

GANITAM

THE WORLD OF MATHEMATICS

CLASS I
PART 1

Name:

School:

'Ganitam'

The World of Mathematics



PART I

'Ganitam'

The World of Mathematics

First Edition published in 2022

Second Edition published in 2023

Third Edition published in 2024

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Preface

‘Ganitam’ – The World of Mathematics

Mathematics builds hope. It helps us believe that every problem has a solution.

Education imparted in classrooms should be linked to life outside school. Hence the knowledge and skills acquired in school should help children understand the world around them better, and thereby contribute towards its betterment. This series of books on Mathematics titled “Ganitam-The World of Mathematics”, has been prepared with that thought on our minds. The book has been designed in such a way that it enhances inquisitiveness in children by encouraging them to ask questions and seek answers rather than just learn what is listed in the books.

The content has been carefully curated, so that it reflects the rich cultural diversity of our motherland Bharat, enabling the child to intuitively understand the unifying values that bond the citizens of this great country together. Thus, the book will help a child gain various skills required for the 21st century and be a universal citizen with a passion for following Indian values.

The core content of the book originates from the Vedas which provide the key concepts of Mathematics. For example, the sutra एकाधिकेन पूर्वेण (Ekaadhikena Purvena) indicates an interesting mathematical application. Great ancient Indian scholars like Acharya Aryabhatta, Brahmagupta, Bhaskaracharya, Pingala, Mahavira, and more contemporary ones like Srinivasa Ramanujan along with their counterparts from other parts of the world, have further developed this body of knowledge. Numerous teachers from the DAV Group of Schools, with their decades of rich experience, have compiled the existing knowledge in a child-friendly form.

Therefore, there is no copyright on the content of this book. One can seek permission and print all or only certain chapters of the book. However, no unauthorized modification is permitted in any chapter. Considering the social orientation of the organization, we have consciously ensured that cost of the textbook is affordable



without compromising on the quality of paper/print. Also, the e-copy of the entire book will always be downloadable for free from our website – davchennai.org/publications.

This is the second version of the book and could have not only omissions, but also areas of improvement. We request the reader to excuse us for the omissions, but please do bring to our notice any feedback for correction and improvement in subsequent versions. We will remain grateful to you for your support and feedback.

Lastly, before signing off, we would like to express our profound gratitude to God Almighty for the guidance and encouragement in this endeavour. As the great mathematician, Srinivasa Ramanujan, rightly said - **“An equation for me has no meaning unless it expresses a thought of God.”**

Chennai | May 2024

Secretary
TN Arya Samaj Edu. Society



Acknowledgements

Lead Content Developer

Smt. S. Charumathy B.Sc., B.Ed.

Academic Furtherance

Dr. V. Padma, Former Dean, Academic Research

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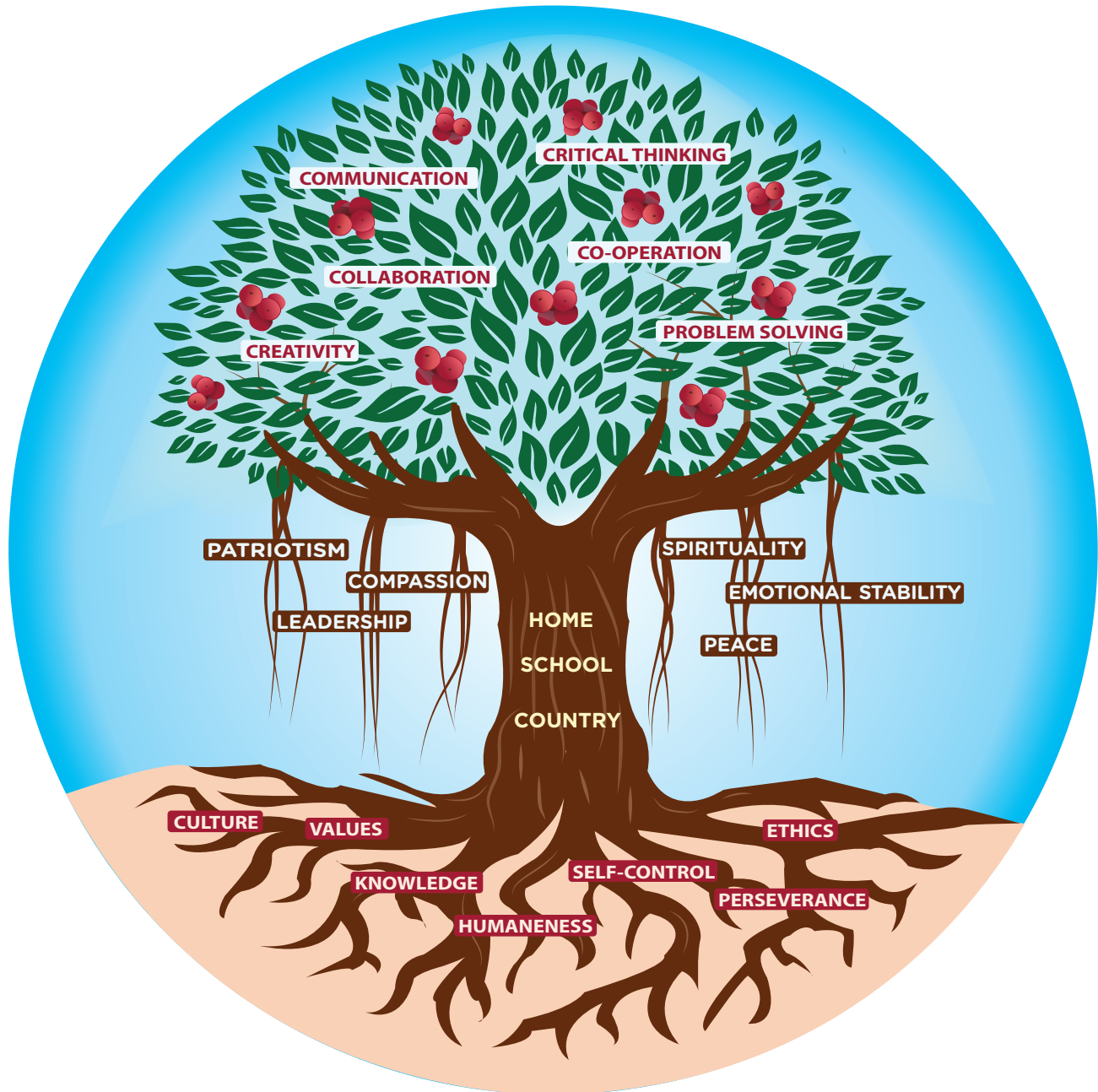
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The Learning Tree



Contents

Chapter 1 – Comparing Skills

1-15

Big-Small, Tall-Short, Long-Short, More-Less, Thick-Thin, Heavy-Light, Full-Empty, Inside-Outside, Before, After, Between, Same as or Equal to.

Highlights: *Experiential Learning, Lab Activity, Value-Based Questions, Value skills.*

Chapter 2 – Numbers up to 20

16-46

Building numbers, Number and Number Names, Numbers on the abacus, Number Line, Before, After, Between numbers, Comparing numbers, Ordering of numbers, Ordinal Numbers.

Highlights: *Fun activity.*

Chapter 3 – Addition of small numbers [Numbers up to 20]

47-66

Addition by counting the objects, Addition on a number line, Addition using an abacus, Addition of 1 digit and 2 digit numbers by vertical and horizontal arrangement, Order in addition, Number combinations, Addition of 3 numbers.

Highlights: *Higher Order Thinking Skills (HOTS), Lab Activity.*

Chapter 4 – Subtraction of small numbers [Numbers up to 20]

67-84

Subtraction by crossing out the objects, Subtraction using a number line, Subtraction of 1 digit and 2 digit numbers by vertical and horizontal arrangement.

Highlights: *Higher Order Thinking Skills (HOTS), Fun activity, Value-Based Questions.*

Chapter 5 – Shapes and Patterns

85-97

Types of lines, Tracing the lines, Shapes-square, rectangle, triangle, circle, oval, diamond. Patterns made by shapes, objects and letters. Shapes and patterns in real life.

Highlights: *Arts Integrated Learning, Experiential Learning, Higher Order Thinking Skills (HOTS).*

Chapter 6 – Numbers up to 100

98-137

Numbers upto 100, Numbers and Number names, Numbers on abacus, Backward counting, Expanded form and Standard form, Before, after and between numbers, Comparison, Identifying the smallest and the greatest, Ordering of numbers in increasing and decreasing order.

Highlights: *Arts Integrated Learning, Fun activity, Value-Based Questions.*





COMPARING SKILLS



Learning Outcomes:

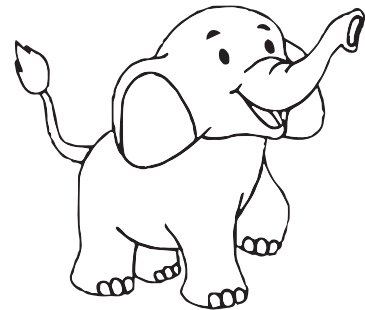
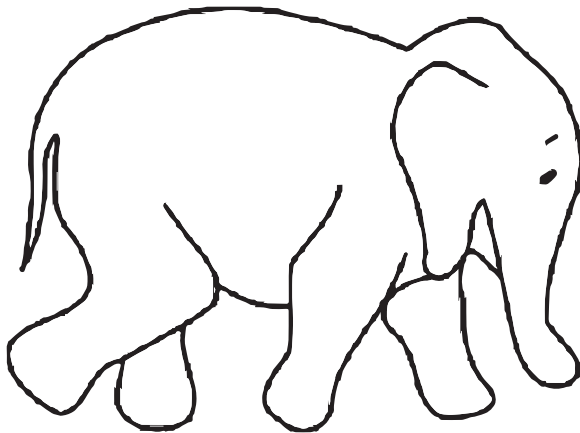
At the end of this lesson, children will be able to:

Differentiate between Big-Small , Tall-Short , Long-Short , More-Less, Thick-Thin, Heavy-Light, Empty-Full, Inside-Outside, Before-After-Between, Same as or Equal to.

BIG – SMALL

Colour the bigger object

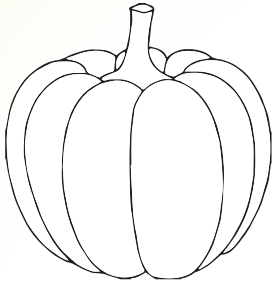
a)



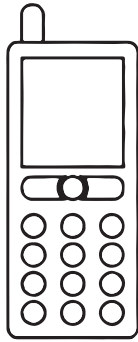
b)



c)



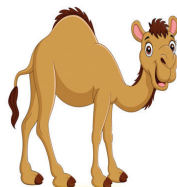
d)



Facts:

Do you know?

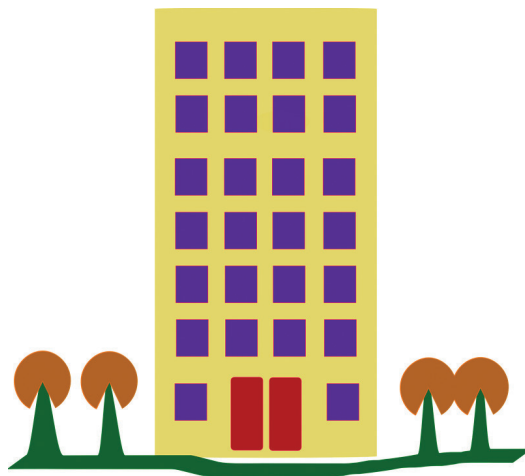
The largest sea animal is blue whale.
Try to find the biggest land animal.



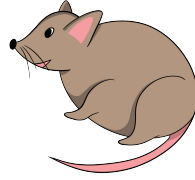
TALL – SHORT



a) Tick the taller building



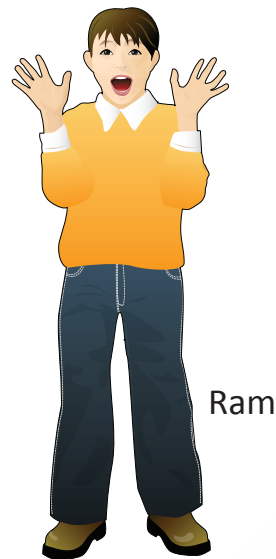
b) Tick the taller animal



c) Tick the shorter one



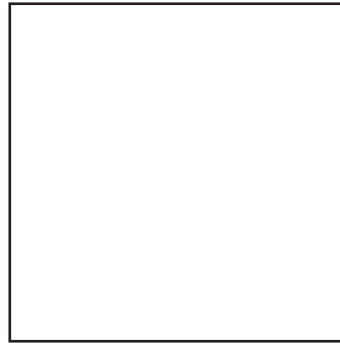
d) Who is taller Ram or Shyam?



Teacher's sign & date _____

e) Value based question

Vikas planted a sapling when he was in class 1. Draw to show how the sapling will look like after 2 years?



The sapling will now be _____ (taller / shorter) than before.



LONG – SHORT



Which is longer? Tick the correct answer

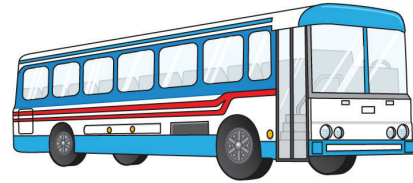
a)



b)



c)



d)



e) Draw an object longer than your eraser.

Thinking Skills

Kavita and her Nainamma (grandmother in Telugu) went for shopping to buy school shoes for Kavita. Nainamma did not know Kavita's shoe size. The shopkeeper measured the length of Kavita's foot and gave her the shoe size as 4.

1. Will Kavita's Nainamma have the same shoe size as Kavita? Why?
2. What is your shoe size?

Teacher's sign & date _____





a) Circle the aquarium which has more fish



b) Circle the object which can hold more water



c) Circle the box which has more stars



d) Circle the box which has more capsicums



Teacher's sign & date _____

Suggested Lab Activity

Make the children sit in groups of five. Give each one a bowl of seeds or marbles. Ask them to compare and find out who has more seeds.



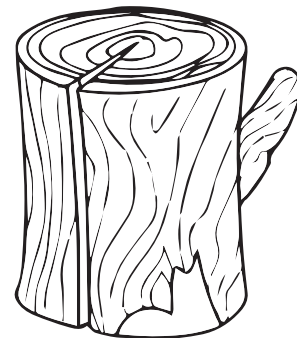
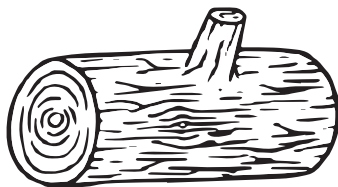
THICK – THIN



a) Colour the thinner marker



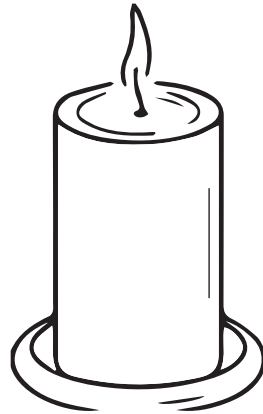
b) Colour the thicker log of wood



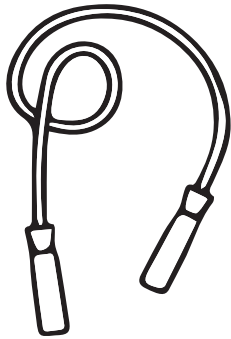
c) Tick the thicker book



d) Colour the thinner candle



e) Draw a rope thicker than the one given



Value Based Question

1. Have you seen the wheels of a bicycle and a car?
 - a. Which is thicker?
 - b. Which one would you prefer to avoid pollution? (car/bicycle)

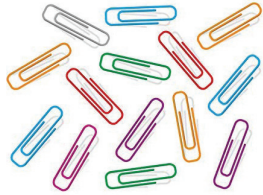
Teacher's sign & date _____

HEAVY – LIGHT

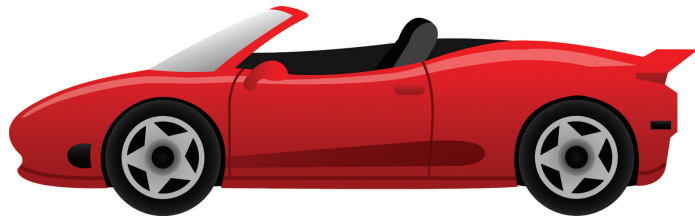
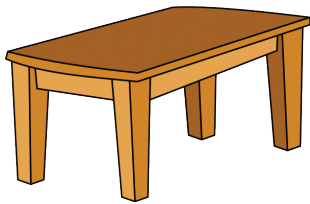
Write 'H' for the heavier object and 'L' for the lighter object.



a)



b)



c)



d)



Teacher's sign & date _____



EMPTY – FULL



a) Tick the empty bottle



b) Tick the basket which is full of fruits



c) Tick the empty plate



Teacher's sign & date _____



INSIDE – OUTSIDE





Fill in the blanks with either inside or outside

- The photo frame is _____ the cupboard.
- The broom is _____ the cupboard.
- The ball is _____ the cupboard.
- The clock is _____ the cupboard.
- The globe is _____ the cupboard.
- The cap is _____ the cupboard.
- The bag is _____ the cupboard.
- The pen stand is _____ the cupboard.

Teacher's sign & date _____

Value Skills

Anil's aaji (grandmother in Marathi) used to water the plants everyday. She carries a bucketfull of water for this.

- Can you carry a bucket full of water?
- How can you help aaji?



Experiential learning

- List some objects that are heavier than you.
- Find out your weight during your P.T class.

Value Skills

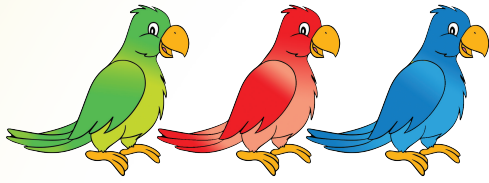
Varun's periappa (father's elder brother in Tamil) visited his home for a family get together. After dinner he saw waste littered all around the dustbin. Periappa decided to clean the house. Varun helped him in cleaning the house.

- Would you help your friend clean the place after a party?
- Is it right to litter?
- The waste should be thrown (inside / outside) the dustbin.



Teacher's sign & date _____

Before, after and between



5

6

7

8

TUESDAY

WEDNESDAY

THURSDAY

Fill in the blanks with before, after or between

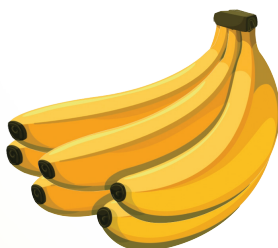
- a) The green parrot is _____ the red parrot
- b) The little boy is in _____ his siblings.
- c) Wednesday comes _____ Thursday.
- d) Blue parrot is _____ the red parrot.
- e) 7 is _____ 6 and 8

THINK: What is the number just before 5? _____

Teacher's sign & date _____

Same as or equal to

When the number of objects in two groups are same, we read it as equal to and write the sign ' $=$ '



Fill in with equal to sign ' = ' if they are equal

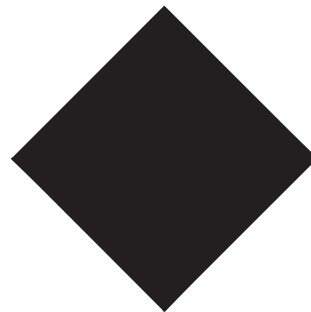


Higher Order Thinking Skills(HOTS):

Are the values equal? (Yes / No)



Are the shapes the same? (Yes / No)



Teacher's sign & date _____

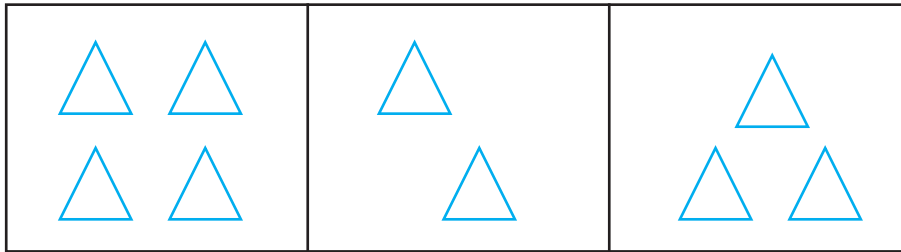
All the four bags are of same size. The bags are filled with the same amount of cotton, rice, sand and salt as shown
Which would be the lightest?

