per the curricular expectations.

This document includes list of learning outcomes (with labeling) and progress sheet for monitoring/ tracking of the progress of the students.

Question prepared in this document are only suggestive for teachers. The teacher can modify these tools as per the need.

ABOUT THE DOCUMENT


This question bank might prove an effective tool in the hands of the educators & evaluators. It aims at assisting teachers to assess and improve the performance of the learners.

Some features of the documents are as follows:

- * Proper care has been taken to cover all the learning outcomes.
- * The questions have been framed focusing upon the learner's mathematical thinking, reasoning and hence ability to solve daily life problems.
- * The teacher can make relevant changes in question bank according to the needs of different levels of learners.
- * It provides enrichment material & remedial material for different level of learners.

RESOURCE GROUP

- | | | |
|-------------------------|-------------|--------------------------------------|
| 1. Mr. Rakesh Sood | (Principal) | GMSSS Sector 28 D, Chandigarh |
| 2. Ms. Gurpreet Kaur | (TGT Maths) | GMSSS Sector 23, Chandigarh |
| 3. Ms. Abha Kumar | (TGT Maths) | GMSSS Sector 19, Chandigarh |
| 4. Ms. Hemlata | (TGT Maths) | GMSSS Sector 21, Chandigarh |
| 5. Ms. Jyoti Sharma | (TGT Maths) | GMSSS Sector 15, Chandigarh |
| 6. Mr. Kapil Mohan Sood | (TGT Maths) | GHS Sector 53, Chandigarh |
| 7. Ms Navneet | (JBT) | GMSSS, MHC, Manimajra,
Chandigarh |
| 8. Mr. Gulshan Kumar | (JBT) | GPS Mauli Complex, Chandigarh |
| 9. Mr. Harish Kumar | (JBT) | GMSSS Sector 28 D, Chandigarh |
| 10. Ms. Neelam Sharma | (CRC) | |
| 11. Mr. Vikram | (CRC) | |
| 12. Ms. Neena Rana | (CRC) | |
| 13. Ms. Renu Singla | (CRC) | |

Code	Learning Outcomes
1.1	<ul style="list-style-type: none"> recites number names and counts objects up to 20, concretely, pictorially and symbolically works with numbers 1 to 20 & counts objects using numbers 1 to 9 develops the concept of zero.
1.2	<ul style="list-style-type: none"> compares numbers up to 20. For example tells whether number of girls or number of boys is more in the class
1.3	<ul style="list-style-type: none"> applies addition of numbers 1 to 20 in daily life constructs addition facts up to 9 by using concrete objects. For example to find $3+3$ counts 3 steps forward from 3 and concludes that $3+3=6$ solves day-to-day problems related to addition of numbers up to 9
1.4	<ul style="list-style-type: none"> applies subtraction of numbers 1 to 20 in daily life – subtracts numbers using 1 to 9. For example the child takes out 3 objects from a collection of 9 objects and counts the remaining to conclude $9-3=6$ solves day-to-day problems related to subtraction of numbers up to 9
1.5	<ul style="list-style-type: none"> recognises numbers up to 99 and writes numerals
1.6	<ul style="list-style-type: none"> classifies objects into groups based on a few physical attributes such as shape, size and other observable properties including rolling and sliding describes the physical features of various solids/shapes in her own language. For example- a ball rolls, a box slides etc.
1.7	<ul style="list-style-type: none"> estimates and measures short lengths using non uniform units like a finger, hand span, length of a forearm, footsteps, etc.
1.8	<ul style="list-style-type: none"> observes, extends and creates patterns of shapes and numbers. For example, arrangement of shapes/ objects/ numbers, etc.:- <div style="text-align: center;">  </div> <ul style="list-style-type: none"> – –1,2,3,4,5,... 1,3,5,... 2,4,6,..... 1,2,3,1,2,..., 1,...3,.....
1.9	<ul style="list-style-type: none"> collects, records (using pictures/numerals) and interprets simple information by looking at visuals. (For example in a picture of a garden the child looks at different flowers and draws inference that flowers of a certain colour are more).

MATHEMATICS QUESTION BANK

CLASS 1



In the eyes of my tiny tots everyday I see Questions Questions Questions,

Seeking clarifications everyday I hear Questions Questions Questions

Demanding reasons again they inquire Questions Questions Questions

About Why, How, When and Where? Tell me Mam Why not there?

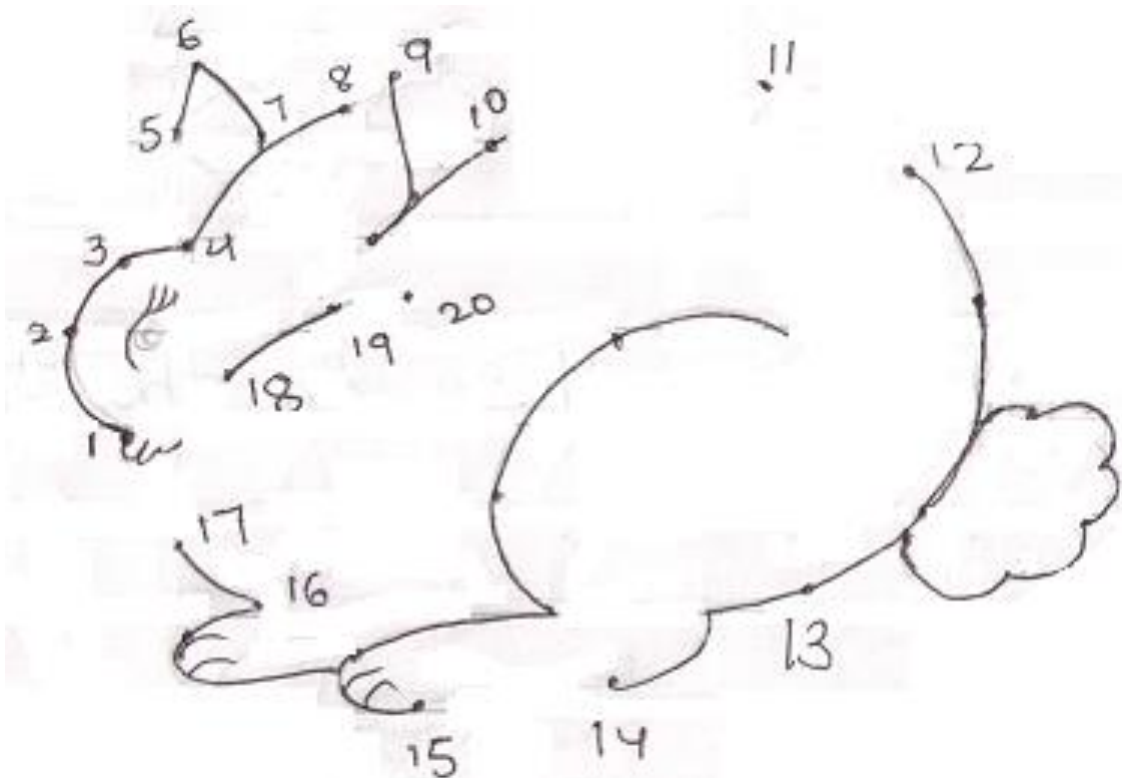
Who and Whose it by the way? Answering them I honour their say

To my amuse they really explore when they try to do more and more.

LEARNING OUTCOME 1.1

- The Learner recites number names and counts objects upto 20, concretely, pictorially and symbolically.
- * works with numbers 1 to 20 & counts objects using numbers 1 to 9
- * Develops the concept of zero.

Q1. Join the dots in correct number order to complete the Rabbit figure and colour it.



Q2 Count and write the number of shapes in the boxes provided.