THINK?

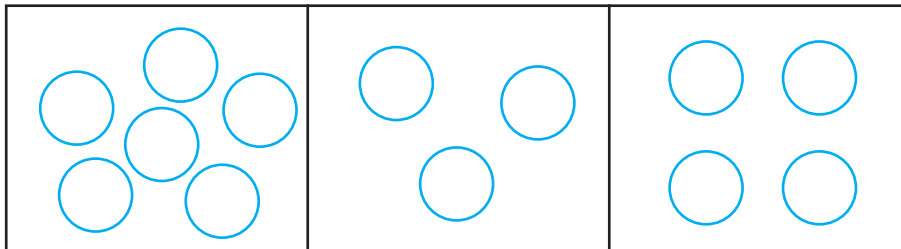


Most and least

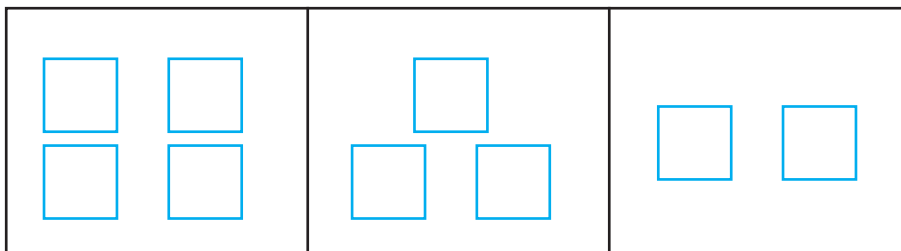
Colour the triangle in the box that has the least number of triangles.



Colour the circles in the box that has the most number of circles.



Colour the squares in the box that has the least number of squares.



Observe:

Which is longer, your class notice board or the black board? _____

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NUMBERS 1 TO 20

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

LEARNING OUTCOMES:

At the end of this lesson, children will be able to:

Build numbers up to 20, Write numbers and number names, Write expanded form and standard form, Identify before, after and between numbers, Compare numbers, Arrange numbers in increasing and decreasing order, Understand Ordinal numbers.

The Thirsty Crow



One hot day, a thirsty crow flew all over the fields looking for water for a long time, he could not find any.

He felt very weak, almost lost all hopes. Suddenly, he saw a jug below a tree. He flew straight down to see if there was any water inside.

Yes, he could see some water inside the jug! The crow tried to push his head into the jug. Sadly he found that the neck of the jug was too narrow. The crow thought hard for a while. Then looking around it, he saw some pebbles.



He suddenly had a good idea. He started picking up the pebbles one by one and dropped them in the pot.



1



2



3



4



5



6



7



8



9

The water level kept rising. Soon it was high enough for the crow to drink. His plan worked! He drank the water, quenched his thirst and flew away happily.

Do you think the crow is wise? Yes, it is. Dear children, think wisely, before you do anything.

**Water is precious.
Do not waste water.**



EXERCISE 2.1

Write the numbers from 1 to 9

1	1			
---	---	--	--	--



2				
---	--	--	--	--



3				
---	--	--	--	--



4				
---	--	--	--	--



5				
---	--	--	--	--



6				
---	--	--	--	--



7				
---	--	--	--	--



8				
---	--	--	--	--



9				
---	--	--	--	--





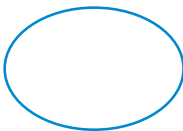

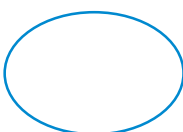
Teacher's sign & date _____








EXERCISE 2.2

Count and write the number. Match the number name

		Two
		Six
		Eight
		Four
		One
		Seven
		Five
		Nine
		Three



Count the number of objects. Write the number and the number name

 <input type="text" value="3"/>	 <input type="text"/>	 <input type="text"/>
 <input type="text"/>	 <input type="text"/>	 <input type="text"/>

Count the number of letters in each word

P R A Y E R _____

R A D I O _____

B I R T H D A Y _____

G O D _____

P R I N T E R _____

F L A G _____



EXERCISE 2.3

1) Draw and colour

7 mangoes	
-----------	--

4 candles	
2 buttons	
5 balls	
6 chocolates	
1 cake	

2) Write the number names

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



3) Number facts

a) What is the number of Vedas?

b) How many fingers do we have in each hand?

c) How many noses do we have?

d) How many legs does a table have?

e) How many strings are there in a veena?

f) What is the number of planets?

g) How many wheels does a tricycle have?



What is zero?

Look at the pictures



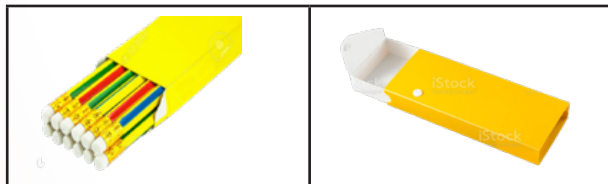
No apples in the basket



There are no flowers in the vase

Zero is written as 0.

Tick the box that has no pencils



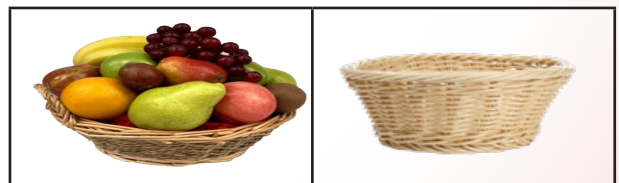
Tick the plate that has no laddus



Tick the plate that has no idlis


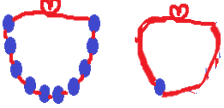
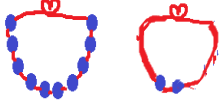
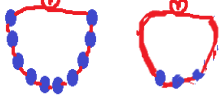
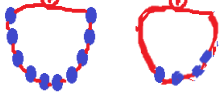
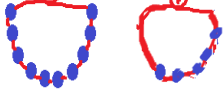


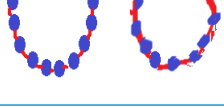
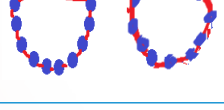
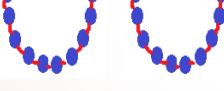


Tick the basket that has no fruits



Teacher's sign & date _____

Numbers from 10 to 20

	T 1	O 0	Ten	10
	T 1	O 1	Eleven	11
	T 1	O 2	Twelve	12
	T 1	O 3	Thirteen	13
	T 1	O 4	Fourteen	14
	T 1	O 5	Fifteen	15
	T 1	O 6	Sixteen	16
	T 1	O 7	Seventeen	17
	T 1	O 8	Eighteen	18
	T 1	O 9	Nineteen	19
	T 2	O 0	Twenty	20



EXERCISE 2.4

1) Draw the missing coconuts to match the numbers

1 coconut

12

12 coconuts

16

10 coconuts

17

10 coconuts

11

10 coconuts

13

9 coconuts

18

2) Circle enough beads to match the numbers

14

15 beads

19

19 beads

15

15 beads

20

20 beads



3) Write the number and the number names in the missing place

11 Eleven	_____	13 _____
14 _____	_____	16 Sixteen
_____	18 Eighteen	19 _____
_____	5 _____	_____
Twenty		Two

Teacher's sign & date _____



EXERCISE 2.5

Numbers from 0-9 are one digit numbers. 10 is the smallest two digit number

1) Complete the table

1					6				10
		13					18		

Write the numbers from 1 to 20



2) Find the number sequence given in the clue boxes and circle it

Clue boxes

a) 1 2 3 4 5 6 7

b) 3 4 5 6

c) 7 8 9 0

d) 4 5 6 7 8

e) 2 3 3 4 5 7

f) 3 4 4 8 5 5

5	6	7	1	2	8	3	9
6	5	8	2	9	4	4	2
7	1	2	3	6	5	4	8
8	0	3	4	5	6	8	3
9	3	2	5	1	7	5	4
0	2	1	6	4	8	5	0
1	5	0	7	8	9	0	1
3	4	2	3	3	4	5	7

3) Write the number names:

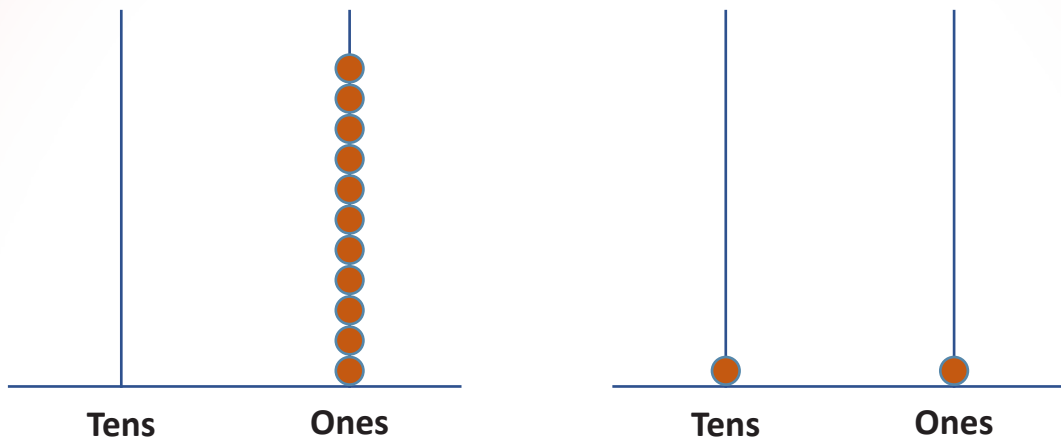
11		16	
12		17	
13		18	
14		19	
15		20	

Teacher's sign & date _____



The abacus

This is an abacus



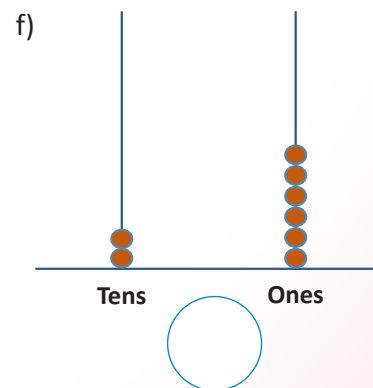
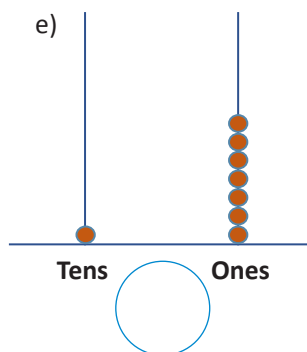
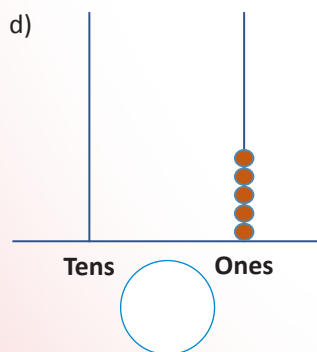
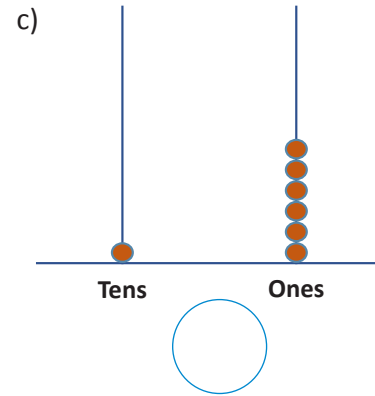
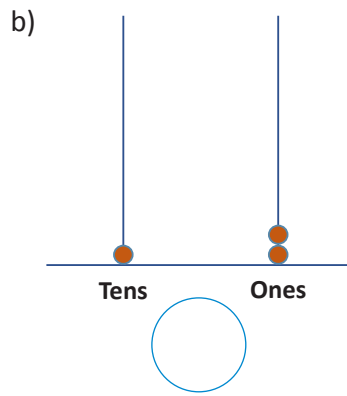
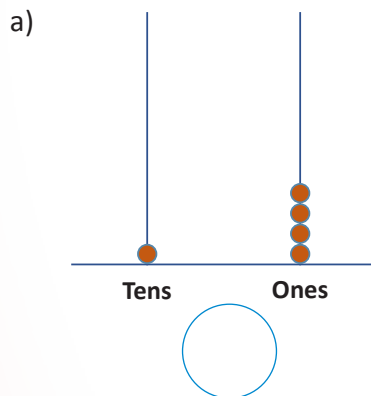
$$11 \text{ Ones} = 1 \text{ tens} \quad 1 \text{ ones}$$

Eleven means a group of 10 and one more



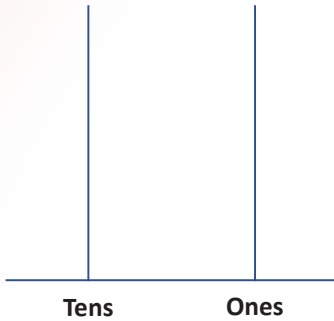
EXERCISE 2.6

1) Write the number shown on the abacus

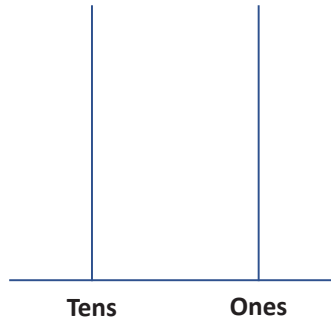


2) Draw the beads on the abacus to show the numbers

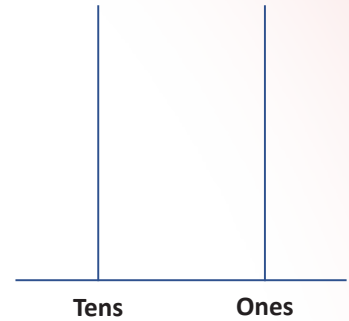
a) 7



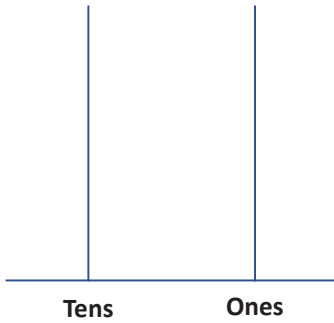
b) 19



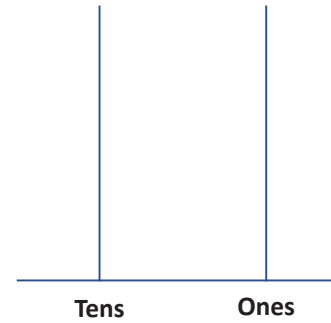
c) 10



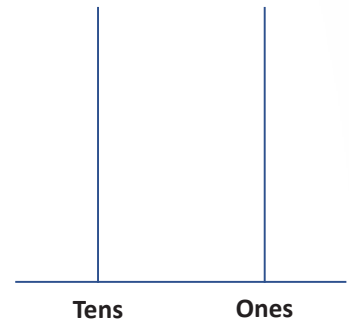
d) 13



e) 8

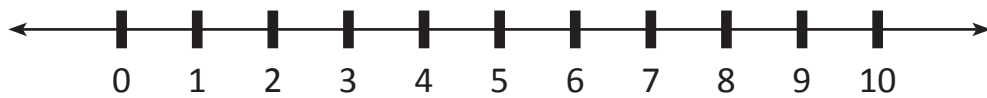


f) 15

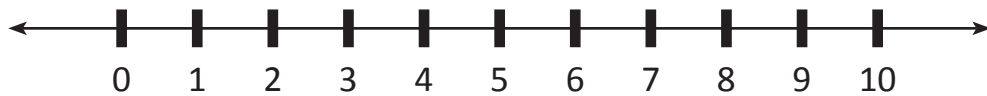


The number line

This number line shows numbers from 0 to 10



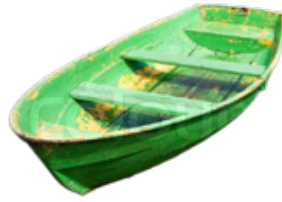
How old are you? Circle the number that tells your age



Which class are you studying? Circle the number that tells your class



Before – After – Between



The green boat is between the red and blue boat

The blue boat is before the green boat

The red boat is after the green boat



EXERCISE 2.7

1) Write the number that comes just after

5	
---	--

10	
----	--

16	
----	--

19	
----	--

2) Write the number that comes just before

	8
--	---

	10
--	----

	15
--	----

	18
--	----

3) Write the number that comes between

5		7
---	--	---

14		16
----	--	----

9		11
---	--	----



































18		20
----	--	----

1		3
---	--	---

12		14
----	--	----

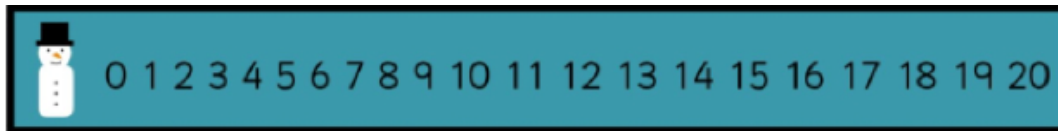


4) Write the numbers between

- a) 2 and 5    
- b) 5 and 8    
- c) 4 and 10       
- d) 1 and 7       
- e) 13 and 18      
- f) 9 and 14      

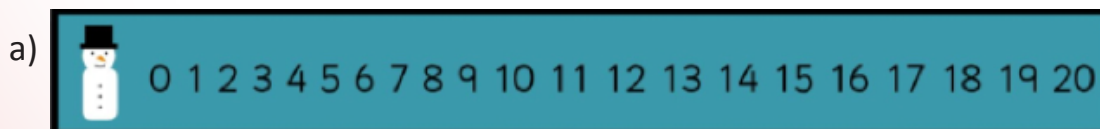
Number strip

5) Use the number strip and answer the following



- a) 6 is just after b) 13 is just after
- e) 4 is just after f) 15 is just after
- g) 10 is just after h) 12 is just after
- i) 7 is between and j) 10 is between and
- k) 14 is between and l) 5 is between and

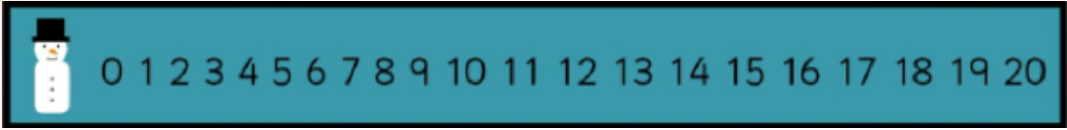
6) Fill in the boxes



What comes just before 9?



b)



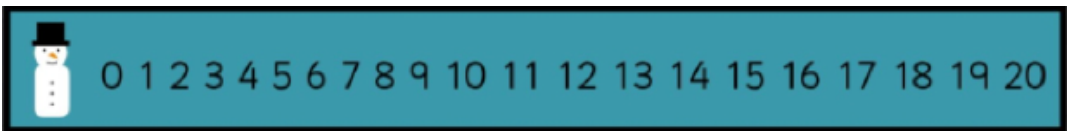
What comes just before 18?

c)



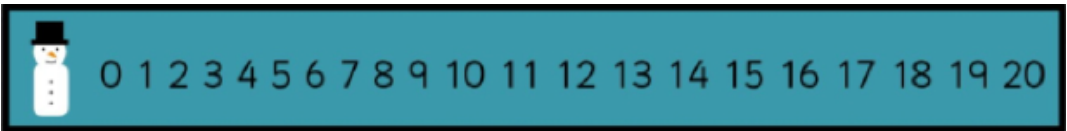
What comes just before 13?

d)



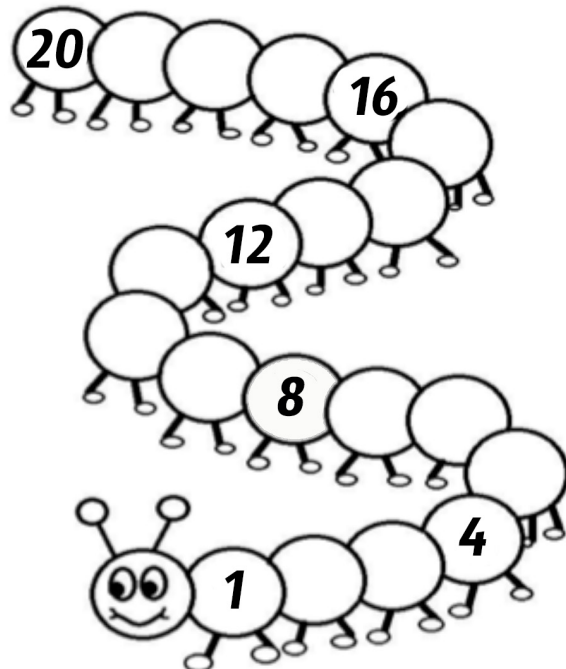
What comes just before 14?

e)



What comes just before 20?

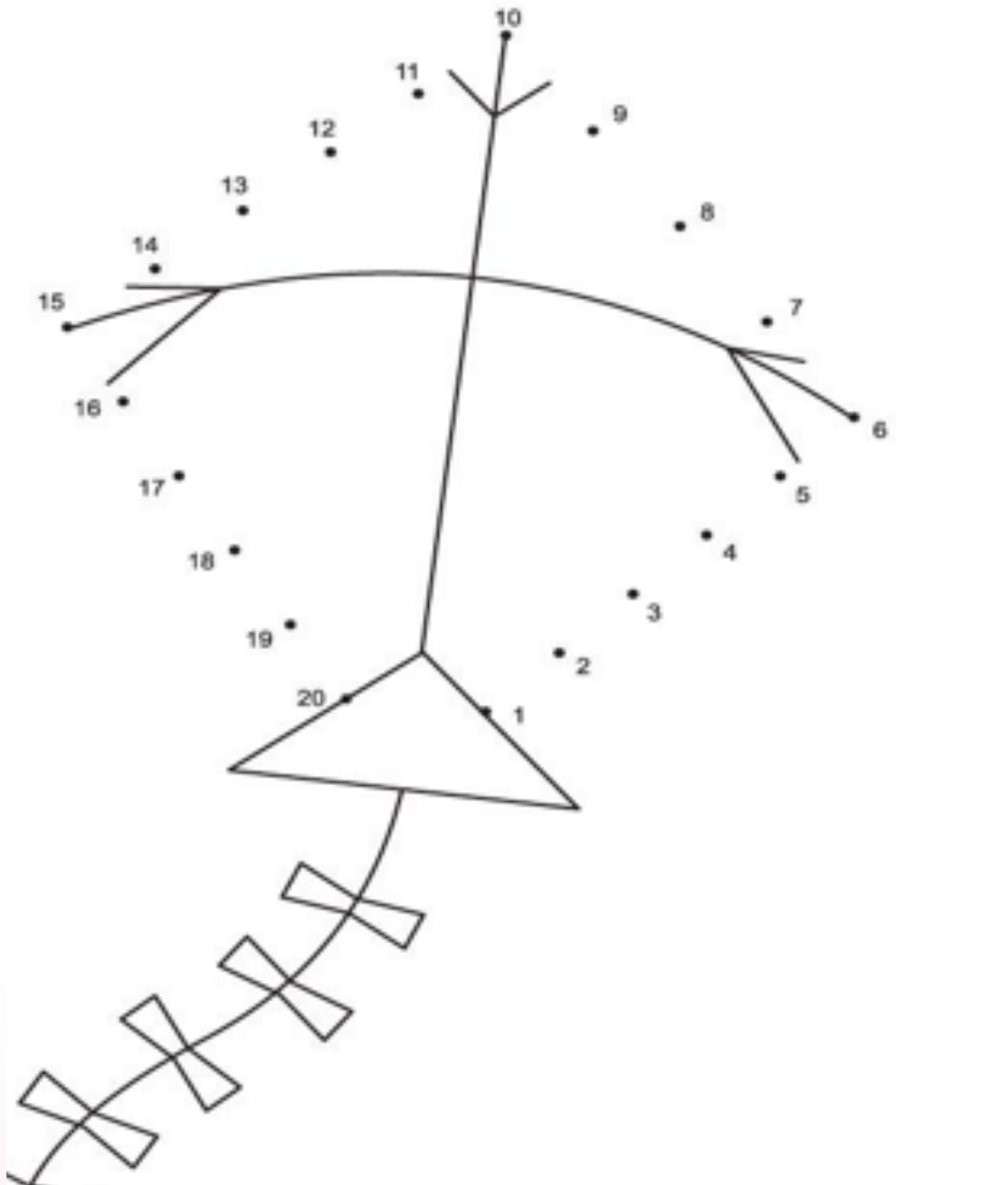
7) Fill in the numbers from 1 to 20



8) Write the missing numbers



Join the dots from 1 to 20



Teacher's sign & date _____



EXERCISE 2.8

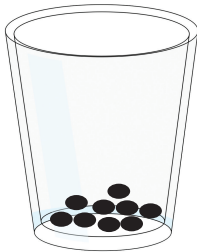
Comparing numbers

Smaller number

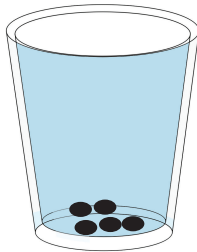
Draw the required number of marbles in each glass. Colour the glass which has less marbles. **One has been done for you**

1)

9

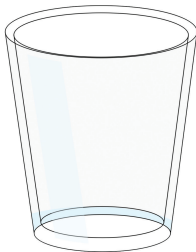


5

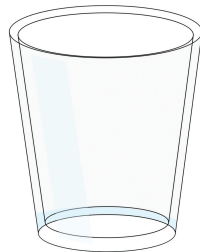


2)

7

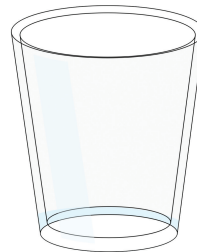


3

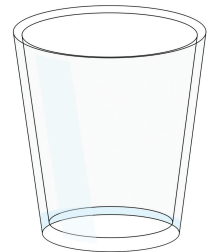


3)

10



12



4) Circle the smaller number

4 5

7 3

16 14

8 12

17 20

15 11

9 19

7 18

5) Circle the smallest number

7 11 13

8 10 16

9 19 15

1 16 6

12 14 17

11 13 20

Teacher's sign & date _____



Bigger number

6) Draw the required number of straws in each glass. Tick the glass which has more straws.

a)

10

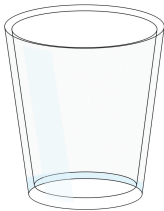


9

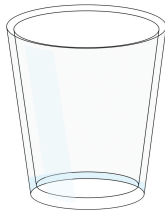


b)

3

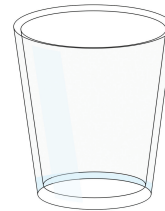


6

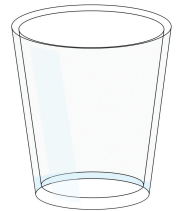


c)

8



5



7) Circle the bigger number

10 20

13 3

7 17

0 3

15 18

19 11

9 12

14 8

8) Circle the greatest number

11 13 12

9 11 15

18 14 8

1 10 11

5 19 14

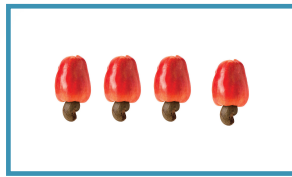
20 17 16

Teacher's sign & date _____

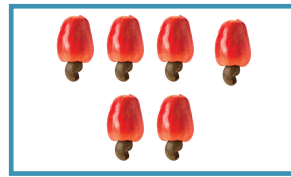


Greater than

Pintu parrot is very hungry. She always want to eat more. There are 6 nuts and 4 nuts on either side of her. Help Pintu choose the correct box.



4



6

6 is greater than 4.

Symbol for greater than is >

$$6 > 4$$

Lesser than

Bunny wants to put some ice cubes into his glass of juice. He is advised by his mother to use less number of ice cubes. Which one should he choose?



<



3 is less than 7

Symbol for less than is <

$$3 < 7$$

Equal to

Equal to' means the same.

Seetha has one ice-cream in each hand.



Symbol for equal to is '='





EXERCISE 2.9

1) Count the number of objects. Write the number in each box and fill in with correct sign $<$ or $>$ or $=$.

a)



b)



c)



d)



e) You have 12 crayons. Your friend has 9 crayons.
Who has more? _____



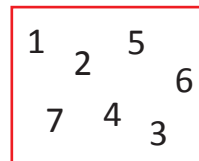
Will you share your crayons with your friend?

Order of numbers

Increasing order

Which is the smallest number? 1

Write it in the first box. The next smallest from the remaining numbers is 2. Write it in the second box. Continue till all the boxes are filled.



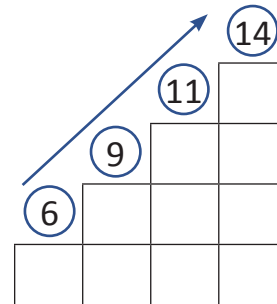
1	2	3	4	5	6	7
---	---	---	---	---	---	---



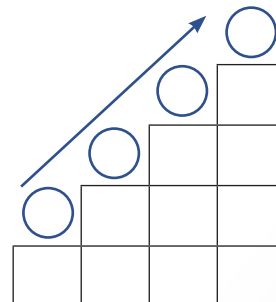
EXERCISE 2.10

1) Write these numbers starting from the smallest to the greatest

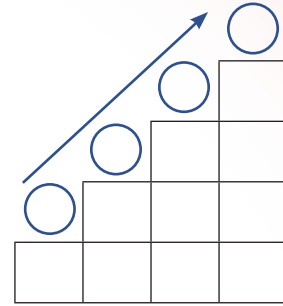
14	6	9	11
----	---	---	----



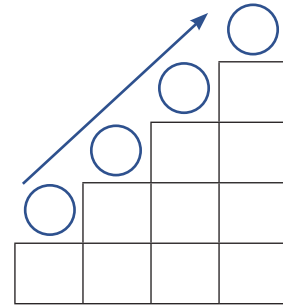
12	19	8	10
----	----	---	----



15 7 18 3



13 17 2 16



Teacher's sign & date _____

Decreasing order

19 17 9

These numbers are arranged from the greatest to the smallest

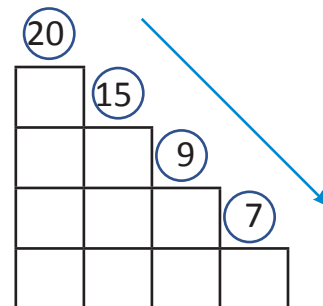
19 is the greatest number in this group.

9 is the smallest number in this group.

2) Write these numbers starting from the greatest to the smallest

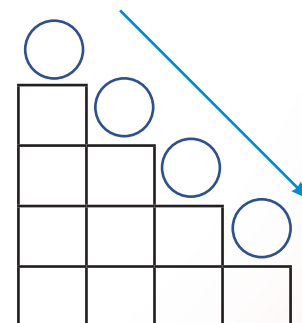
a)

15 7 20 9

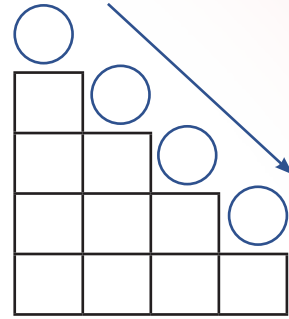
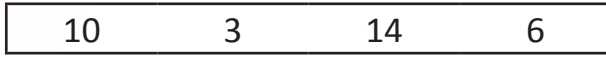


b)

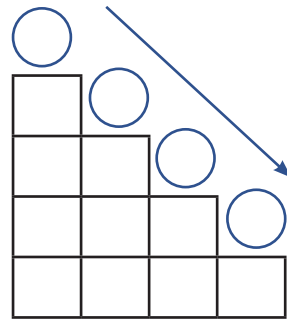
19 8 11 13



c)

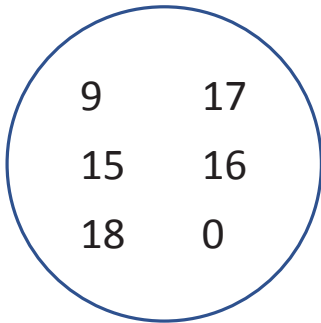


d)

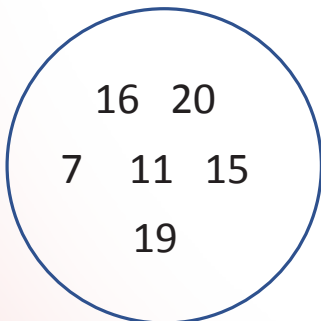


3) Arrange the numbers from the smallest to the greatest

a)

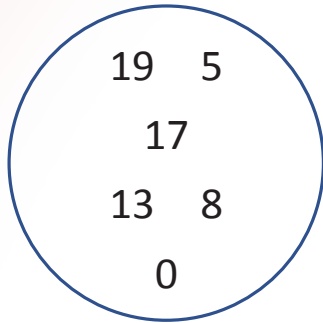


b)

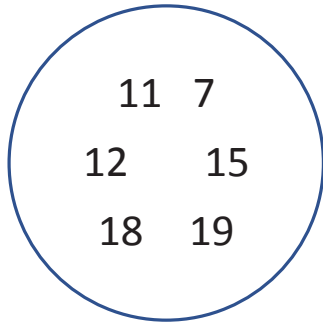


4) Arrange the numbers from the greatest to the smallest

a)



b)



5) Activity: To find the number names

Find the number names of the numbers below in the grid and colour them.

8	5	7	11
20	14	6	
3	9		

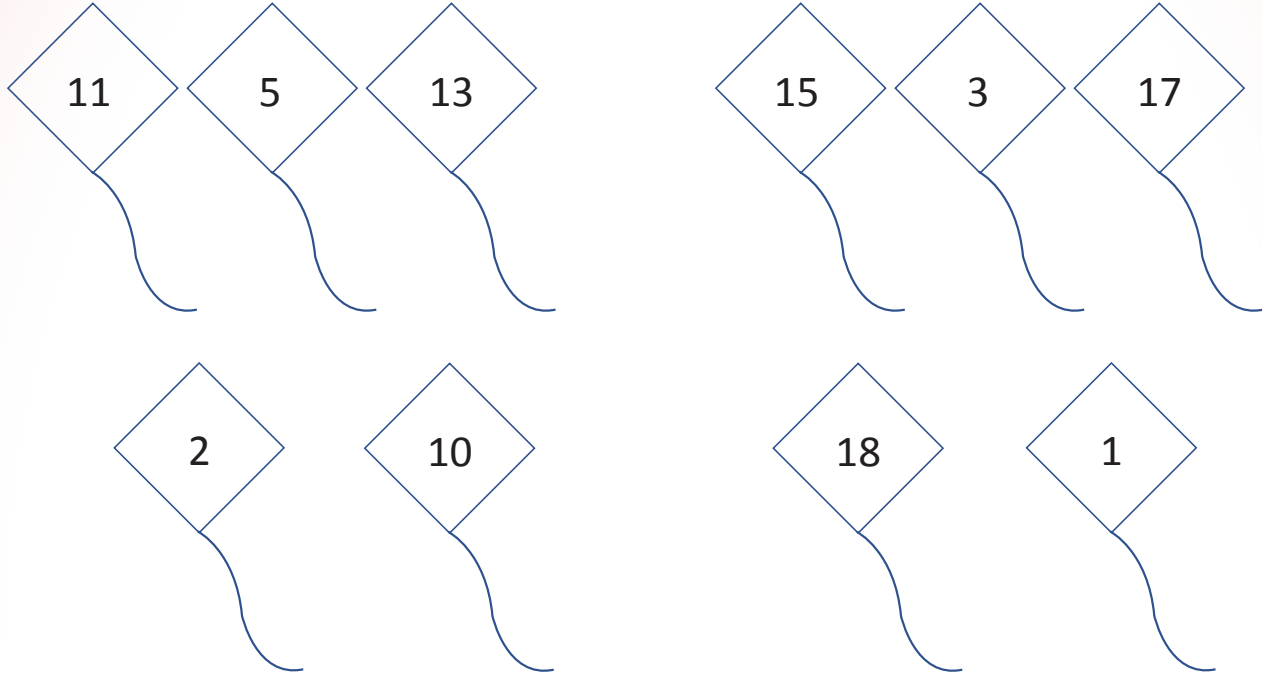
K	L	B	T	A	E	T	Y	U	O
E	I	G	H	T	S	E	V	E	N
L	Z	A	R	S	F	H	I	O	P
E	C	V	E	T	W	E	N	T	Y
V	H	J	E	L	K	R	T	U	I
E	S	F	O	U	R	T	E	E	N
N	I	N	E	O	P	T	U	R	Q
W	X	Q	J	L	F	I	V	E	W

6) Colouring Activity

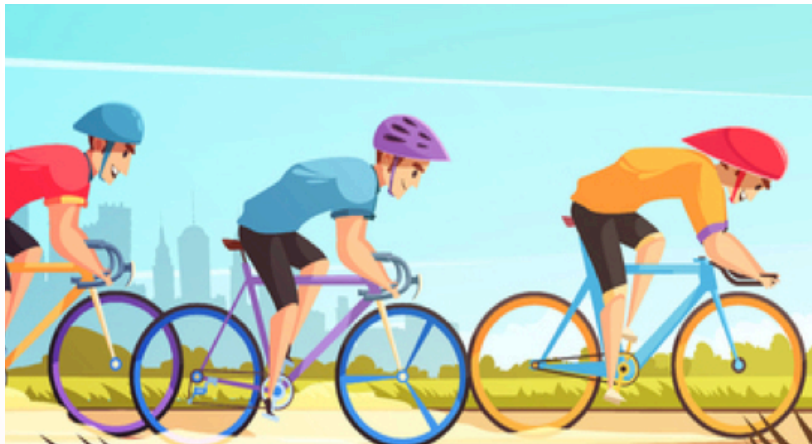
Colour the kites having numbers greater than 12 **Red**.

Colour the kites having numbers lesser than 9 **Green**.

Colour the kites having numbers greater than 9 and lesser than 12 **Pink**.



Look at the picture given below



Here the cyclist with red cap is about to finish the race and behind him are the ones with violet and blue cap.

The numbers that tell the position of the objects or persons are **ORDINAL NUMBERS**.

They are first, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, etc

In the given picture, The cyclist with a red cap - **first** position.

The cyclist with a violet cap - **second** position.

The cyclist with a blue cap - **third** position.

Ordinal numbers and their number names:

Ordinal Number	Ordinal Number Name
1 st	First
2 nd	Second
3 rd	Third
4 th	Fourth
5 th	Fifth
6 th	Sixth
7 th	Seventh
8 th	Eighth
9 th	Ninth
10 th	Tenth



EXERCISE 2.11

1. Look at the table given below and answer the following

A	B	C	D	E	F	G	H	I	J
---	---	---	---	---	---	---	---	---	---

C is in the _____ position.

I is in the _____ position.

G is in the _____ position.

The position just after D is _____.

H is just after the _____ position.

J is in the _____ position.

I comes just after the _____ position.

2. Look at the picture given below and fill in the blanks



- (a) Thulasi is in the _____ position. (b) _____ is in the third position.
(c) Sathya is in the _____ position. (d) _____ is in the first position.

3. Look at the picture and answer the following



- (a) Radha is in the _____ position. (b) _____ is in the first position.
(c) Kamala is in the _____ position. (d) Rishi is in the _____ position.
(e) _____ is in the second position.
(f) _____ is in the sixth position.