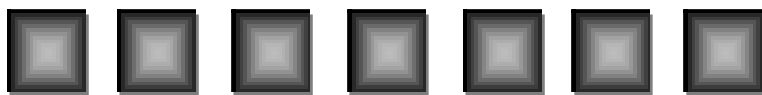
i)



ii)



v)



iv)

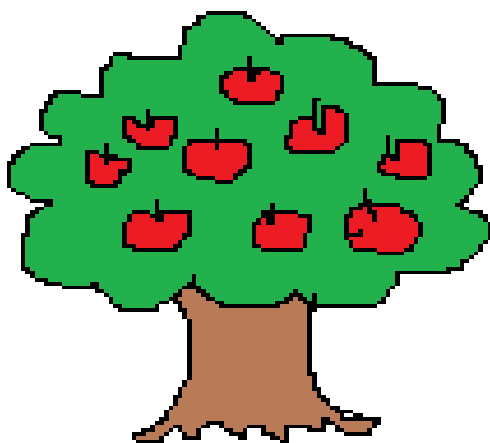


v)

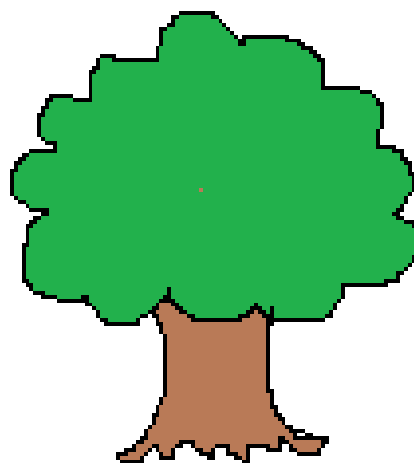


Q3. How many apples are there on the trees?

i)



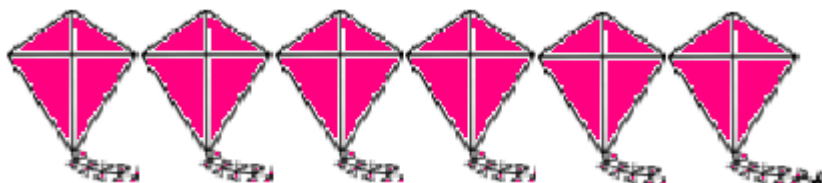
b)



Q4 Count and match the following :



2



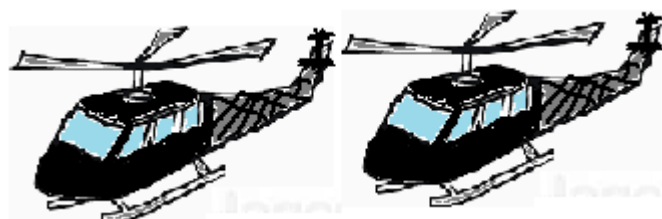
3



1



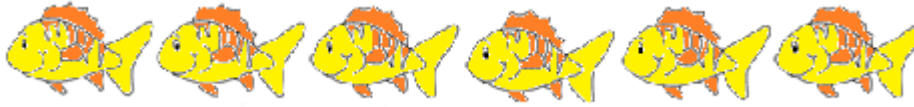
6



4

Q5 Count and Circle the correct number of things:-

a)



9

6

8

b)

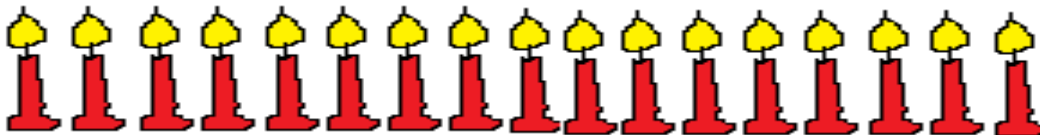


10

12

14

c)



12

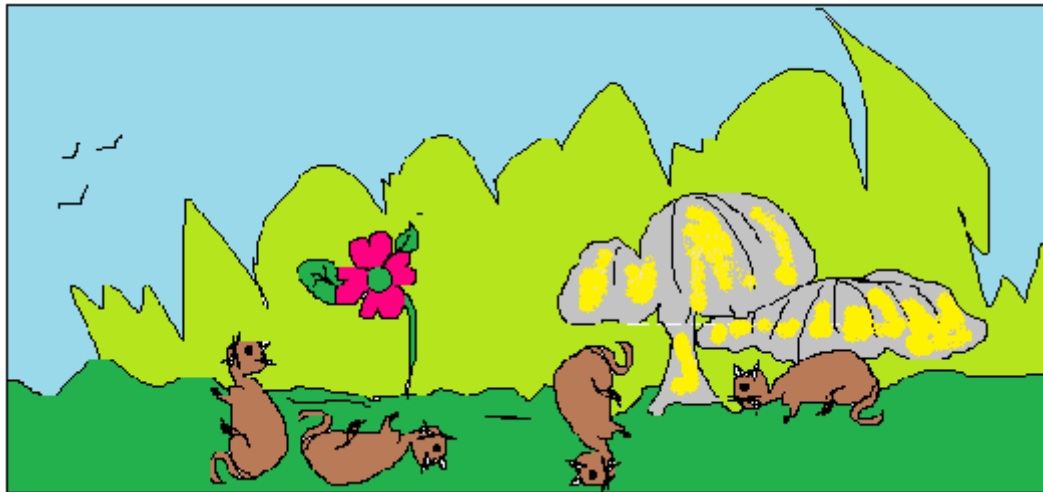
15

17

Q6 Count the flowers in the Vase and write the number in the box.

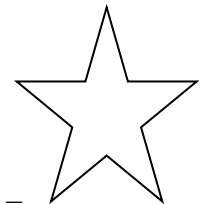


Q7 A hungry Cat wants to eat Rats. Help the Cat in finding the Rats .Count and Circle all rats you see and write the number in her mouth.

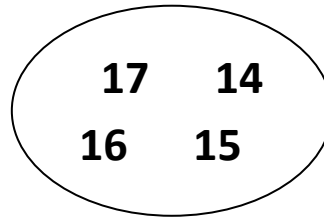
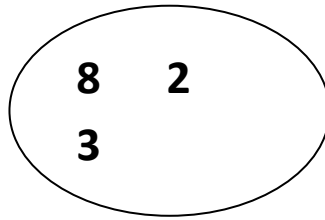
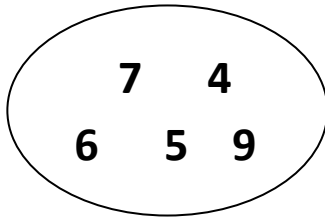


Q8

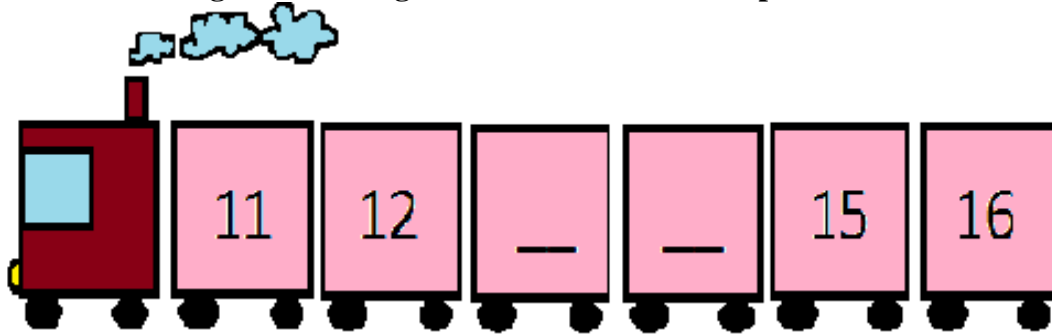
**“Twinkle twinkle little stars,
Can you count these glittering stars ? ”**



Q9 Circle the smallest number from the following groups:



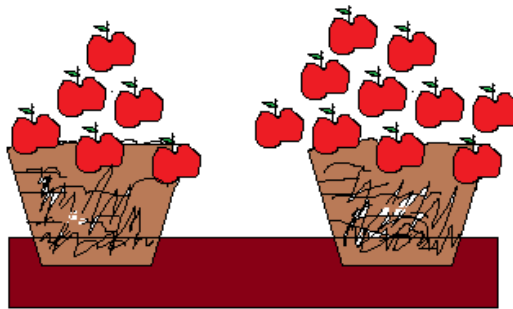
Q10 Fill the missing numbers engraved over the Train compartments :-



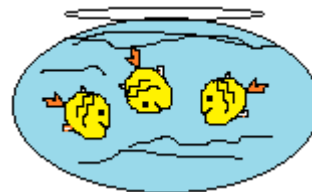
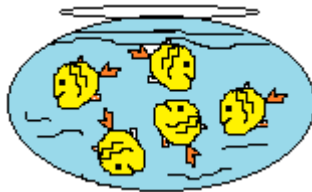
LEARNING OUTCOME 1.2

- The learner compares numbers upto 20. For example tells whether number of girls or number of boys is more in the Class.

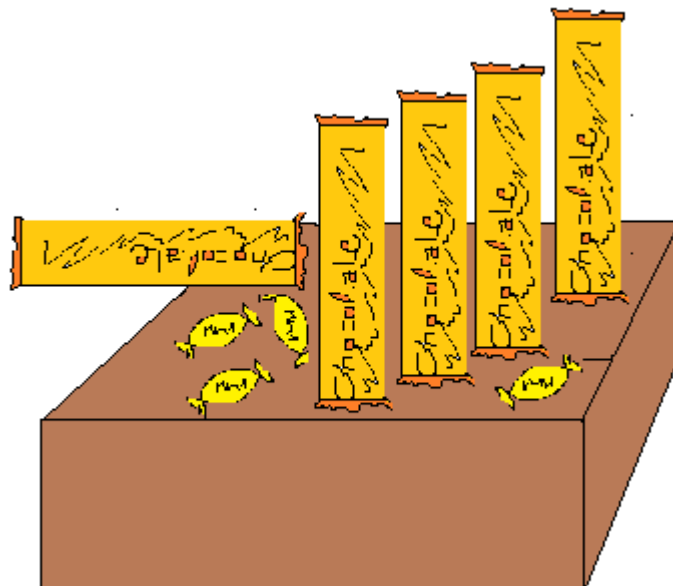
Q1 Which fruit basket has more apples ? Circle the basket with more apples on the table.