4. Match the ordinal number and the number names

1 st
2 nd
3 rd
4 th
5 th
6 th
7 th
8 th
9 th
10 th

Fourth
Sixth
Second
First
Third
Fifth
Ninth
Seventh
Tenth
Eighth

5. Fun activity

- Colour the 4th parachute green
Colour the 1st parachute orange
Colour the 2nd parachute blue
Colour the 5th parachute red
Colour the 3rd parachute pink



6. Higher Order Thinking Skills (HOTS):

The following are the marks scored by the students of Class I. Fill in the blanks.

- a. The first mark was scored
by _____.
- b. Krishna stands in the _____ position.
- c. The second position was held
by _____.

Name of the Student	Marks out of 10
Ram	9
Krishna	7
Jaya	8
Vijay	5

Teacher's sign & date _____

WORKSHEET

1) Compare and fill in with = or > or <

a)



11



13

b)



15



12

c)



9



8

d)



10



10

2) Circle the greatest number:

a) 3, 13, 1 b) 5, 9, 19 c) 20, 2, 0 d) 14, 17, 10

3) Write the number that comes just before:

	11
--	----

	8
--	---

	12
--	----

	20
--	----



4) Check and write < or > or =

15	○	11
----	---	----

20	○	13
----	---	----

14	○	14
----	---	----

16	○	18
----	---	----

12	○	19
----	---	----

9	○	10
---	---	----

13	○	13
----	---	----

11	○	18
----	---	----

1	○	12
---	---	----

5) Write the number that comes after:

15	
----	--

7	
---	--

19	
----	--

12	
----	--

6) Arrange the numbers from the greatest to the smallest:

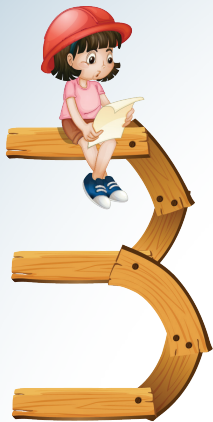
a)

		12
8		
		4
3		
	24	

b)

		12
3		
19		11
	17	

Teacher's sign & date _____



ADDITION OF SMALL NUMBERS

(Numbers upto 20)

$$\begin{array}{c} \text{Apple} + \text{Apple} = \text{Apple} \\ 1 + 1 = 2 \end{array}$$

LEARNING OUTCOMES:

At the end of this lesson, children will be able to:

Add by counting objects, Add on the number line, Add using abacus, Perform addition of one digit numbers by vertical and horizontal arrangement of numbers, Understand the order property of addition, Learn number combinations and application in real life.

It was a cold day in December. Maya and her Bhatiji (niece in Bengali) decided to have a cup of soup. They went into the kitchen to prepare it, but found that there were no vegetables in the refrigerator. So both of them set out for shopping.

Maya was excited to know what her Bhatiji was going to buy. Bhatiji picked up a corn, some carrots, few peas and cabbage. She also bought a packet of pepper and flour. Bhatiji guided her to the billing section. The man in the counter asked "How many items altogether Madam?"

Bhatiji: Count the number of items we bought by putting it together, Maya.

Maya: Yes, we bought carrots, peas, cabbage, pepper and flour. So, 5 items on the whole.

Is she correct? _____

Correct her if you find her wrong. _____

Both of them returned home and Bhatiji started preparing the soup. Maya took out her toy cars to play. Bhatiji asked her, "Tell me the total number of toy cars in your collection."

She put all her toy cars together and started counting 1,2,3,4 and 5

I have 5 cars in my collection.

So, if you put things together you are adding.



Addition

Combining two or more numbers is called **addition**.

The term used for addition is **plus**. The symbol for addition is '+'.
The symbol for addition is '+'.

When we add two or more numbers the answer we get is called the **sum**.



2 balloons added to 5 balloons gives 7 balloons.

$$2 + 5 = 7$$

We can also write it as:

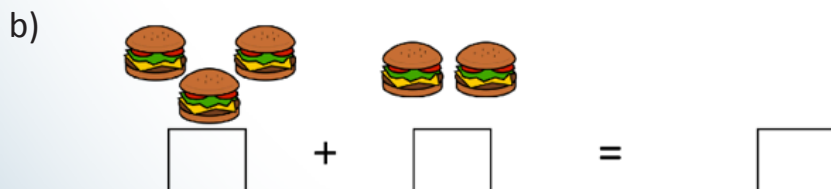
$$\begin{array}{r} 2 \\ + 5 \\ \hline 7 \end{array}$$

In $2 + 5 = 7$, 7 is called the sum




EXERCISE 3.1

1) Addition - Count the objects, write the numbers and find the sum.




c)




$$\square + \square = \square$$

d)



$$\square + \square = \square$$

e)



$$\square + \square = \square$$

Teacher's sign & date _____

Suggested activity:

Students use concrete objects to add (ice-cream spoons/beads/seeds/sticks)

Number lines can be used for addition.

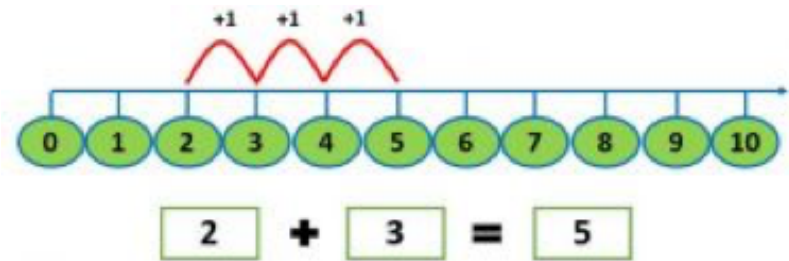
The first one is done for you.

Place your finger at 2.

Make 3 jumps from 2 as shown.

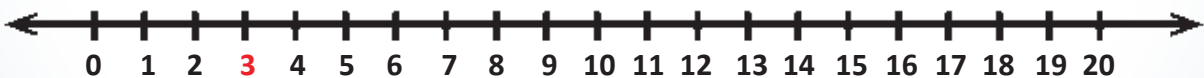
You reach 5.

Therefore, $2 + 3 = 5$

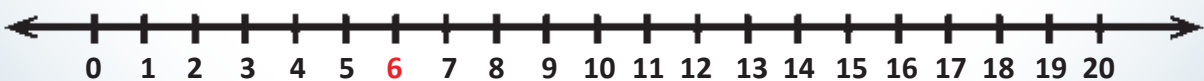


EXERCISE 3.2

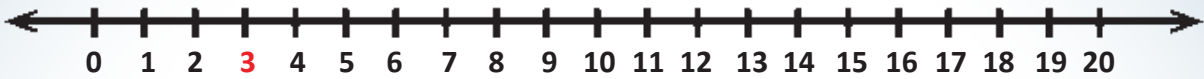
a) $3 + 3 = \underline{\quad}$



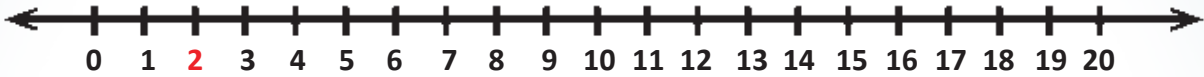
b) $6 + 5 = \underline{\quad}$



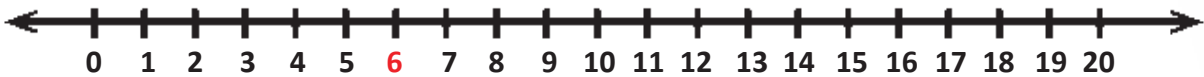
c) $3 + 2 = \underline{\quad}$



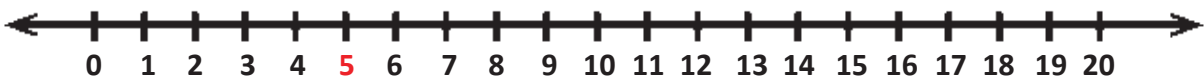
d) $2 + 7 = \underline{\quad}$



e) $6 + 4 = \underline{\quad}$



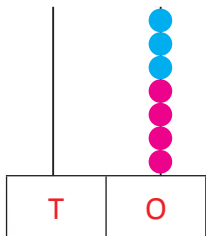
f) $5 + 8 = \underline{\quad}$



Teacher's sign & date _____

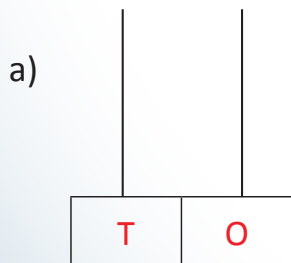
Addition on the abacus

Add 4 and 3. Put 4 pink beads in the ones place. Then put 3 blue beads and count.
 $4 + 3 = 7$

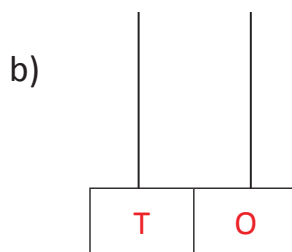


EXERCISE 3.3

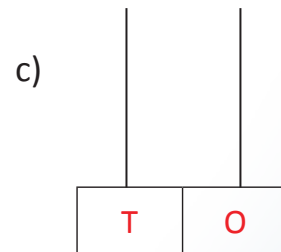
1) Draw the beads on the abacus and add



$5 + 4 = \underline{\quad}$



$2 + 6 = \underline{\quad}$



$7 + 0 = \underline{\quad}$



d)

T	O

$1 + 4 = \underline{\hspace{2cm}}$

e)

T	O

$3 + 4 = \underline{\hspace{2cm}}$

f)

T	O

$8 + 1 = \underline{\hspace{2cm}}$

g)

T	O

$3 + 3 = \underline{\hspace{2cm}}$

h)

T	O

$2 + 5 = \underline{\hspace{2cm}}$

i)

T	O

$0 + 9 = \underline{\hspace{2cm}}$

Put together the orange and pink flowers and count



Write the numbers one below the other and count. You get the sum.

$$\begin{array}{r}
 6 \\
 + 3 \\
 \hline
 9
 \end{array}$$

9 is the sum



EXERCISE 3.4

Add by drawing lines:

1) $\begin{array}{r} 2 \\ + 2 \\ \hline \\ \hline \end{array}$

2) $\begin{array}{r} 1 \\ + 7 \\ \hline \\ \hline \end{array}$

3) $\begin{array}{r} 8 \\ + 2 \\ \hline \\ \hline \end{array}$

4) $\begin{array}{r} 2 \\ + 3 \\ \hline \\ \hline \end{array}$

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

6) $\begin{array}{r} 7 \\ + 2 \\ \hline \\ \hline \end{array}$




$$\begin{array}{r} 7) \quad 5 \\ + 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 1 \\ + 2 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 4 \\ + 6 \\ \hline \\ \hline \end{array}$$


Addition Using Fingers

$5 + 4 = 9$ (Keep the bigger number in the mind)

- Keep 5 in the mind
- 4 in the finger
- Start counting after 5  6,7,8,9. So 9 is the answer



Find $2 + 7$

In this sum, keep 7 in the mind and 2 in the finger and start counting after 7  8,9.

So, 9 is the answer.



EXERCISE 3.5

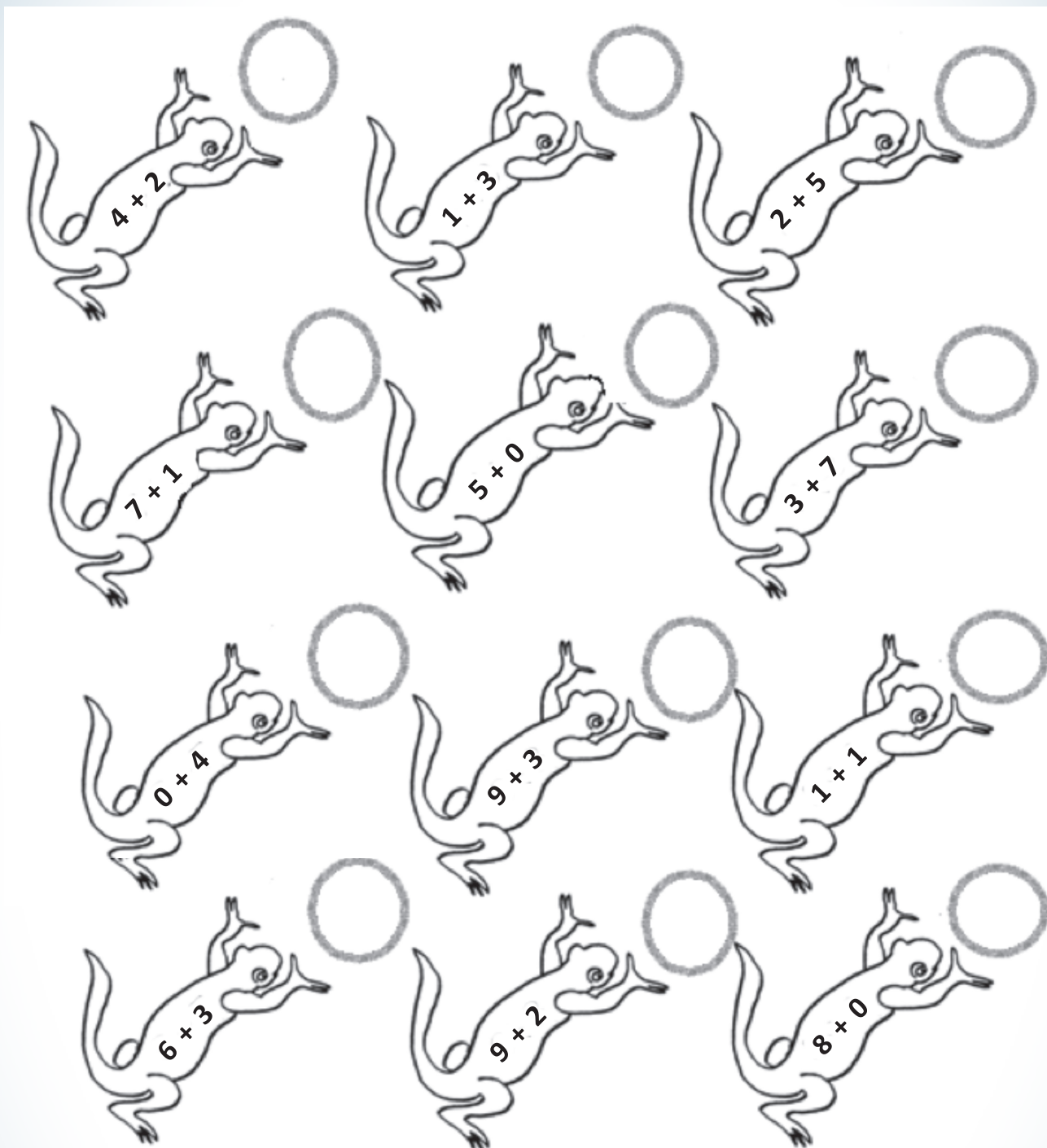
Adding is Fun

a) $7+8 =$		i) $4+5=$	
b) $2+7 =$		j) $3+7=$	
c) $2+2 =$		k) $3+9=$	
d) $4+6 =$		l) $4+2=$	
e) $6+3=$		m) $4+1=$	
f) $1+3=$		n) $3+2=$	
g) $0+6=$		o) $5+5=$	
h) $9+1 =$		p) $8+2 =$	

Teacher's sign & date _____



EXERCISE 3.6



Shade the balls as follows:

Answers from 0 to 4 → **red**

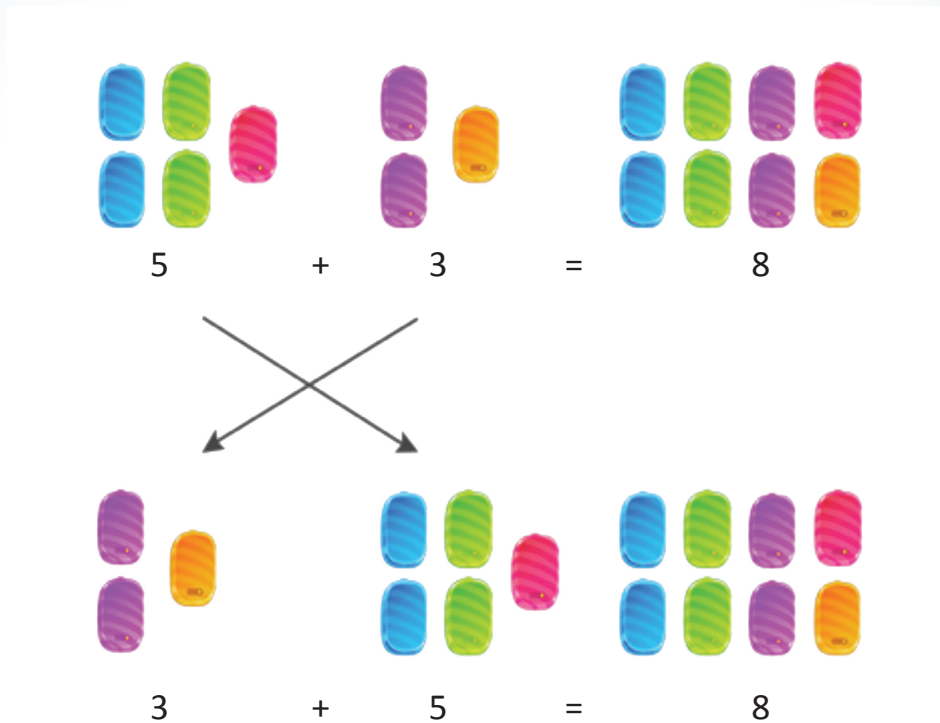
5 to 7 → **green**

8 to 12 → **blue**

Teacher's sign & date _____



Order in addition



Even when we change the order of the numbers to be added, the sum remains the same.



EXERCISE 3.7

1) Fill in the blanks

a) $4 + 3 = 7$

$3 + \underline{\quad} = 7$

b) $6 + 2 = 8$

$2 + 6 = \underline{\quad}$

c) $4 + 0 = 4$

$\underline{\quad} + 4 = 4$

d) $5 + 4 = 9$

$\underline{\quad} + 5 = 9$

e) $1 + 5 = 6$

$5 + \underline{\quad} = 6$

f) $5 + 2 = 7$

$7 = \underline{\quad} + 2$

g) $6 + 1 = 7$

$1 + \underline{\quad} = 7$

h) $0 + 9 = 9$

$\underline{\quad} + 0 = 9$

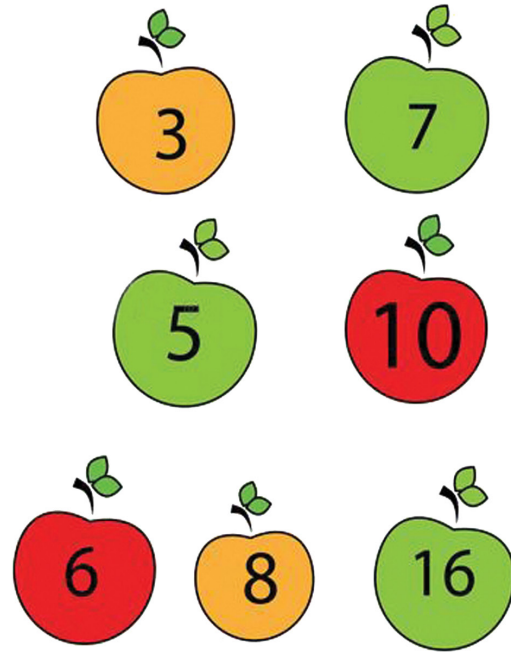
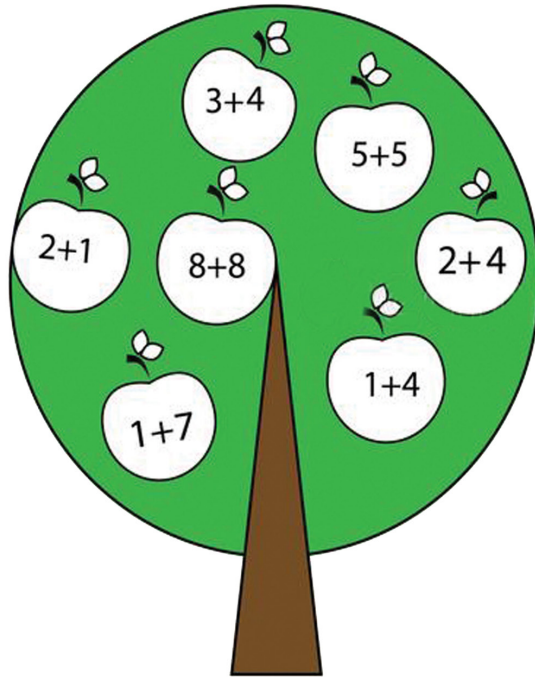
i) $2 + 8 = 10$

$10 = \underline{\quad} + 2$

2)

Math Matching Game

Sorting apples



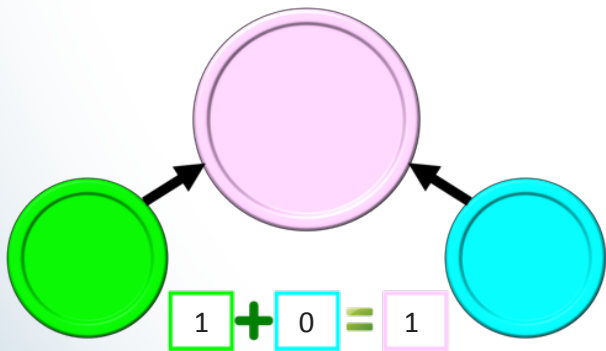
Teacher's sign & date _____

Learn number combinations

Any number (except 0) can be written as the sum of two different/same numbers. One is done for you.