Q2 Tick mark the tank with more fishes:-



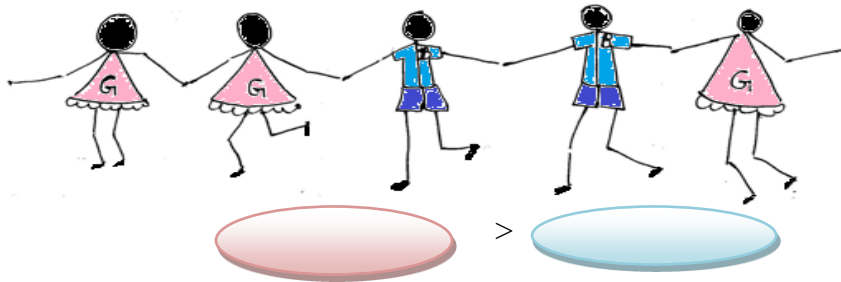
Q3 The box is filled with Chocolates and Candies. Write the number of the same in respective figures.



CANDIES =

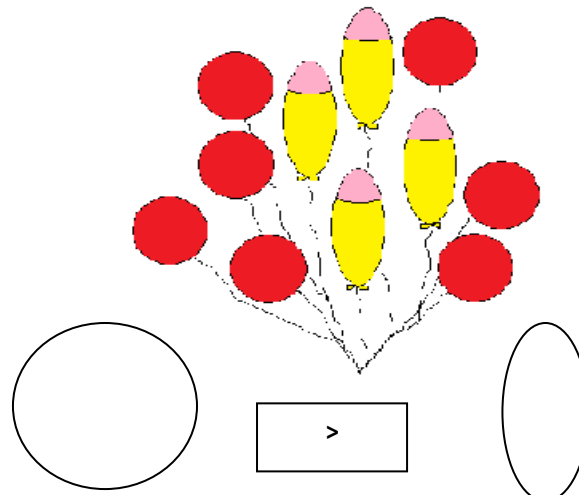
Chocolates =

Q4 Look at the Children's Queue. Count and write the number of girls and boys according to greater and smaller number in the circles:-

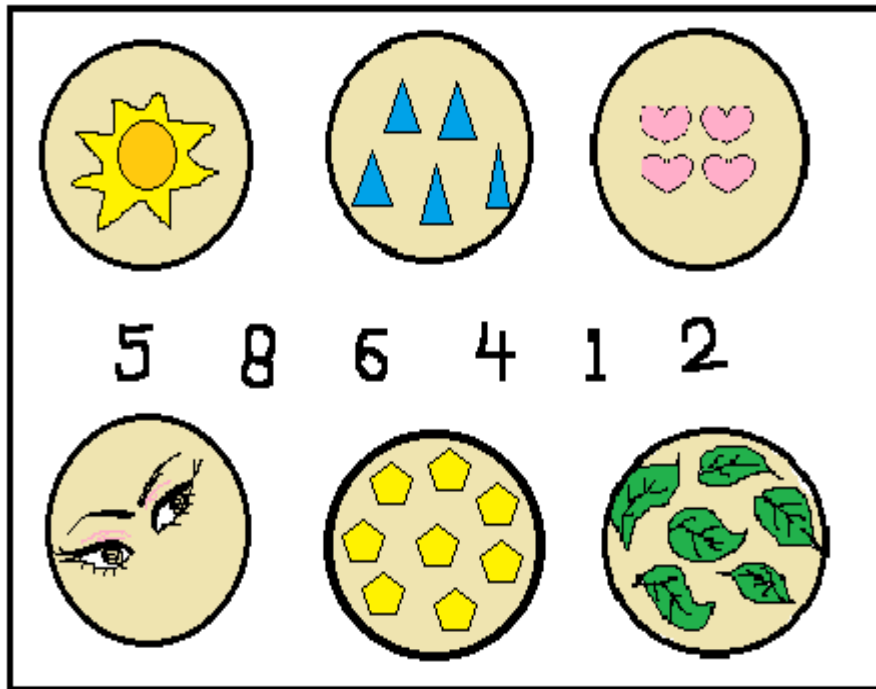


Q5 Count and match the followings:

Q6 There are some hot air balloons and hot air balls. Can you tell which are more then the other ?



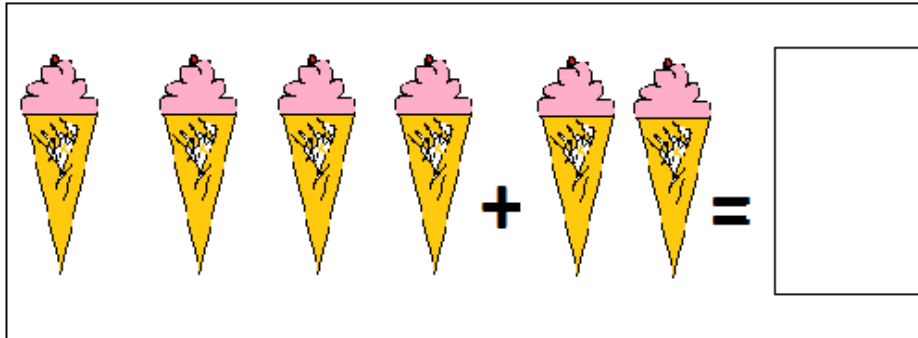
Q7 Match the numbers with the number of things you see in the circles.



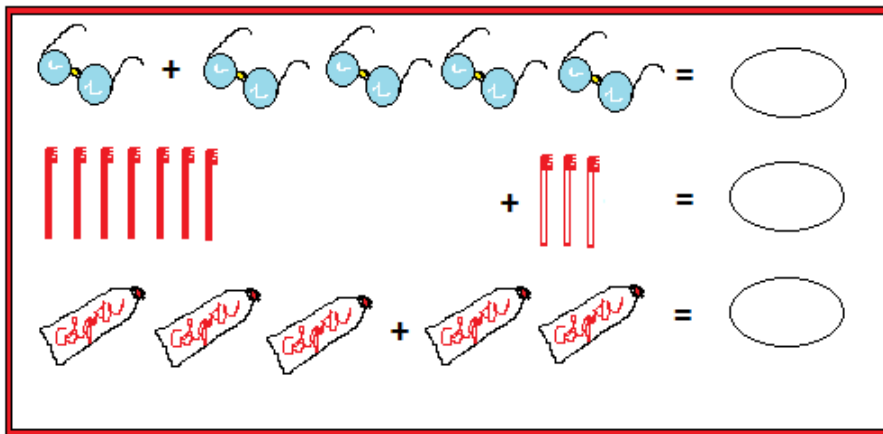
LEARNING OUTCOME 1.3

- The learner applies addition of numbers 1 to 20 in daily life.

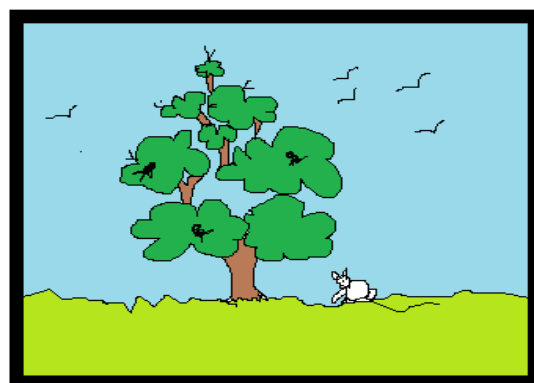
Q1 Add and write the number of Ice-Creams.



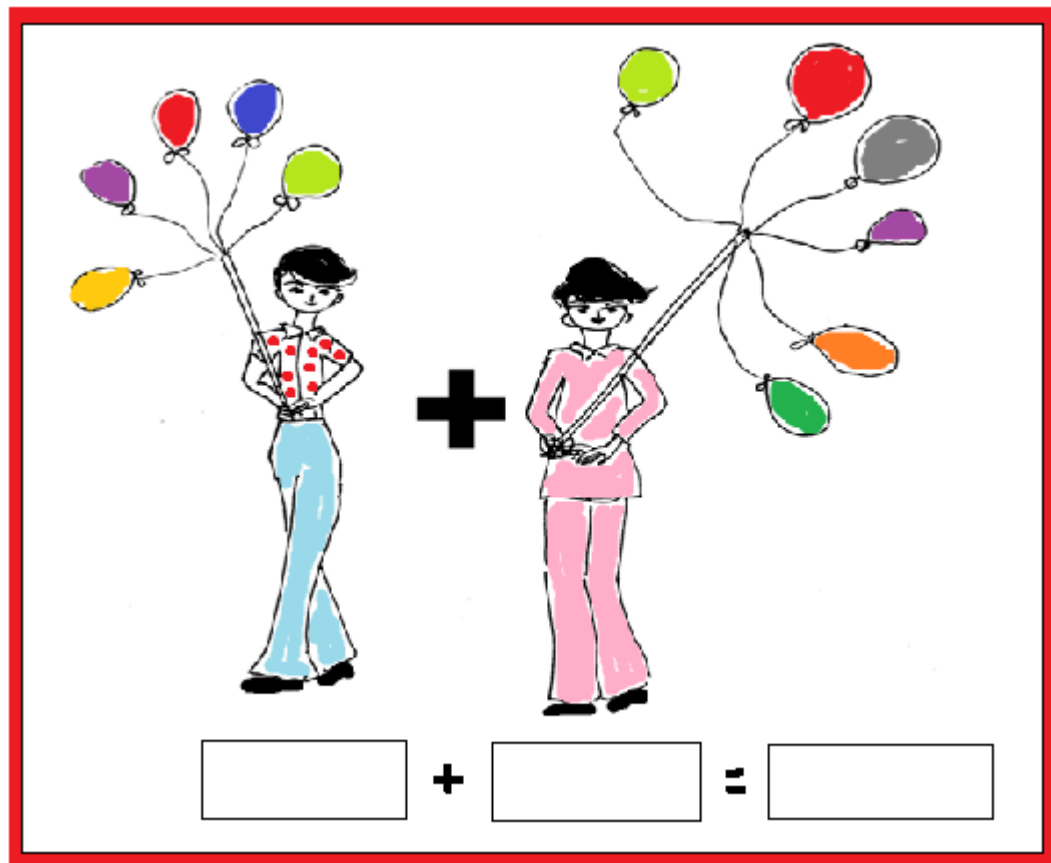
Q2. Count, add and write the number of daily necessities in boxes provided.



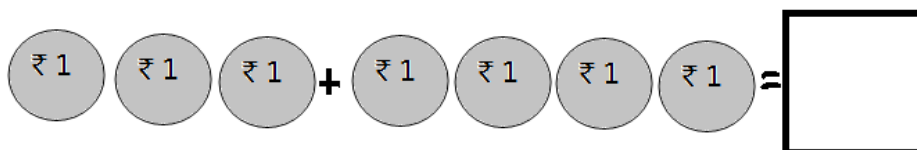
Q3 Count the number of birds flying in the sky and sitting over the trees and the Rabbits. Write the total in the boxes.



Q4 These are 2 Balloon Sellers. Count how many Balloons do each have? Add the number of Balloons.



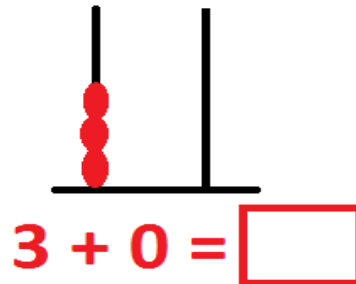
Q5 Add Rupee 1 coins and tell how many coins are there in total ?



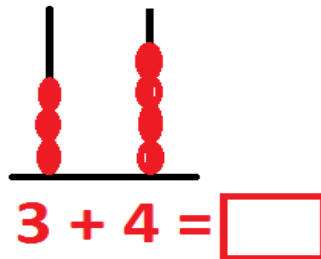
LEARNING OUTCOME 1.3

- The learner constructs Addition facts upto 9 by using concrete objects. For example to find $3+3=6$

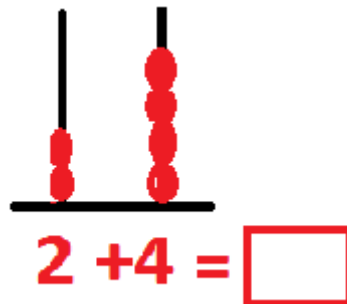
Q1 Teacher is advised to use Real Abacus and put these situations in front of the learner. Answer how many beads are in total and fill in the columns.



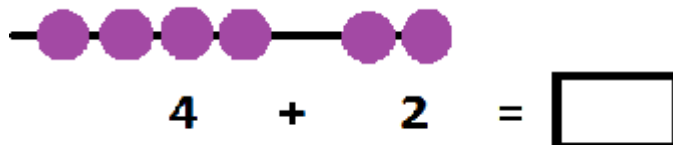
Q2 What comes after adding the beads ? Write in the space provided.



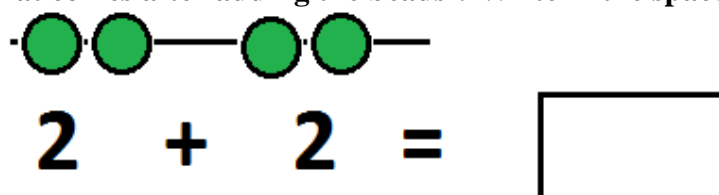
Q3 What comes after adding the beads ? Write in the space provided.



Q4 What comes after adding the beads ? Write in the space provided.



Q5 What comes after adding the beads ? Write in the space provided.









LEARNING OUTCOME 1.3




- The learner solves day-to-day problems related to addition of numbers upto 9.




(Suggestion:Take a few ice-cream sticks to the class. Show them and experiment practical adding as follows):

Q1. (Showing 3 sticks) keep adding 1 stick and keep asking the students about the total number of sticks then in hand.

a)  +  = 
3 + 1 =

c)  +  = 
3 + 3 =

b)  +  = 
3 + 2 =



d)  +  = 
3 + 4 =

Q2. With the help of sweets the teacher will asks the students if they can add as follows:-

a)  +  =

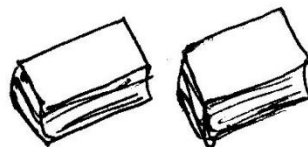
b)  +  =

c)  +  =

d)  +  =

e)  +  =

Q3. You have 5 notebooks in your bag. If I gift you 2 more how many total note books will you have?

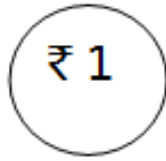


5 + 2 =

Q4. If your father gives you 5 rupees and I give you 1 rupee, how much money will you have in total?



+



=



Rs.

$$\begin{array}{r} 5 \\ + 1 \\ \hline 6 \end{array}$$

the child is allowed to do

But its best if he answers in correct oral estimate.

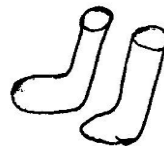
Q5. I have a pair of socks and yesterday I bought another pair. How many socks do I have now?

(The child is allowed to draw and count)



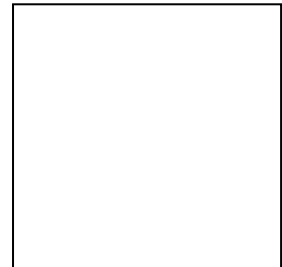
2

+



2

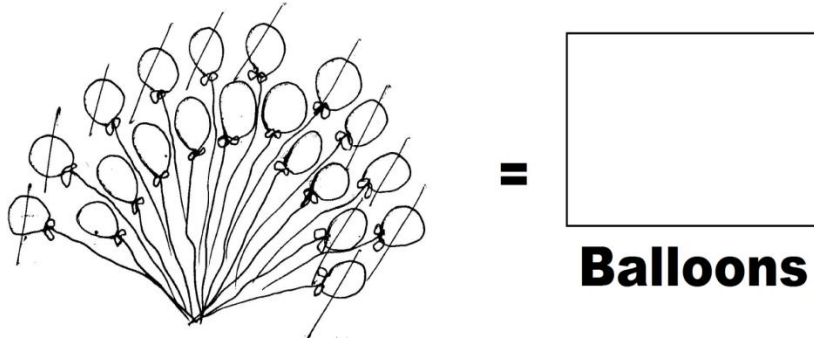
=



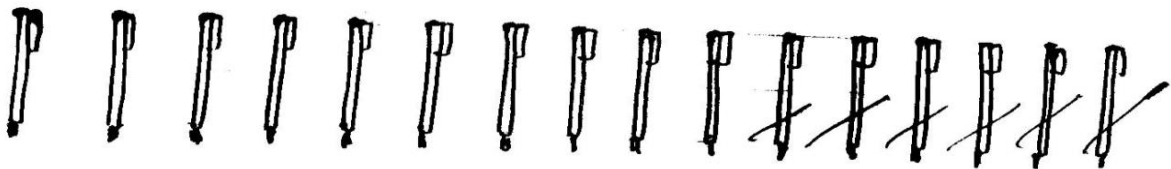
LEARNING OUTCOME 1.4

- The learner applies subtraction of numbers 1 to 20 in daily life-

Q1. Out of 20 balloons the balloon seller has only 12 were sold. So how many balloons the balloon –seller is left with?