EXERCISE 3.8



Sun is the only star that we can see during the day.



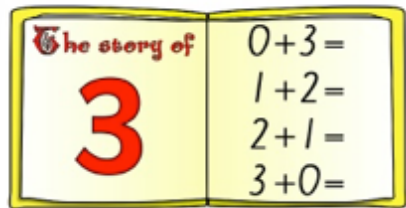
$$0 + 2 = 2$$

$$1 + 1 = 2$$

$$2 + \underline{\quad} = 2$$



We have two eyes



$$0 + 3 = \underline{\quad}$$

$$1 + 2 = 3$$

$$2 + 1 = 3$$

$$3 + 0 = \underline{\quad}$$



Our national flag has three colours



$$0 + 4 = 4$$

$$1 + 3 = 4$$

$$2 + 2 = \underline{\quad}$$

$$3 + 1 = \underline{\quad}$$

$$4 + \underline{\quad} = 4$$



Four seasons of the year

$$0 + 5 = 5$$

$$1 + 4 = \underline{\quad}$$

$$2 + 3 = \underline{\quad}$$

$$3 + 2 = \underline{\quad}$$

$$4 + 1 = \underline{\quad}$$

$$5 + 0 = \underline{\quad}$$



The five elements of nature



$$0 + 6 = 6$$

$$1 + 5 = \underline{\quad}$$

$$2 + 4 = \underline{\quad}$$

$$3 + 3 = \underline{\quad}$$

$$4 + 2 = \underline{\quad}$$

$$5 + 1 = \underline{\quad}$$

$$6 + 0 = \underline{\quad}$$



An ant has six legs



$$0 + 7 = 7$$

$$1 + 6 = 7$$

$$2 + 5 = \underline{\quad}$$

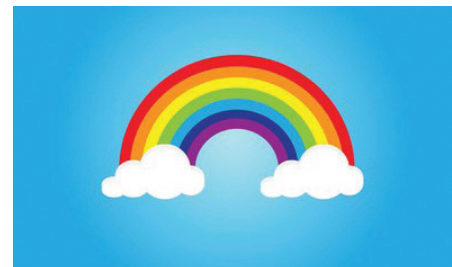
$$3 + 4 = \underline{\quad}$$

$$4 + 3 = \underline{\quad}$$

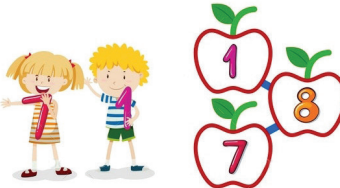
$$5 + 2 = \underline{\quad}$$

$$6 + 1 = \underline{\quad}$$

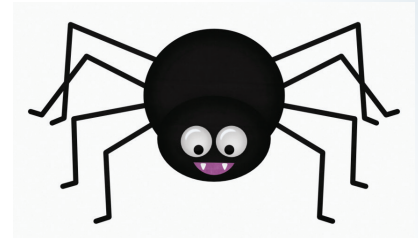
$$7 + 0 = \underline{\quad}$$



A rainbow has seven colours



- $0 + 8 = 8$
- $1 + 7 = \underline{\quad}$
- $2 + 6 = \underline{\quad}$
- $3 + 5 = \underline{\quad}$
- $4 + 4 = \underline{\quad}$
- $5 + 3 = \underline{\quad}$
- $6 + 2 = \underline{\quad}$
- $7 + 1 = \underline{\quad}$
- $8 + 0 = \underline{\quad}$



A spider has eight legs



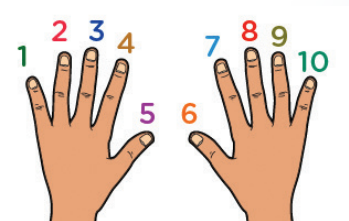
- $0 + 9 = \underline{\quad}$
- $1 + 8 = \underline{\quad}$
- $2 + 7 = \underline{\quad}$
- $3 + 6 = \underline{\quad}$
- $4 + 5 = \underline{\quad}$
- $5 + 4 = \underline{\quad}$
- $6 + 3 = \underline{\quad}$
- $7 + 2 = \underline{\quad}$
- $8 + 1 = \underline{\quad}$
- $9 + 0 = \underline{\quad}$



I am the greatest one digit number



- $0 + 10 = 10$
- $1 + 9 = \underline{\quad}$
- $2 + 8 = \underline{\quad}$
- $3 + 7 = \underline{\quad}$
- $4 + 6 = \underline{\quad}$
- $5 + 5 = \underline{\quad}$
- $6 + 4 = \underline{\quad}$
- $7 + 3 = \underline{\quad}$
- $8 + 2 = \underline{\quad}$
- $9 + 1 = \underline{\quad}$
- $10 + 0 = \underline{\quad}$

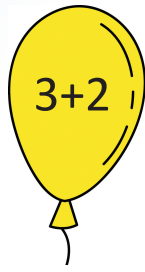


I have ten fingers

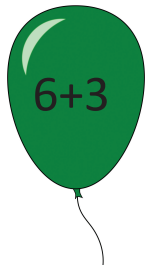


Higher Order Thinking Skills(HOTS):

1) Which balloon has the largest sum?



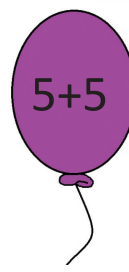
(a)



(b)



(c)



(d)

2) Arrange the number on the star from the greatest to the smallest. Choose the correct option given below.



(P)



(Q)



(R)



(S)

a) P, Q, R, S

b) S, R, Q, P

c) R, S, P, Q

d) R, P, S, Q

3) If  = 4 and  = 2, then find the value of

 +  +  = _____

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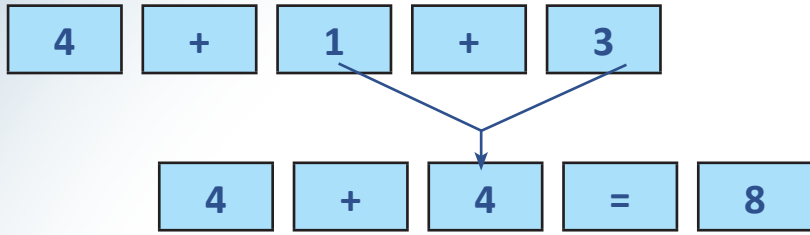
Addition of 3 numbers

Example : 1

4	+	1	+	3
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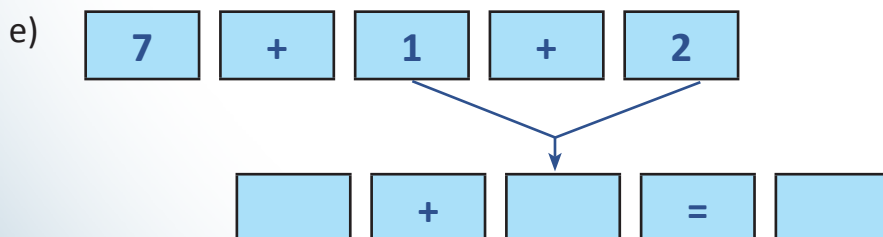
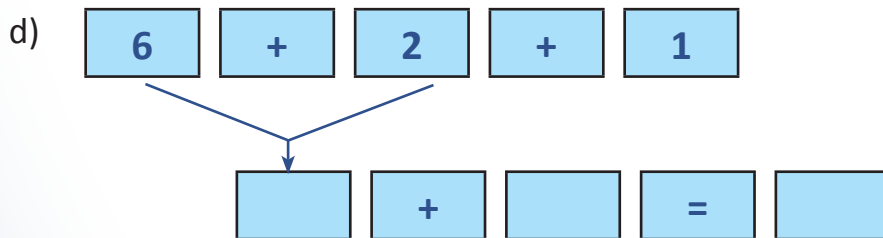
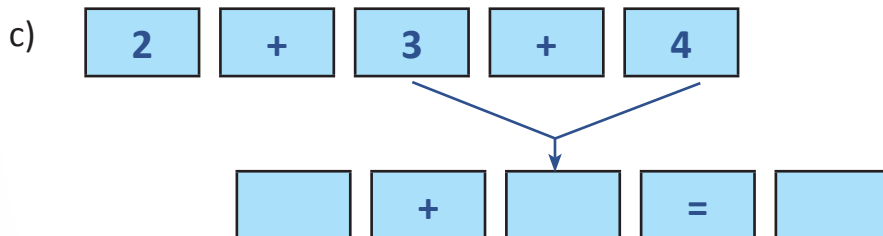
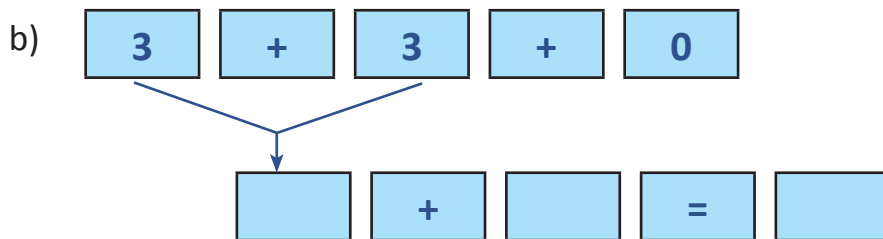
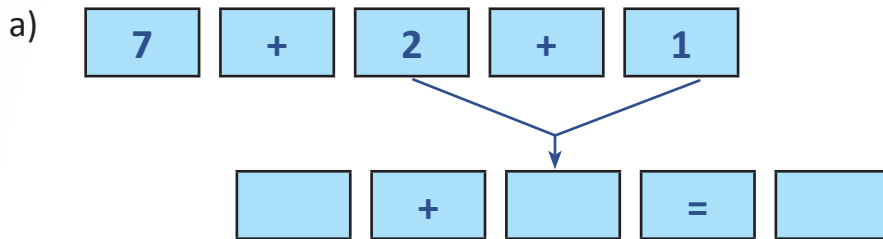
5	+	3	=	8
---	---	---	---	---

Example : 2



EXERCISE 3.9

1) Add the following:



2) Find the sum of

$$\begin{array}{r} \text{a)} \quad 2 \\ \quad \quad 3 \\ + \quad \quad 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{b)} \quad 6 \\ \quad \quad 0 \\ + \quad \quad 1 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{c)} \quad 5 \\ \quad \quad 4 \\ + \quad \quad 1 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{d)} \quad 3 \\ \quad \quad 0 \\ + \quad \quad 4 \\ \hline \\ \hline \end{array}$$

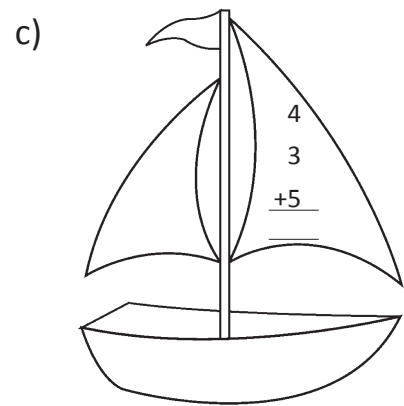
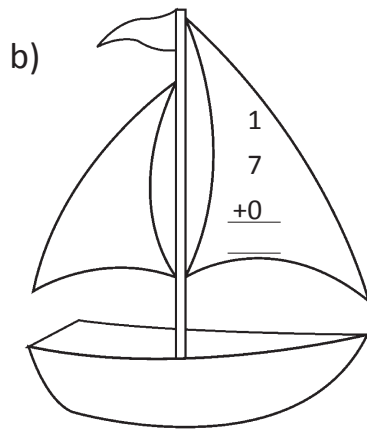
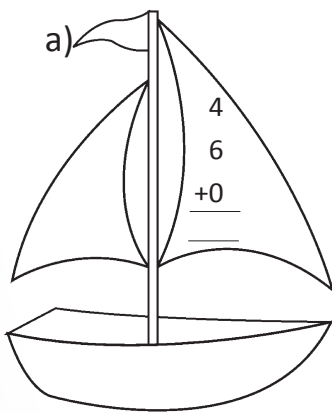
$$\begin{array}{r} \text{e)} \quad 4 \\ \quad \quad 2 \\ + \quad \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{f)} \quad 3 \\ \quad \quad 3 \\ + \quad \quad 0 \\ \hline \\ \hline \end{array}$$

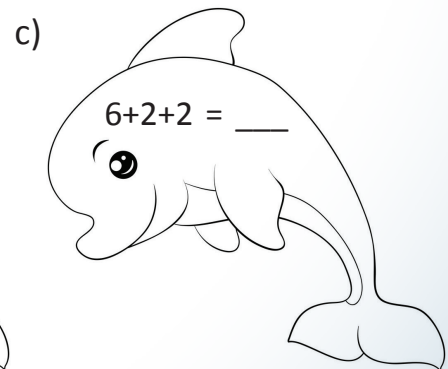
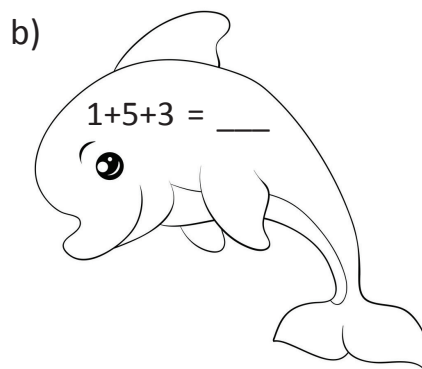
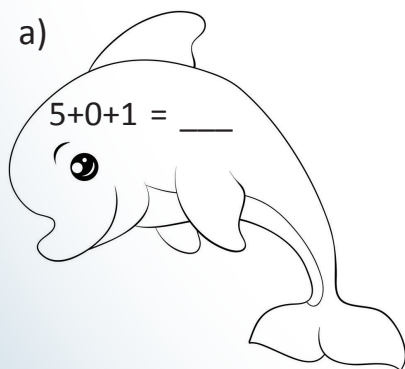
$$\begin{array}{r} \text{g)} \quad 1 \\ \quad \quad 4 \\ + \quad \quad 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h)} \quad 2 \\ \quad \quad 0 \\ + \quad \quad 2 \\ \hline \\ \hline \end{array}$$

3) Find the sum. Colour the boats as per your choice.



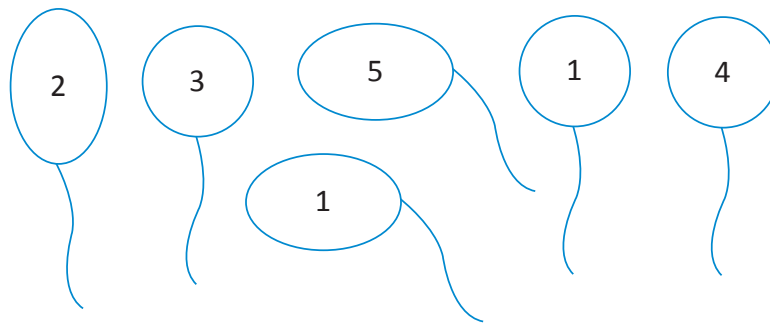
Dolphin sum



Teacher's sign & date _____

4) Add fun

Colour the round balloons blue and oval balloons orange. The balloons have numbers written on them.



How many balloons are round in shape? _____

How many balloons are oval in shape? _____

Find the sum of the numbers in the round balloons and oval balloons.

Round balloons	Oval balloons
$\square + \square + \square = \square$	$\square + \square + \square = \square$

Are the two sums equal? _____(Yes/No)

Lab Activity: Number cards can be used to make different combinations to get the same sum.

5) Math and language

Find out the number of letters each word has and find their sum. One is done for you.

Very Good	\square	+	\square	=	\square		
Thank you	\square	+	\square	=	\square		
Good morning	\square	+	\square	=	\square		
Be kind	\square	+	\square	=	\square		
Excellent work	\square	+	\square	=	\square		
Be Indian	\square	+	\square	=	\square		
God is one	\square	+	\square	+	\square	=	\square
Best of luck	\square	+	\square	+	\square	=	\square
I love India	\square	+	\square	+	\square	=	\square

6) Applications in real life

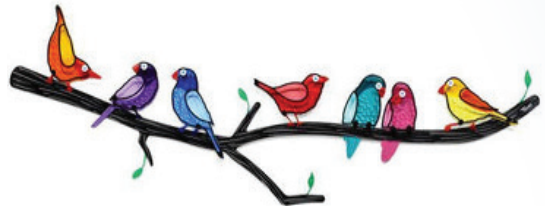
a) Navin had 5 kites. He gets 3 more kites. How many kites does Navin have now?

<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
----------------------	---	----------------------	---	----------------------



b) 7 birds were on a branch. 2 more birds joined them. How many birds are on the branch now?

<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
----------------------	---	----------------------	---	----------------------



c) A shopkeeper sold 2 pots in the morning and 6 pots in the evening.

How many pots did he sell during the day?

<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
----------------------	---	----------------------	---	----------------------



d) Vidya planted 2 rose saplings and 5 lily saplings in her garden. How many saplings did she plant in all?

<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
----------------------	---	----------------------	---	----------------------



Teacher's sign & date _____

7) Applications in real life

a) Arun had 4 marbles. Ashwin had 5 marbles. How many marbles do they have in all?

_____ =

_____ =

_____ =

<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

<input type="text"/>	<input type="text"/>



b) 5 students went to the zoo on Friday, 3 went on Saturday and 2 went on Sunday. How many students went to the zoo altogether?

_____ =

_____ =

_____ =

_____ =



c) Suja bought 3 chocolates. Her father gave her 6 chocolates. How many chocolates does Suja have now?

_____ =

_____ =

_____ =



d) In a Zoo, there are 4 lions, 2 elephants and 4 deer. How many animals are there in the Zoo?

_____ =

_____ =

_____ =

_____ =



e) Seven red apples and three green apples are in the basket. How many apples are there in the basket altogether?

_____ =

_____ =

_____ =



WORKSHEET

1) Observe the grid and fill in the boxes. Three have been done for you. Do the working in the space provided below:

+	0	1	2	3	4
5	5	6	7		
6					
7					
8					
9					

$5+0=5$	$5+1=6$	$5+2=7$		

2) Choose the correct answer:

- a) $6 + 2 =$ _____
i) 3 ii) 8 iii) 7
- b) _____ $+ 0 = 5$
i) 0 ii) 5 iii) 6
- c) $8 =$ _____
i) $2 + 5$ ii) $5 + 3$ iii) $6 + 3$
- d) $1 + 6 + 3 =$ _____
i) 7 ii) 9 iii) 10
- e) The sum of 0 and 9 is _____
i) 0 ii) 9 iii) 90

3) Higher Order Thinking Skills(HOTS):

Fill in the boxes with the correct number from the option box, so that you get the sum that the child is holding.

OPTION BOX

- a) _____ $+ 4$
 $2 +$ _____
 $5 + 2 +$ _____

3
6
9
8



b) $3 + \underline{\quad}$
 $\underline{\quad} + 8$
 $2 + \underline{\quad} + 3$

- 5
- 0
- 2
- 3



c) $6 + \underline{\quad}$
 $\underline{\quad} + 9$
 $4 + 3 + \underline{\quad}$

- 5
- 1
- 2
- 4



d) $8 + \underline{\quad}$
 $3 + 3 + \underline{\quad}$
 $\underline{\quad} + 0 + 4$

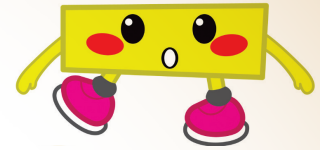
- 6
- 5
- 3
- 1



4) Doubles

$1 + 1 =$	$5 + 5 =$	$9 + 9 =$
$2 + 2 =$	$6 + 6 =$	$10 + 10 =$
$3 + 3 =$	$7 + 7 =$	$11 + 11 =$
$4 + 4 =$	$8 + 8 =$	$12 + 12 =$

Teacher's sign & date _____



SUBTRACTION OF SMALL NUMBERS

(Numbers upto 20)

LEARNING OUTCOMES

At the end of this lesson, children will be able to:

Perform subtraction by crossing out the objects, Subtract using number line and number strip, Subtract by arranging numbers both vertically and horizontally and application in real life.

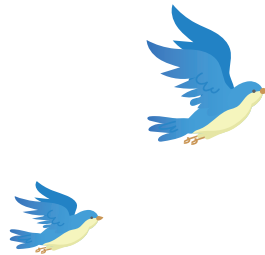
Introduction to subtraction

Concept:

- Subtraction means 'to take away'.
- The symbol for subtraction is – (minus).
- When we subtract two numbers the answer we get is called the 'difference'.



5 birds
were sitting
on a tree



2 birds
flew away.



3 birds
are left.

Thus, if we take away 2 from 5, we get 3.

This statement can be written as $5 - 2 = 3$

or

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

3 is called as the difference between 5 and 2.



Subtraction by crossing out the objects

You can also cross out the objects to subtract. Look at the example given below:

7 toffees are given. To take away 3 toffees, let us cross out them.

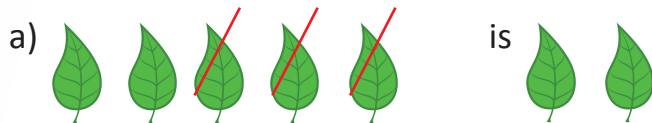


Thus, we are left with 4 toffees. So, $7 - 3 = 4$.



EXERCISE 4.1

1. Look at the pictures and fill in the blanks



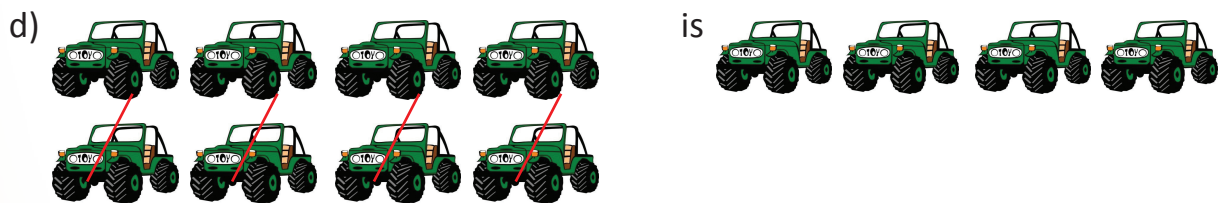
$$5 - 3 = \underline{\hspace{2cm}}$$



$$4 - 1 = \underline{\hspace{2cm}}$$



$$6 - 6 = \underline{\hspace{2cm}}$$



$$8 - 4 = \underline{\hspace{2cm}}$$



$$7 - 4 = \underline{\hspace{2cm}}$$



$5-0 = \underline{\hspace{2cm}}$



$6-2 = \underline{\hspace{2cm}}$



$10-5 = \underline{\hspace{2cm}}$

2. Subtract by crossing out and fill in the box

a) $6-4 = \square$



b) $9-5 = \square$



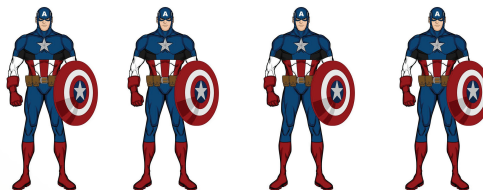
c) $5-2 = \square$



d) $8-7 = \square$



e) $4-4 = \square$



f) $10 - 8 = \square$



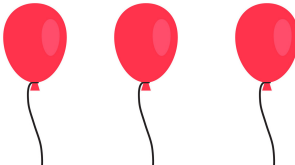
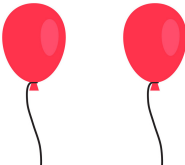

g) $3 - 0 = \square$

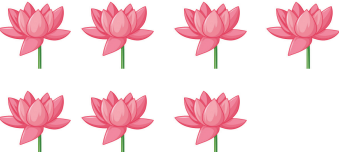
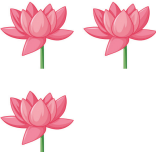
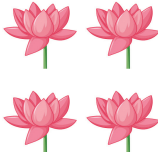


h) $7 - 1 = \square$







3. Observe the pictures given and write the subtraction statement

a)  -  =  $\square - \square = \square$




b)  -  =  $\square - \square = \square$

c)  -  = $\square - \square = \square$

d)  -  =  $\square - \square = \square$

e)  -  = 

- =

f)  -  = 

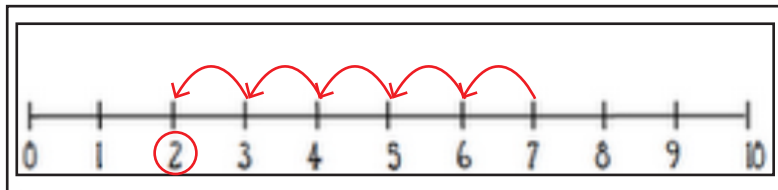
- =

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Subtraction using number line

Example: Subtract 5 from 7

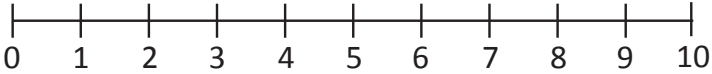
To subtract using number line, start from 7 and jump backwards 5 steps.

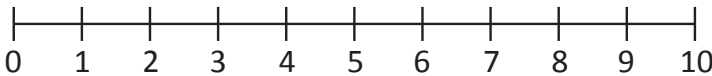



Here, we reach at 2.

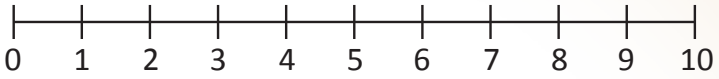
So, $7 - 5 = 2$.

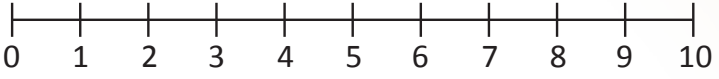
4. Subtract the following using number line

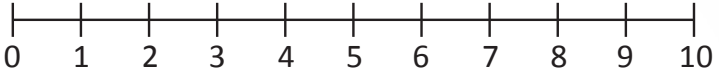
a) $8 - 1 =$ 

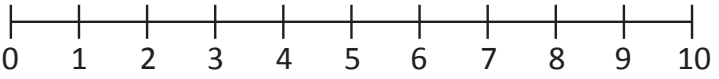
b) $6 - 3 =$ 

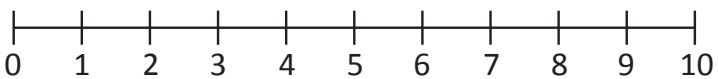
c) $9 - 7 =$ 

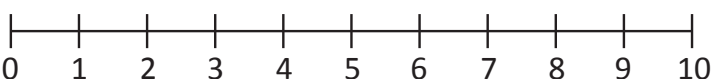
d) $10 - 6 =$ 

e) $5 - 2 =$ 



f) $9 - 4 =$ 

g) $4 - 2 =$ 

h) $8 - 7 =$ 

i) $10 - 3 =$ 

Subtraction by drawing and crossing out objects

<p>Example 1: Subtract 6 - 2</p> <p>Step 1: Draw 6 lines.</p> <p>Step 2: Cross out 2 lines.</p>  <p>Step 3: Count the lines leftover.</p> <p>$6 - 2 =$ <input type="text" value="4"/></p>	<p>Example 2: Subtract 5 from 8</p> <p>Step 1: Draw 8 circles.</p> <p>Step 2: Cross out 5 circles.</p>  <p>Step 3: Count the circles leftover.</p> <p>$8 - 5 =$ <input type="text" value="3"/></p>
--	--



EXERCISE 4.2

Subtract by crossing out. (Draw lines or circles)

a. $5 - 4 =$

b. $7 - 1 =$

c. $8 - 8 =$

d. $6 - 0 =$

e. $4 - 2 =$

f. Subtract 3 from 6

- =

g. Subtract 5 from 7 $\square - \square = \square$

h. 9 less than 10
 $\square - \square = \square$

i. 2 less than 9
 $\square - \square = \square$

j. 6 minus 4
 $\square - \square = \square$



Fun activity

Find the difference. Use the code to colour the picture.

black - 3
blue - 6
yellow - 2
red - 5
green - 4
brown - 7

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We can also subtract numbers by arranging them vertically. Look at the following examples:

<p>Example 1: Subtract 7 – 5 Step 1: Draw 7 lines. Step 2: Cross out 5 lines.</p>  <p>Step 3: Count the lines leftover.</p> $\begin{array}{r} 7 \\ - 5 \\ \hline 2 \end{array}$	<p>Example 2: Subtract 3 from 4 Step 1: Draw 4 circles. Step 2: Cross out 3 circles.</p>  <p>Step 3: Count the circles leftover.</p> $\begin{array}{r} 4 \\ - 3 \\ \hline 1 \end{array}$
---	---



EXERCISE 4.3

Subtract by crossing out: (Draw lines or circles)

a)
$$\begin{array}{r} 5 \\ - 2 \\ \hline \end{array}$$

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

c)
$$\begin{array}{r} 4 \\ - 1 \\ \hline \end{array}$$

d)
$$\begin{array}{r} 9 \\ - 4 \\ \hline \end{array}$$

e)
$$\begin{array}{r} 7 \\ - 2 \\ \hline \end{array}$$

f)
$$\begin{array}{r} 8 \\ - 7 \\ \hline \end{array}$$

g) subtract 0 from 9

h) subtract 4 from 5

i) subtract 6 from 9

j) 3 less than 4

k) 5 less than 7

l) 8 minus 8

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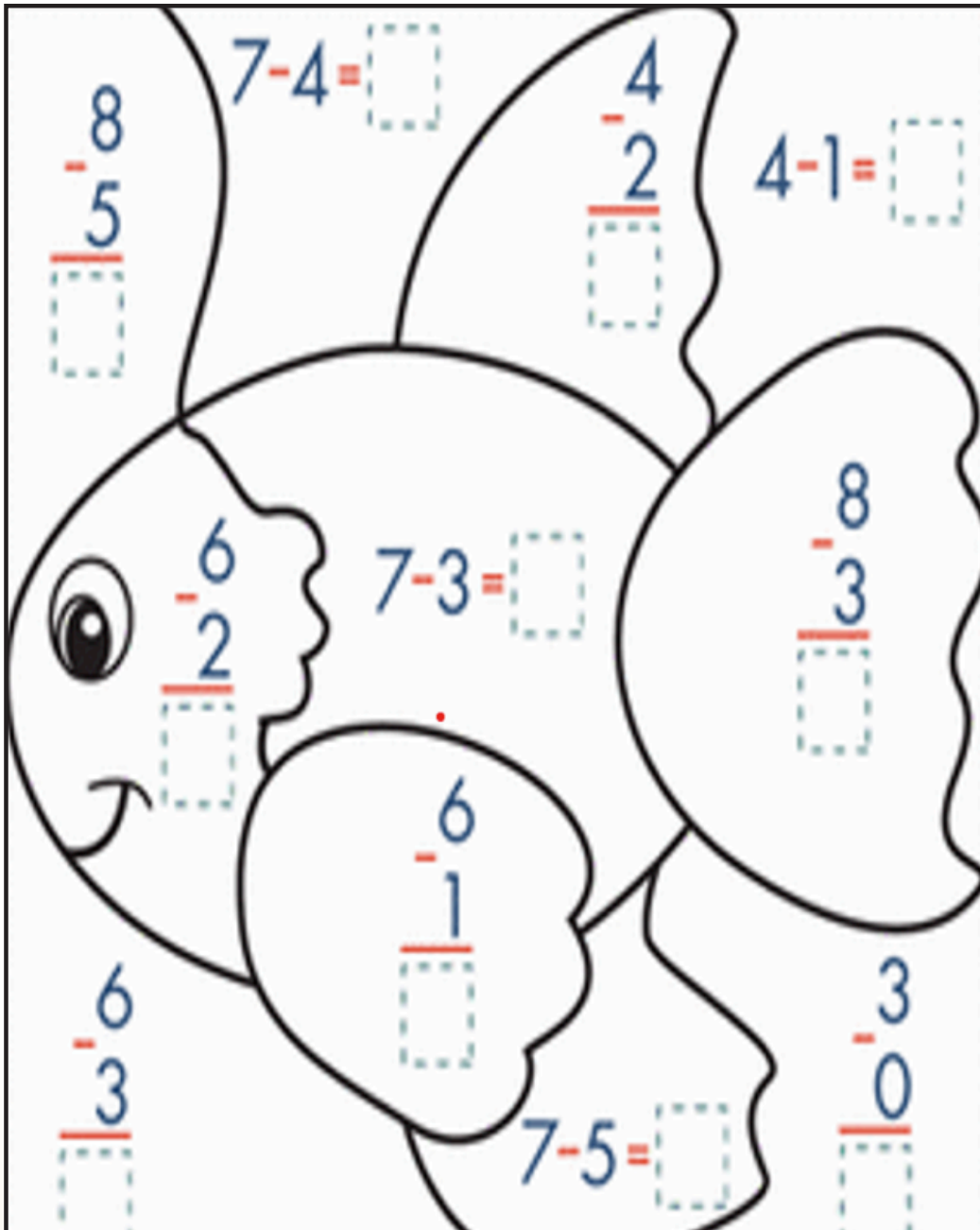
Higher Order Thinking Skills(HOTS)

1. Ravi ate 6 biscuits from a packet of biscuits. 4 biscuits were remaining in the pack. How many biscuits were there in the packet?

Ans = _____ biscuits were there in the packet originally.

Fun activity

Find the difference and use the code to colour the picture: 2- Orange, 3 – Blue, 4- Green, 5 – Yellow.

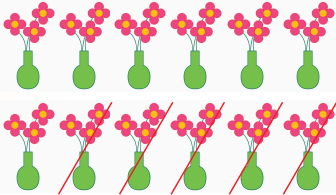
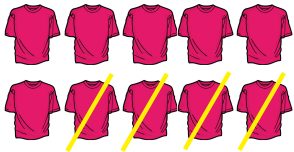
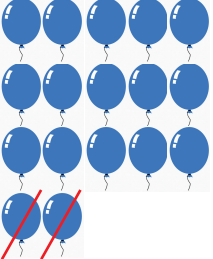
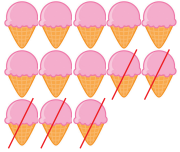
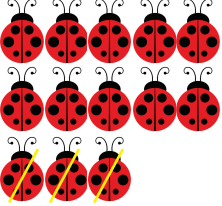
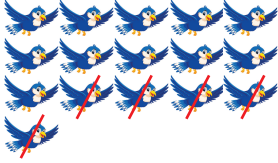
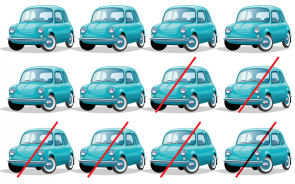
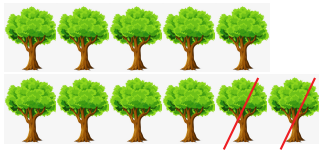
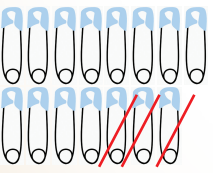



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WORKSHEET A

1. Look at the picture and complete the subtraction statement:

<p>Example</p>  <p>$\underline{12} - \underline{5} = \underline{7}$</p>	 <p>___ - ___ = ___</p>
 <p>___ - ___ = ___</p>	 <p>___ - ___ = ___</p>
 <p>___ - ___ = ___</p>	 <p>___ - ___ = ___</p>
 <p>___ - ___ = ___</p>	 <p>___ - ___ = ___</p>
 <p>___ - ___ = ___</p>	 <p>___ - ___ = ___</p>

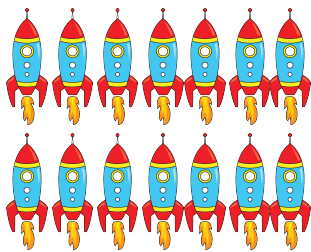
2. Subtract by crossing out



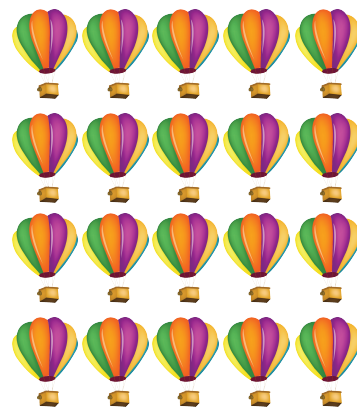
a) $10 - 3 =$ _____



b) $18 - 7 =$ _____



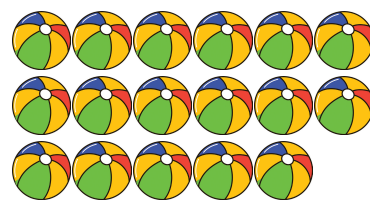
c) $14 - 4 =$ _____



d) $20 - 8 =$ _____

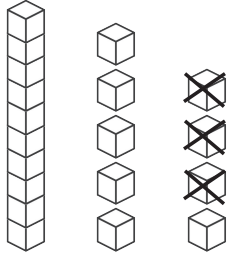
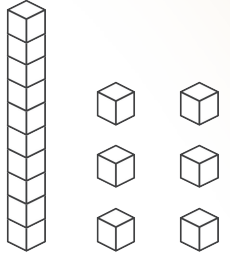
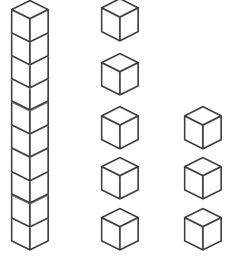
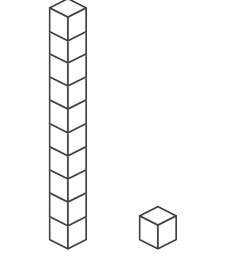
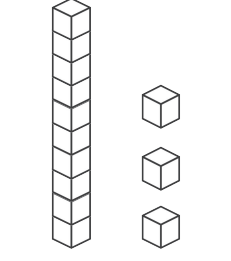
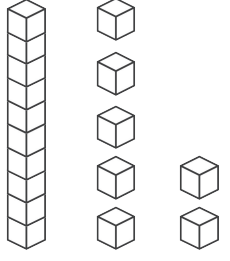
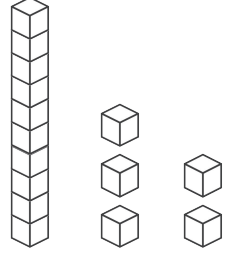
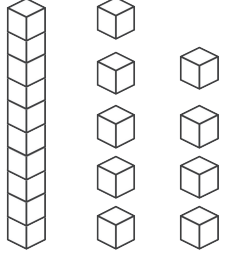
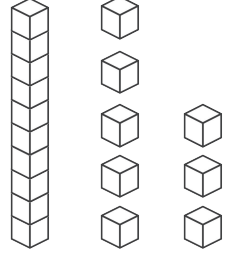
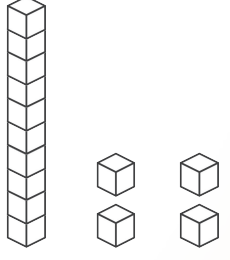


e) $16 - 3 =$ _____



f) $17 - 7 =$ _____

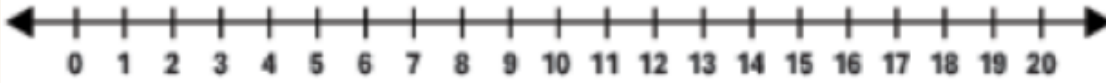
3. Find the difference by crossing out. One is done for you