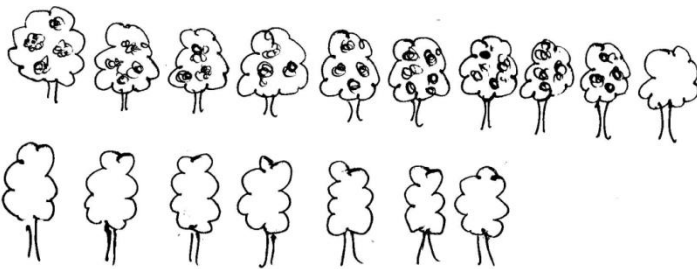


Q2. If 6 of my pens out of 16 are not working well, how many pens are writing properly?



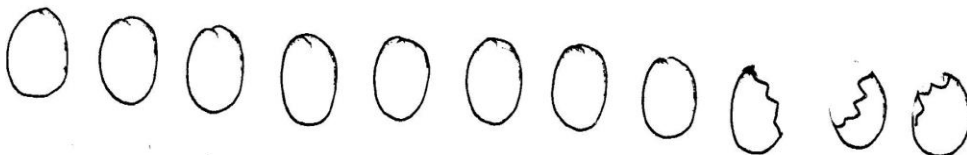
$$16 - 6 =$$

Q3. Out of 17 trees in a garden only 9 bear flowers. How many trees do not bear flowers?



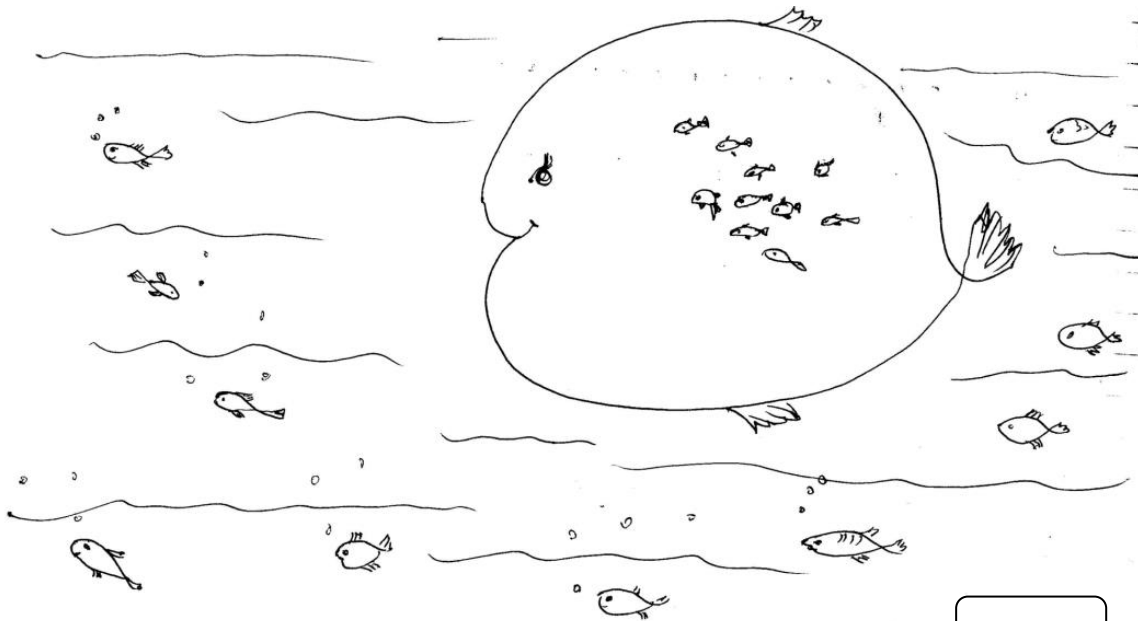
$$17 - 9 =$$

Q4. Tarun has 11 balls out of which 3 are broken. How many balls Tarun can play with?



$$11 - 3 =$$

Q5. A big fish ate 10 little fishes out of 20 little fishes. How many little fish survived?

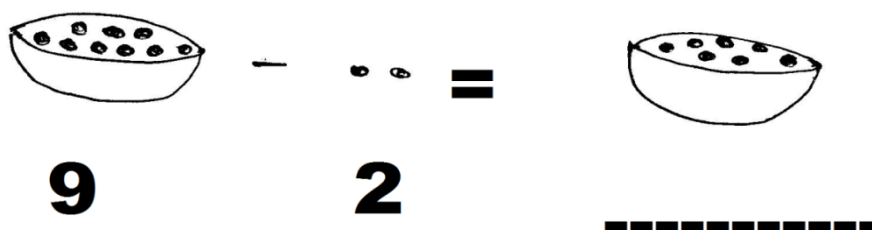


$$20 - 10 =$$

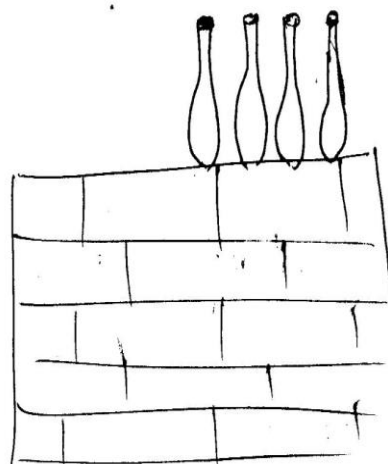
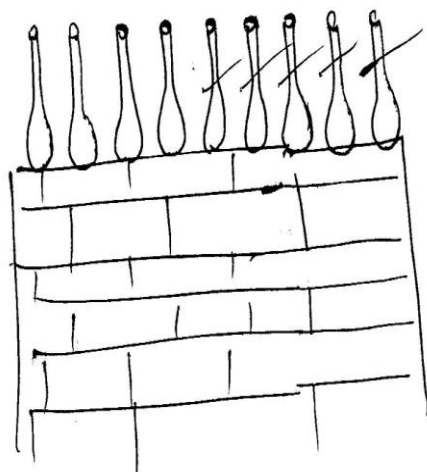
LEARNING OUTCOME 1.4

- The learner subtracts numbers using 1 to 9. For example the child takes out 3 objects from a collection of 9 objects and counts the remaining to conclude $9-3=6$

Q1. The child is asked to take out 2 toffees from the basket (with 9 toffees). Now he is asked to tell how many toffees are remaining in the basket.



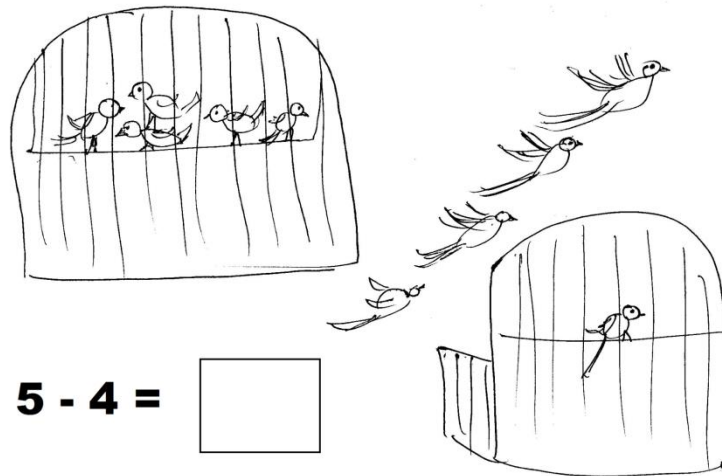
Q2. Humpty- Dumpty had 9 bottles on his wall,
Humpty -Dumpty threw 5 bottles down his wall,
How many bottles did not fall?



$$9 - 5 =$$

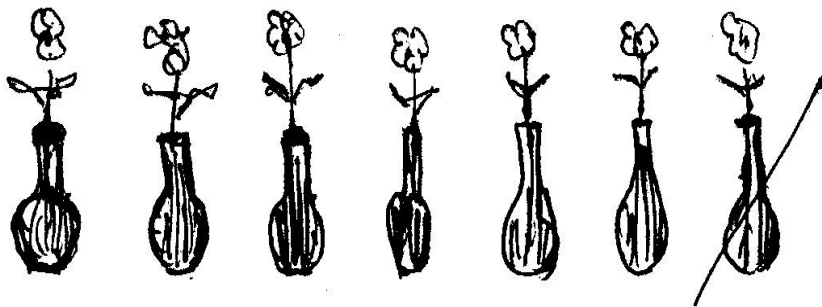
Q3. There were 5 birds in a cage. Meera opened the door of the cage. 4 birds flew away.