$\begin{array}{r} 19 \\ - 3 \\ \hline 16 \end{array}$ 	$\begin{array}{r} 16 \\ - 2 \\ \hline \end{array}$ 
$\begin{array}{r} 18 \\ - 6 \\ \hline \end{array}$ 	$\begin{array}{r} 11 \\ - 1 \\ \hline \end{array}$ 
$\begin{array}{r} 13 \\ - 2 \\ \hline \end{array}$ 	$\begin{array}{r} 17 \\ - 2 \\ \hline \end{array}$ 
$\begin{array}{r} 15 \\ - 4 \\ \hline \end{array}$ 	$\begin{array}{r} 19 \\ - 6 \\ \hline \end{array}$ 
$\begin{array}{r} 18 \\ - 3 \\ \hline \end{array}$ 	$\begin{array}{r} 14 \\ - 1 \\ \hline \end{array}$ 

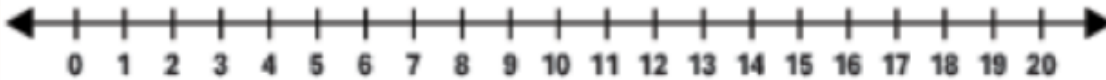
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4. Finish the number sentences. Use the number line for help:

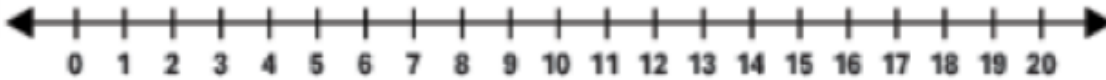
a. $18 - 11 =$ _____



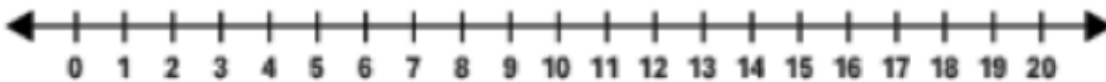
b. $12 - 6 =$ _____



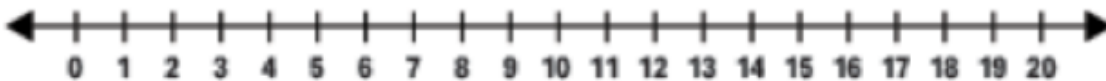
c. $18 - 4 =$ _____



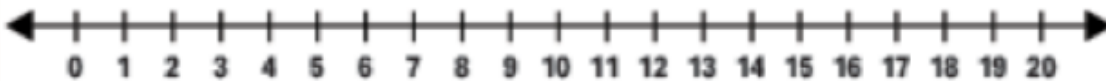
d. $13 - 5 =$ _____



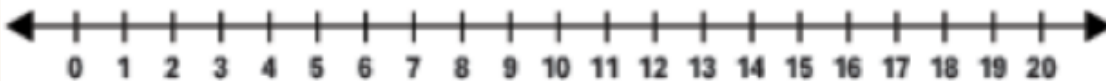
e. $19 - 10 =$ _____



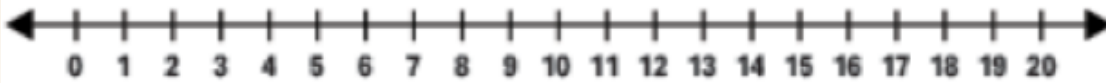
f. $14 - 5 =$ _____



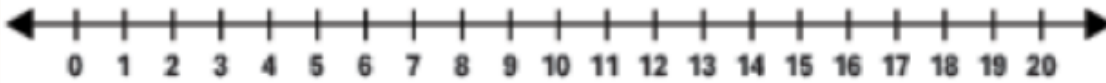
g. $17 - 12 =$ _____



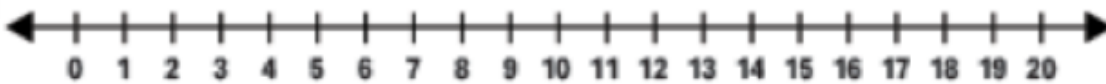
h. $20 - 15 =$ _____



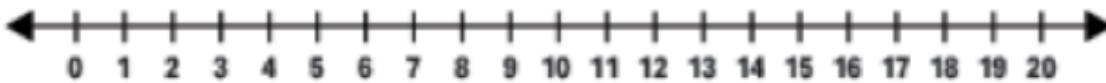
i. $19 - 8 =$ _____



j. $11 - 5 =$ _____



k. $17 - 7 =$ _____



5. Applications in real life

a. A balloon seller had 9 balloons. 3 balloons burst.

How many balloons remain with him now?

Answer: _____

Did you know? The first balloon was made in the year 1824.



b. Raju had 8 pencils. He gave 3 pencils to his friend.

How many pencils are left with him?

Answer: _____

Did you know? The word pencil comes from the French word "pincel" meaning a small paint brush.



c. Abi had 7 marbles. He lost 4 of them.

How many marbles are left with him?

Answer: _____

Did you know? Marbles can be made from glass, clay, steel or plastic.



d. Riya had 8 lollipops. She ate 3 lollipops.

How many lollipops were left with her?

Answer: _____

Did you know? Healthy lollipops are called Zollipopps.



e. Sita had 10 chocolates. She ate 3 chocolates.

How many chocolates does Sita have now?

Answer: _____

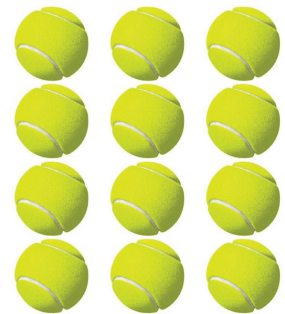
Did you know? Chocolates are made from roasted cocoa beans .



f. Sachin has 12 balls. He gave 4 balls to his friend.

How many balls are remaining with him?

Answer: _____



g. There are 10 vans in a school. 5 vans are sent to pick up children.

How many vans are not used for picking up children?

Answer: _____

Teacher's sign & date _____



h. Gopi had 12 books in his bag. 6 books fell out of his bag.

How many books does he have in his bag now?

Answer: _____

i. There were 11 birds sitting on a tree. 7 birds flew away. How many birds were left on the tree?

Answer: _____

j. Reema planted 17 saplings. Her friend Ram planted 8.

How many more plants did Reema plant?

Answer: _____

k. Shyam had 15 fruits in a basket. Among them 7 were apples and the rest were oranges.

How many oranges were there in the basket?

Answer: _____

Value based question

Rama and her friends went to the beach. There were 12 plastic bottles lying on that part of the beach. They picked up 8 bottles and dropped them in the dustbin. How many plastic bottles are still lying on the beach?

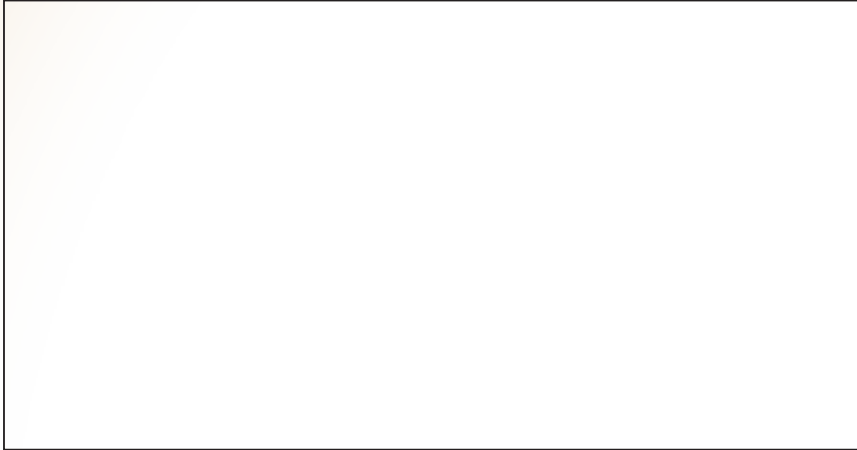
Answer: _____

Is it good to use plastic bottles? Yes/No

Why do you think so? _____

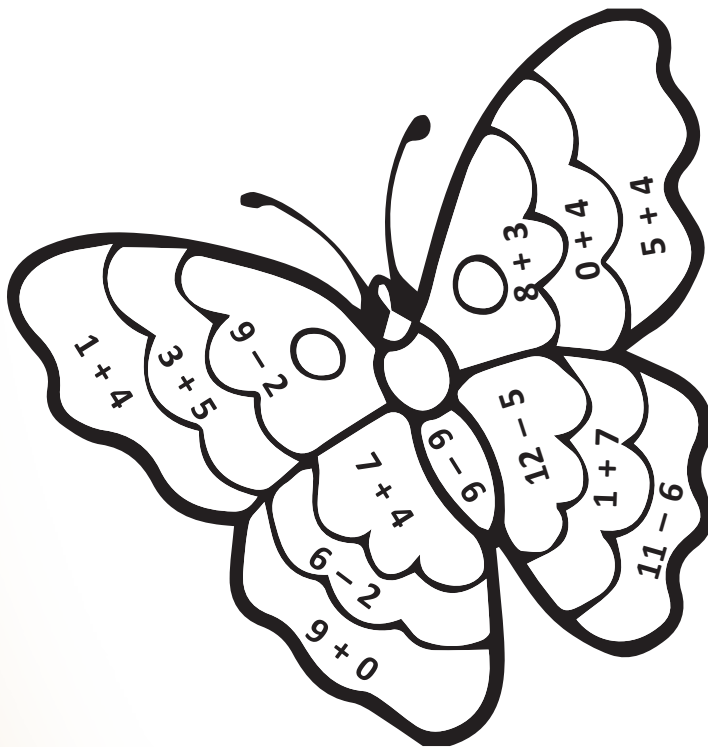
How can you help to keep the beach clean?

Draw a picture of a clean beach and colour it:



Fun activity

Add or subtract as given and colour the picture using the colour code:

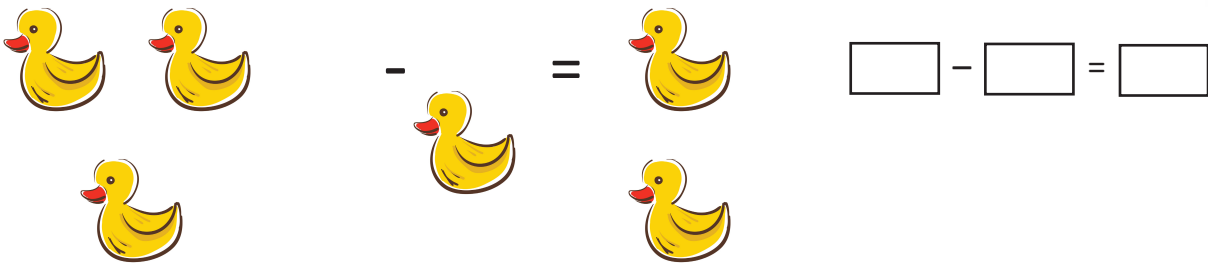
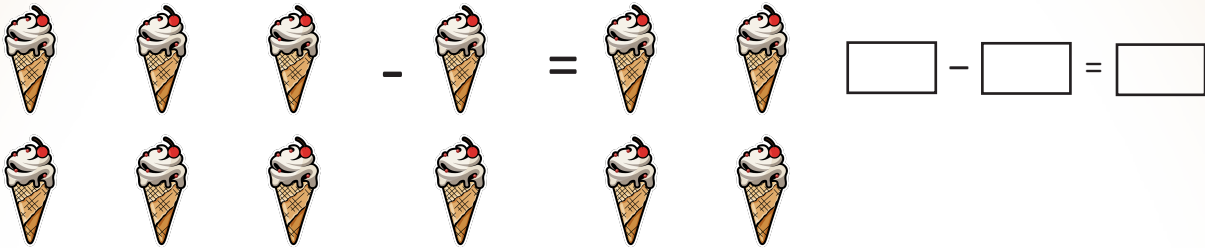


- brown - 0
- purple - 9
- orange - 4
- yellow - 7
- red - 8
- green - 5
- pink - 11

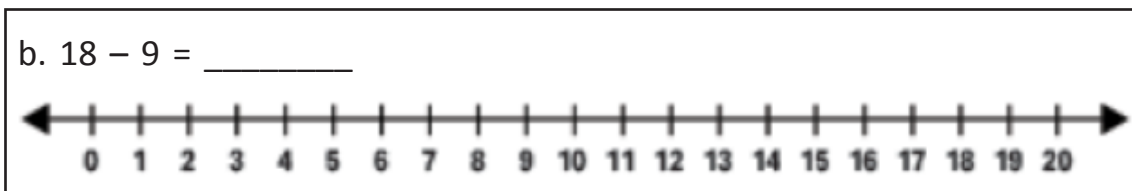
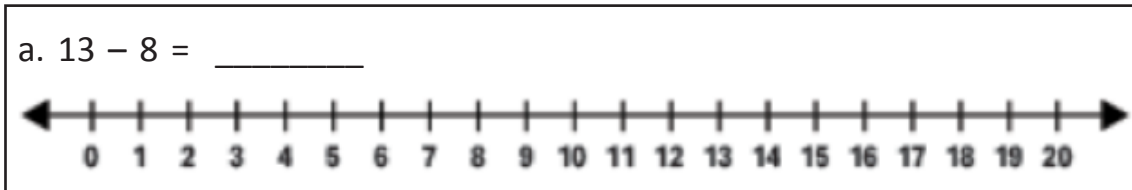
Teacher's sign & date _____

WORKSHEET B

1. Observe the pictures given and write the subtraction statement



2. Finish the number sentences. Use the number line for help:



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SHAPES AND PATTERNS



LEARNING OUTCOMES:

At the end of this lesson, children will be able to:

Identify the types of lines, Shapes-Square, Rectangle, Triangle, Circle, Oval and Diamond, Trace the lines, Identify patterns made by objects, shapes and letters, Also identify patterns in real life.

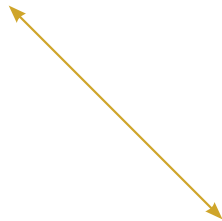
Types of line

Lines can be:

1) Straight lines



Horizontal line

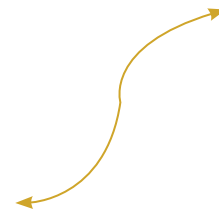
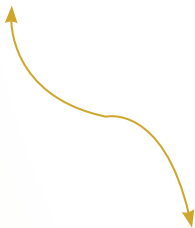


Slanting line



Vertical line

2) Curved lines



Try these

Draw a lamp without using curved lines.

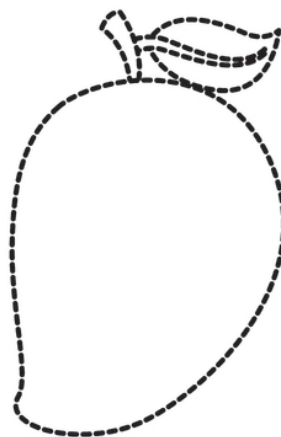
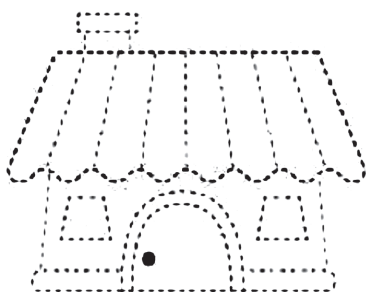
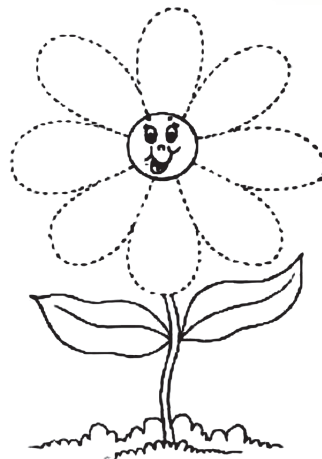
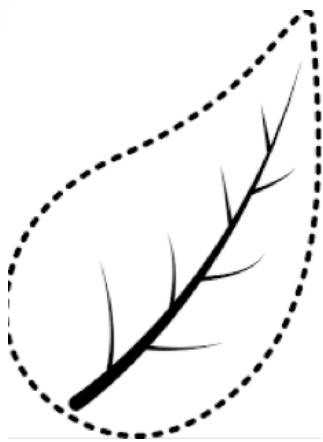




EXERCISE 5.1

Straight lines and curved lines

Join the dots in the following pictures and colour it. Identify the kind of lines used to draw the figure.



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Shapes

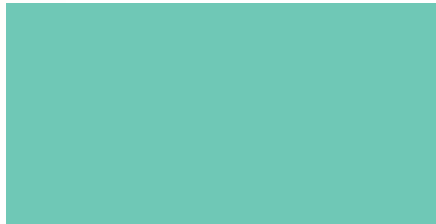
Things around us are of different shapes.

Square



A square has 4 straight lines, 4 sides and 4 corners.
All the sides of a square are equal.

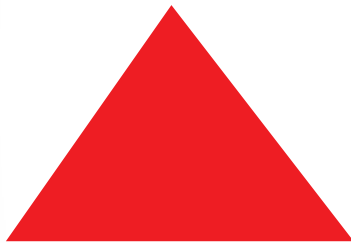
Rectangle



A rectangle has 4 straight lines, 4 sides and 4 corners.

The opposite sides of a rectangle are equal.

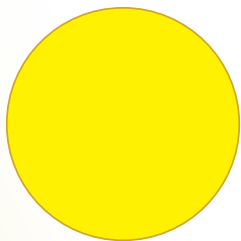
Triangle



A triangle has 3 straight lines, 3 sides and 3 corners.

All the sides of a triangle may or may not be equal.

CIRCLE



It is made of a curved line.

It has no sides and corners.

OVAL



An oval looks like a flattened circle. It has no sides or corners.

It is made of a curved line.

Experiential Learning

Try to identify the shapes of the objects around you.

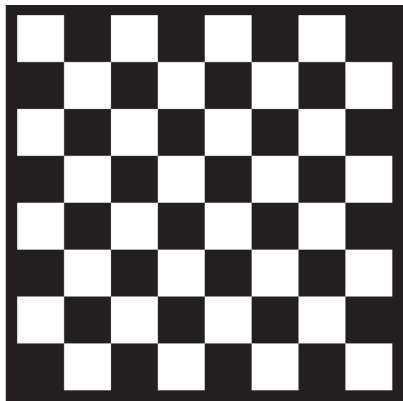
List a few objects below with their shape.

S.No.	Objects	Shapes	S.No.	Objects	Shapes

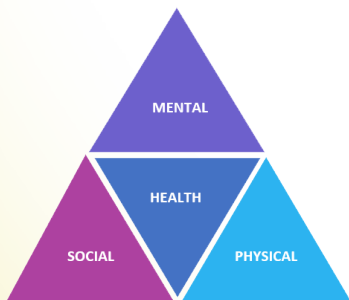
Draw a kite using your ruler and colour it.

Think

Chess is an indoor game.



- Do you have a chess board at home?
- What is the shape of a chess board?
- How many black and white squares are there in it?
Black squares _____ White squares _____
- Are the number of black squares equal to the number of white squares? (Yes / No)
- How many squares are there in all? _____



Count the number of triangles : _____

Try to draw triangles in your own way and colour it.



EXERCISE 5.2

Fun colouring

Identify the different shapes and colour it as instructed below.

Colour the  red ,

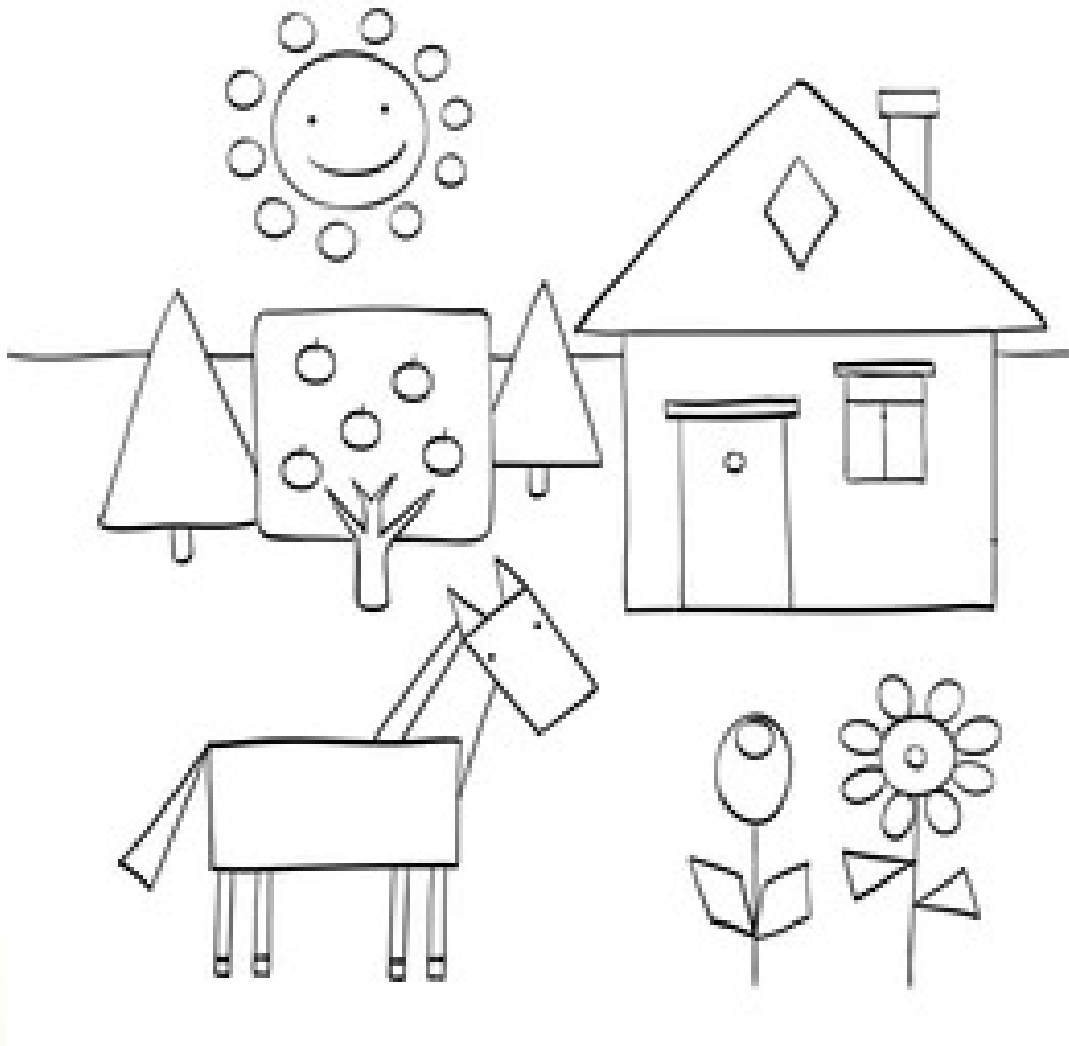
the  pink

Colour the  green ,

the  brown

Colour the  blue ,

the  yellow



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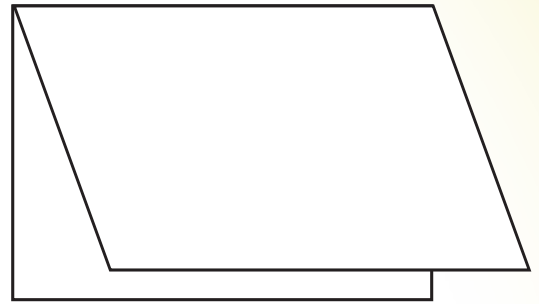


Activity

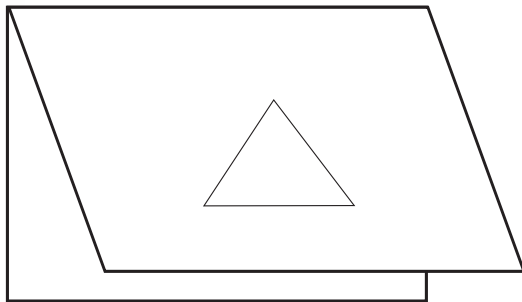
1. Take a sheet of paper.



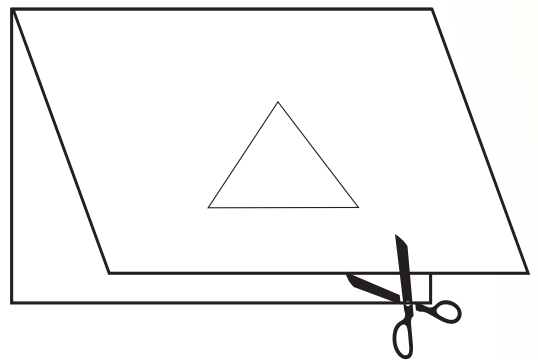
2. Fold it into half



3. Draw a shape on the paper, say a \triangle .

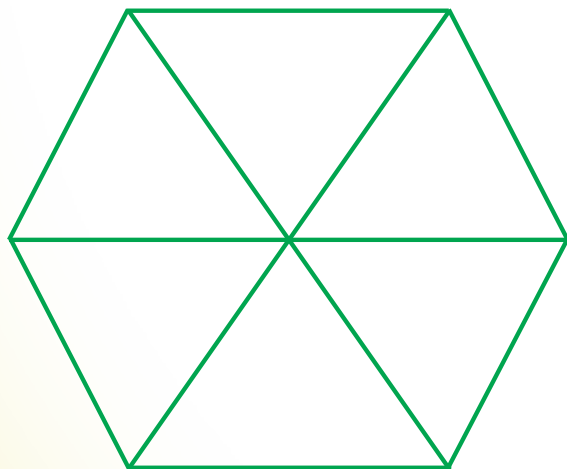


4. Cut out the shape

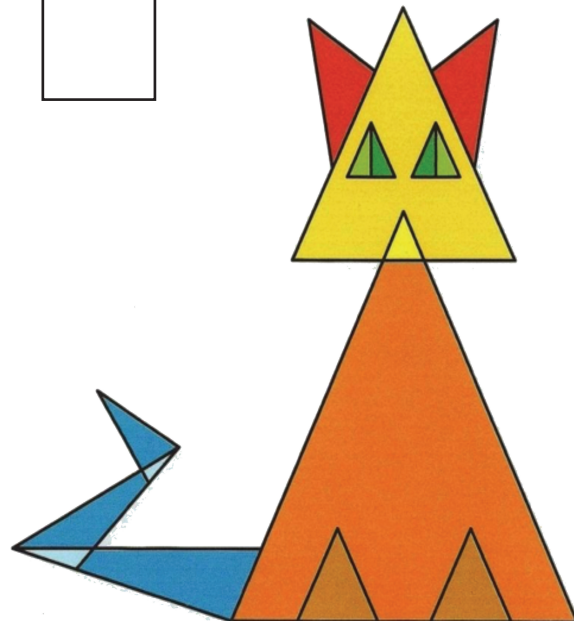


We get figures of same size and shape.

Colour the triangles using different colours



Count the triangles in the cat



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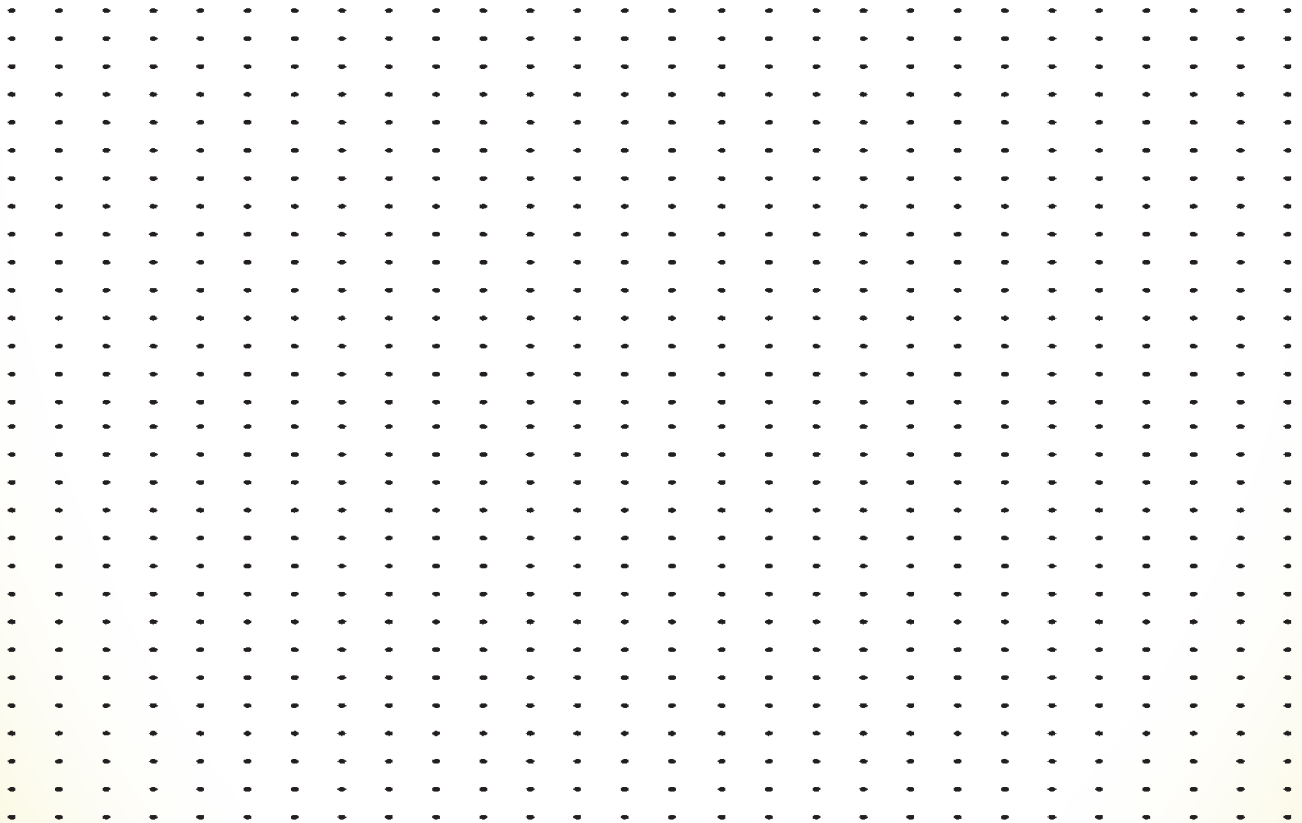
Arts Integrated Activity

Draw an animal or a bird using the shapes that you have learnt.



EXERCISE 5.3

Join the dots to form a square, rectangle, triangle, circle and an oval.



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WORKSHEET

1) Tick the object that cannot roll



2) Circle the object that is heavier than a brick



3) Which two figures when put together form a circle?



Experiential learning

Look around the objects in your living room and relate the shapes that you have learnt with the objects. Which is the most commonly found shape?

Design your own biscuit and colour it.

Patterns

A pattern is formed when anything, be it a shape, a picture, an object or a number is repeated in a particular sequence.

Nature is all about patterns.

Look at the wonderful patterns created by God.



In nature, patterns can be seen in flowers, leaves, fruits, birds, animals, waves and so on.



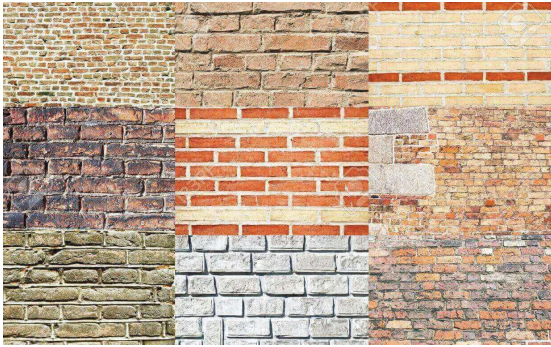
Experiential Learning

Visit a farm/garden/zoo. Observe the patterns in that environment.

Speak a few lines on the patterns observed by you.

Observe the pattern in a plant in your school garden. Discuss the pattern with your teacher.

Observe the pattern in the following and write a note on these.



Bricks on the wall



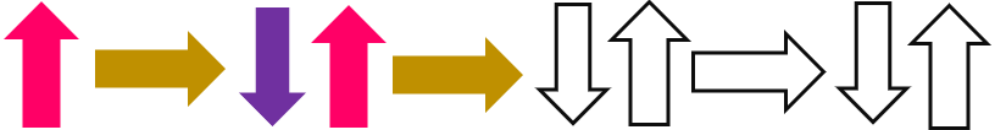
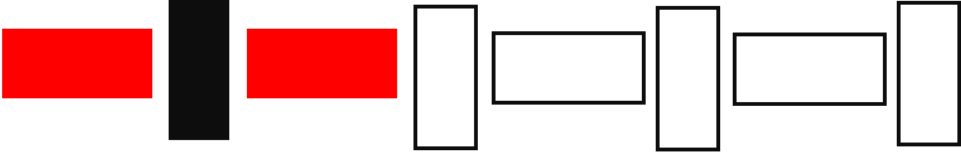




Patterns in rangoli

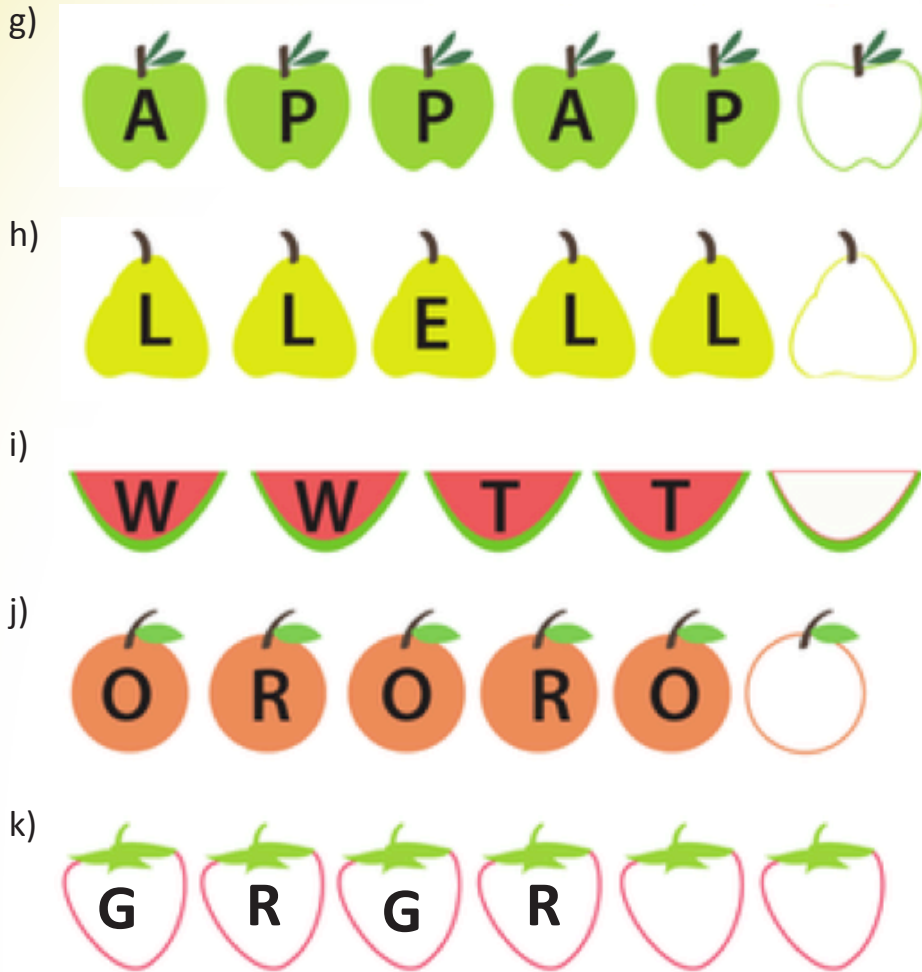


Patterns in dresses

I. Complete the pattern sequence

- a) 
- b) 
- c) 
- d) 
- e) 
- f) 





Art Integrated Learning: Thumb Pattern

Create your own thumb pattern by dipping your finger in different colours.

Do you know?

Your finger prints make a unique pattern, which no one in the world has.



Observe the pattern and fill in the blanks

- 1) A C E G I ___ ___
- 2) AB CD EF GH IJ ___ ___
- 3) Z Y X W ___ ___ ___
- 4) ↖ ↗ ↘ ↙ ___ ___ ___
- 5) 11 12 13 14 ___ ___ ___

- 6) 1 3 5 7 _____ _____
- 7) 10 20 30 40 _____ _____
- 8) 1 22 333 4444 _____ _____




My hand pattern




Dip your hand in any poster colour. Create your hand pattern using different colours as shown in the picture.






“A helping hand can change the world”.

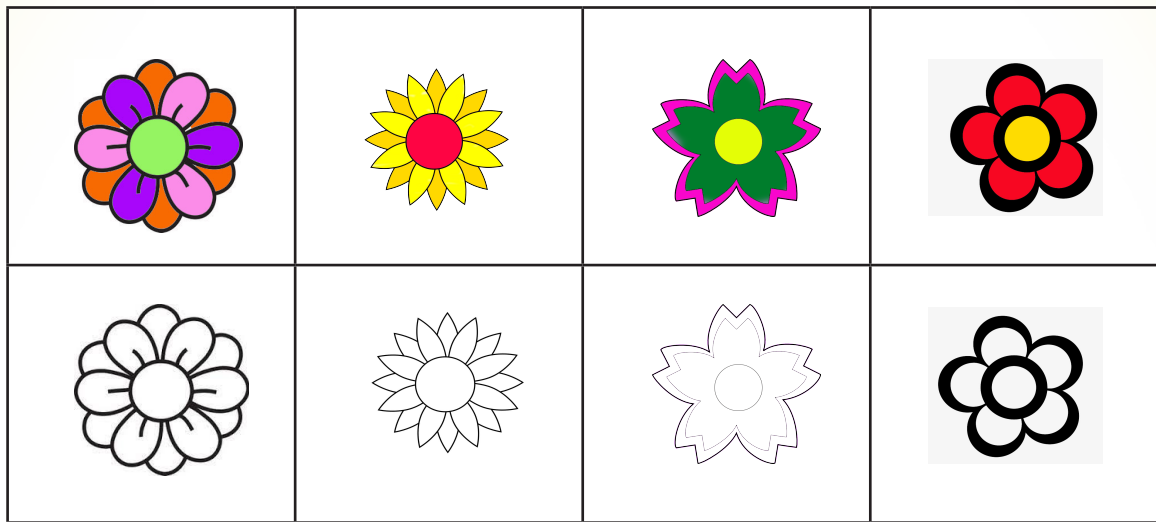
1) Higher Order