How many birds were left in the cage?



$$5 - 4 =$$

Q4. 1 out of 7 flowers vases got broken. How many are left?



$$7 - 1 =$$

Q5. A cat ate 1 out of 2 rats. How many rats were left?

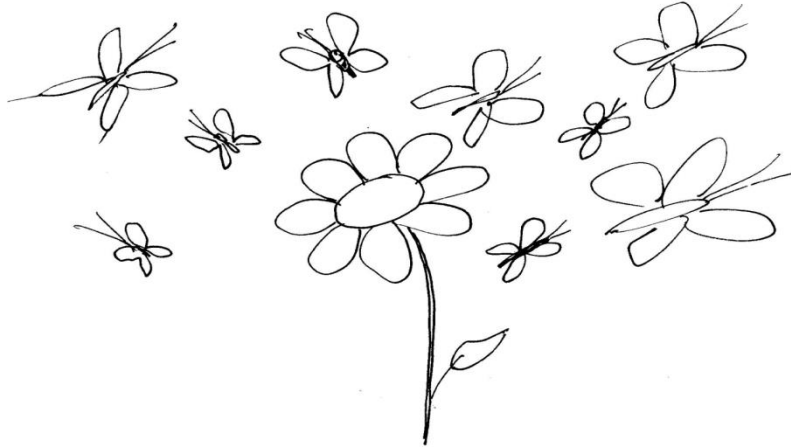


$$2 - 1 =$$

LEARNING OUTCOME 1.4

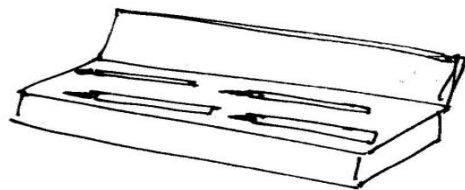
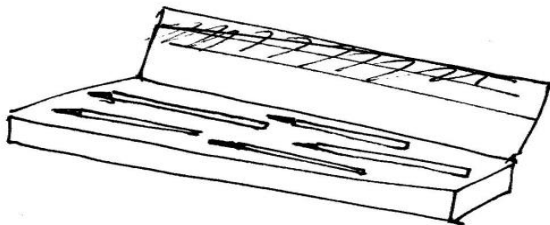
- The learner Solves day-to-day problems related to subtraction of numbers up to 9.

Q1. There were 9 butterflies near a flower, 3 flew away. How many were left?

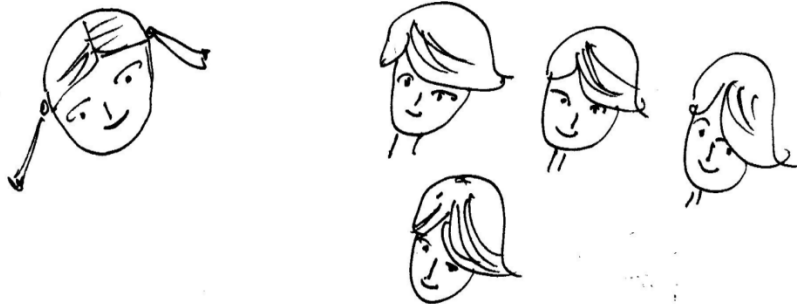


(Note: The teacher can use blackboard and duster or notebook to help the students erase 3 flowers if he fails to subtract to help him understand the concept)

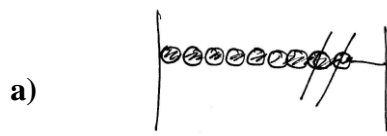
Q2. If there are 5 pencils in your pencil box and I take one, how many pencils will you be left with?



Q3. How many brothers will Sheela be left with if one out of 4 goes abroad?



Q4. Use bead-wire and ask the students to subtract as follows :



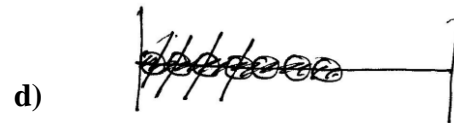
$9 - 2 =$



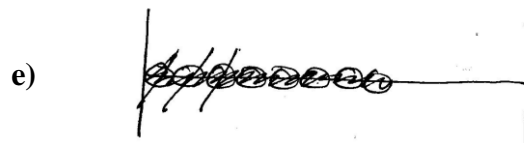
$4 - 2 =$



$6 - 3 =$

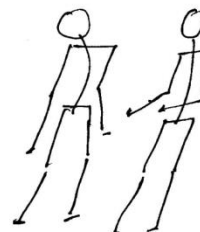
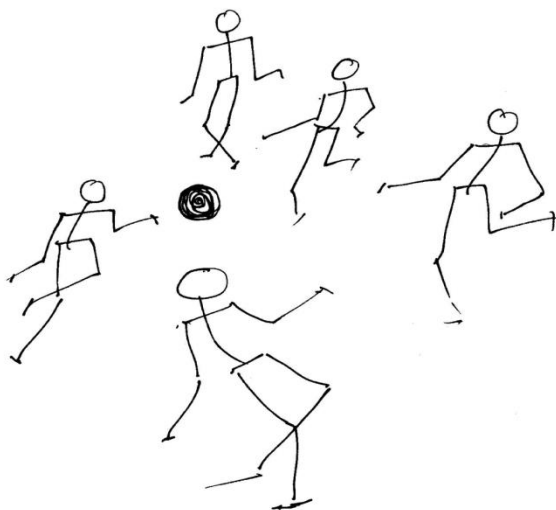


$7 - 4 =$



$8 - 3 =$

Q5. If 5 out of 7 friends of you are playing football, how many friends are not playing football.



$7 - 5 =$

LEARNING OUTCOME 1.5

- The learner recognises numbers upto 99 and writes numerals.

Q1. Read the number cards.

a)

56

b)

72

c)

81

d)

18

e)

16

Q2. The teacher spells the numerals and the students are asked to write. (Dictation)

a)

Twenty Seven

b)

Eighteen

c)

Fifty One

d)

Seventy Four

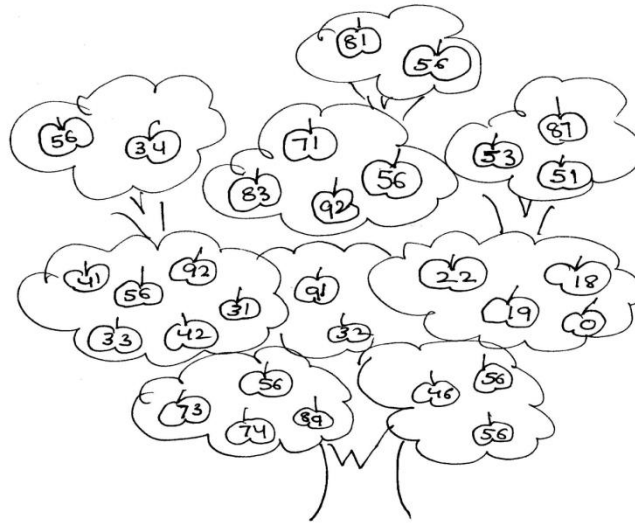
e)

Eleven

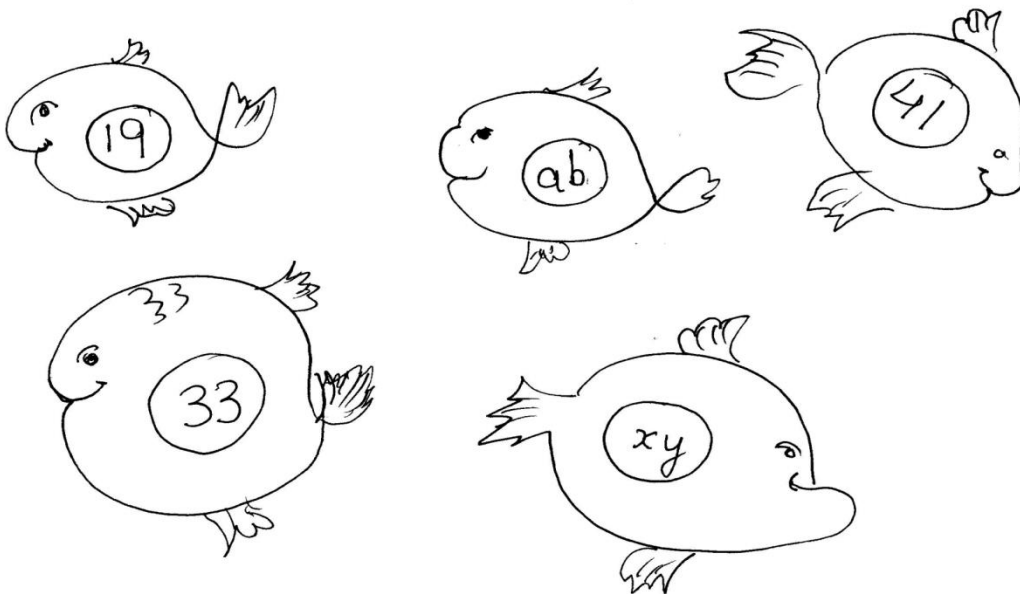
f)

Thirty One

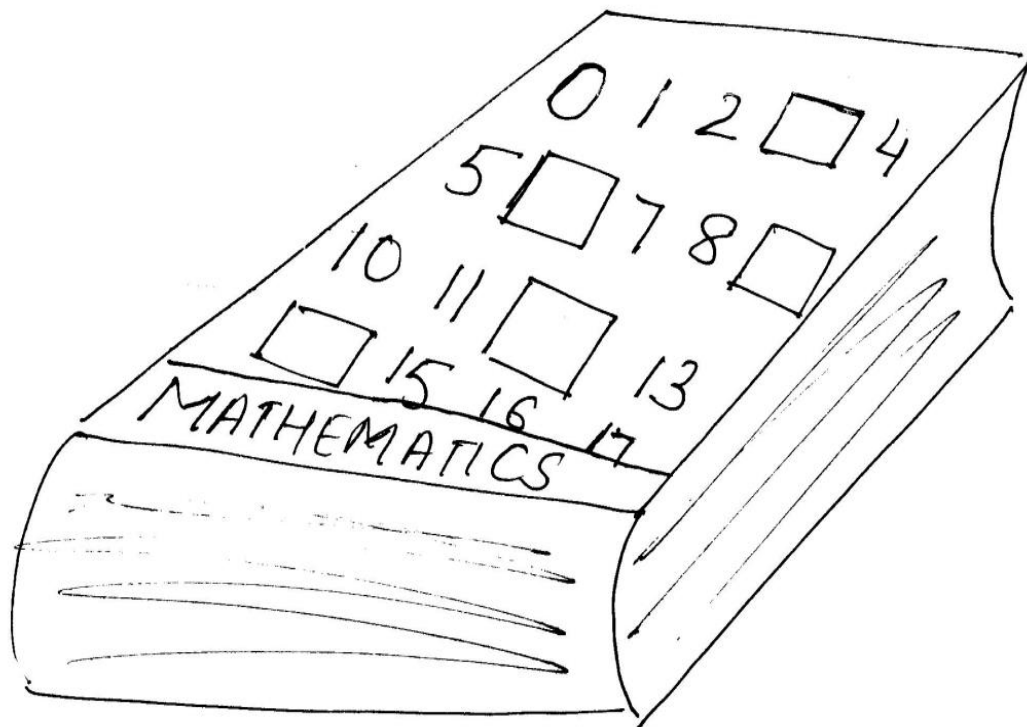
Q3. There are many numbers of apples on the tree. Circle all apples with number 56.



Q4. Tick all the fishes with numerals on their body and read the numerals.



Q5. The Maths Book cover has numerals in an order fill in the missing numerals.



Q6. Fill in the missing dates in the calendar for a month to complete it.

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
		1	2	3	4	5
6		8	9	10		12
13	14	15	16		18	19
20	21	22	23		25	26
27	28	29				

LEARNING OUTCOME 1.6

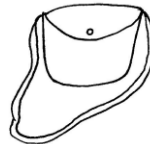
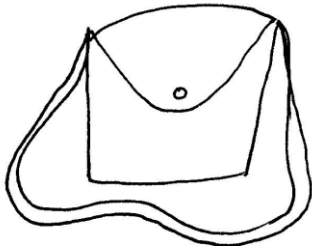
- Classifies objects into groups based on a few physical attributes such as shape, size and other observable properties including rolling and sliding.

Q1. Circle the bigger object:-

a)



b)



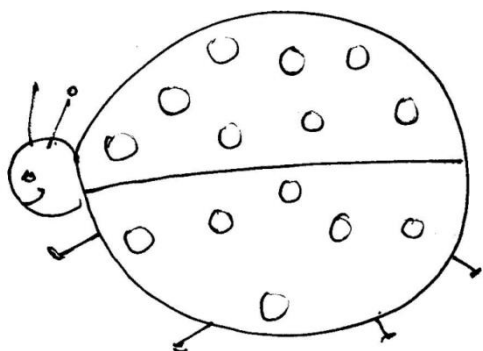
c)



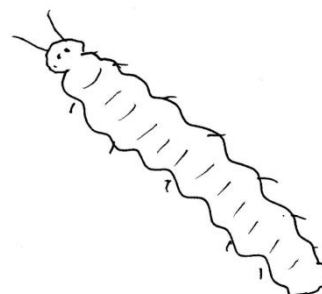
Q2. Tick the longest rope.



Q3. Which insect has circular (round) body?

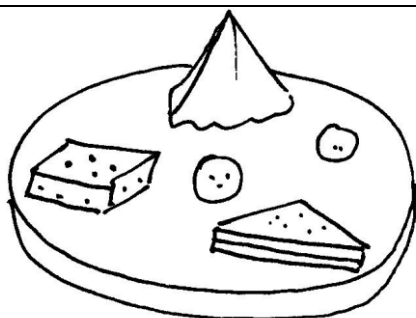


A lady bird



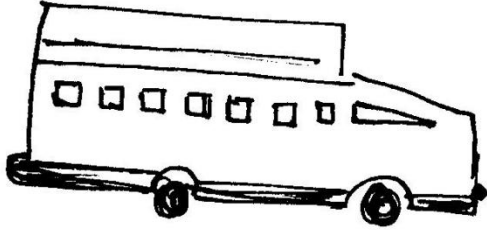
A Caterpillar

Q4. Tick the triangular shaped snacks from the snack serving plate.

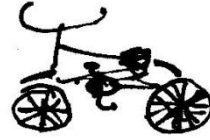


Q5. Circle the apparently heavier objects.

a)



Bus



Cycle

b)

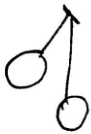


Spoon

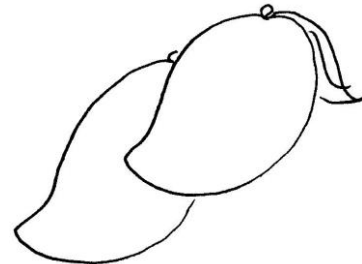


Bowl

c)

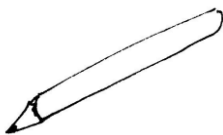


Cherries

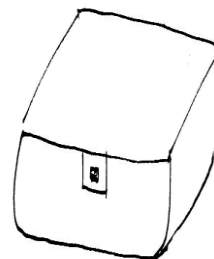


Mangoes

d)



Pencil

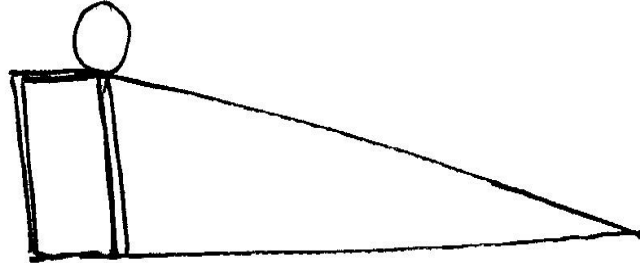


Pencil Box

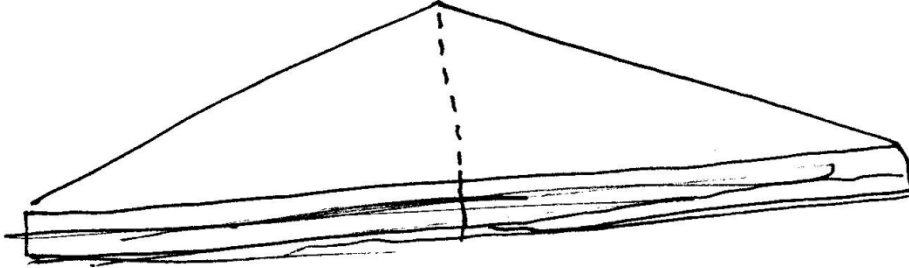
LEARNING OUTCOME 1.6

- The learner describes the physical features of various solids shapes in her own language. For example – a ball rolls, a box slides etc.

Q1. What do you think will happen to the ball if you kick/ push it from behind ?



Q2. What shape will you get of a sandwich when cut into equal parts?



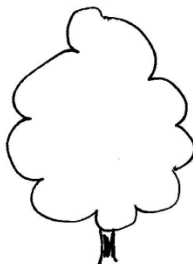
Q3. How many sides does a dice have ?
(preferably the teacher should show a dice to the class).



Q4. How many corners does the blackboard have?



Q5. Which tree do you think is the taller amongst the two? Tick.



LEARNING OUTCOME 1.7

- **The learner estimates and measures short lengths using non-uniform units like a finger, hand span, length of a forearm, footsteps etc.**

Q1. Give an estimate of your friend's height with the help of your hand span.

Q2. Estimate your desk's width with the help of your hand span.

Q3. Give an estimate of your bag's size with the help of your hand span.

Q4. Estimate the height of your water bottle with the help of your finger.

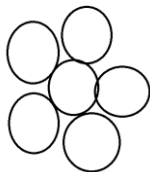
Q5. Estimate the distance of teacher's table from the class door of your class with the help of your foot steps.

LEARNING OUTCOME 1.8.

- The learner observes, extends and creates patterns of shapes and numbers. For example. Arrangement of shapes/ objects/ numbers, etc:-

Q1. Choose shapes and size and make a flower arrangement .

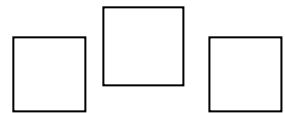
Expected :



(circles)

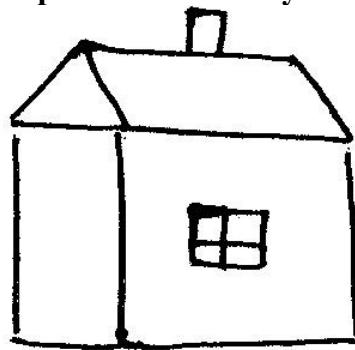


(Triangles)



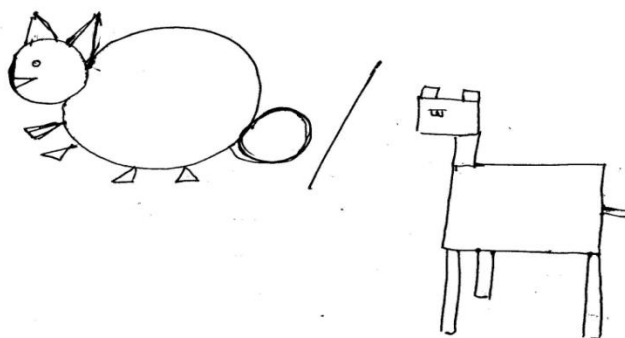
(Square)

Q2. With the help of shapes draw a hut in your drawing file.



(expected answer something like)

Q3. With the help of shapes draw any animal of your choice)



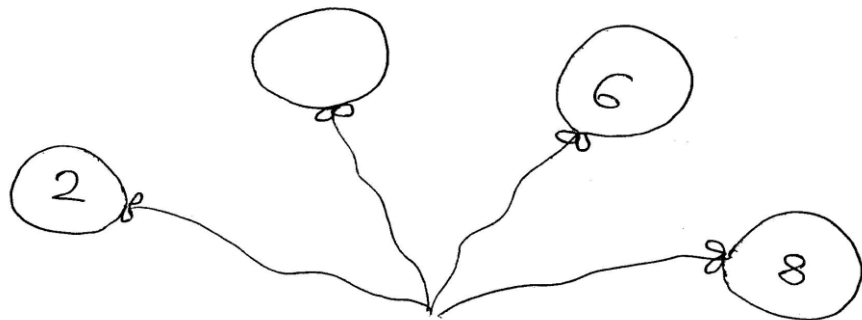
(expected answer something like) etc.

Q4. Complete the numeral patterns:-

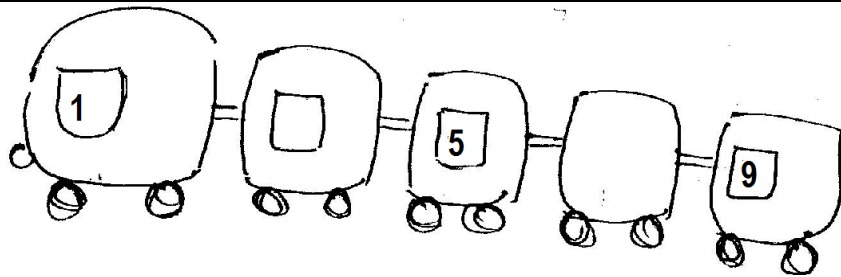
a)



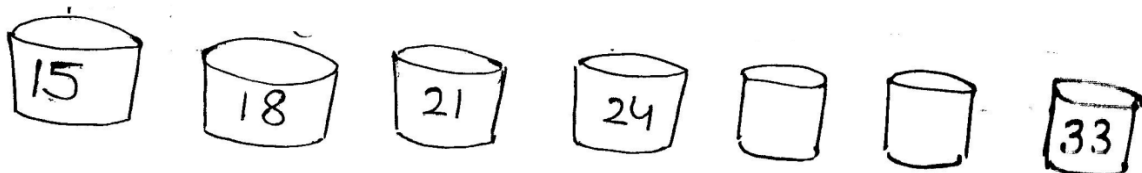
b)



c)



Q5. Complete the numeral pattern :

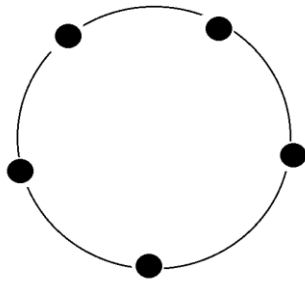


LEARNING OUTCOME 1.9

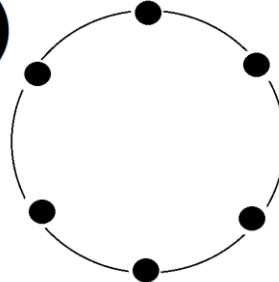
- The learner collects /records (using pictures/ numerals) and interprets simple information by looking at visuals. (for example in a picture of a garden the child looks at different flowers and draws inference that flowers of a certain colour are more)

Q1. Spot the difference between the two pictures of bangles with beads.

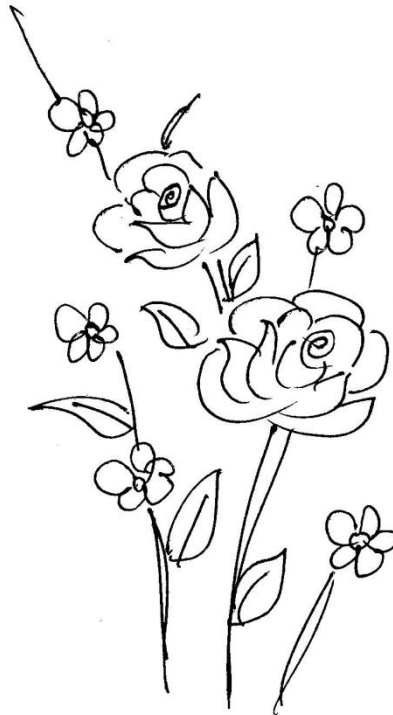
a)



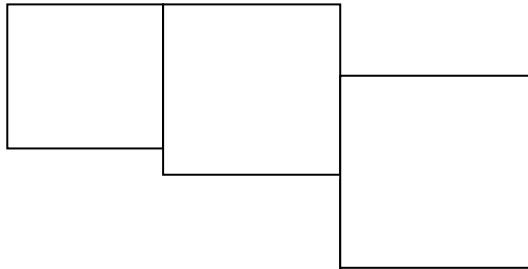
b)



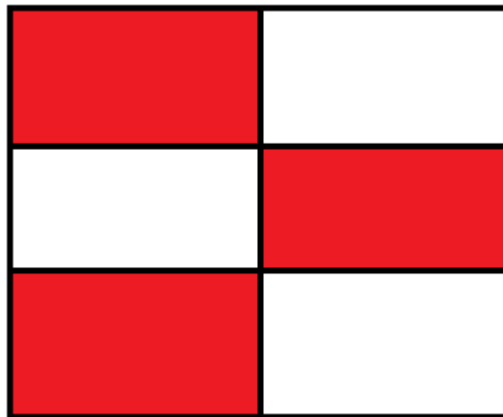
Q2. Look at the picture and tell how many Rose flowers can you see.



Q3. Can tell how many total squares are there in the figure.



Q4. Can you count how many blocks of the figure are coloured ?



Q5. Can you spot the normal fan among the followings?

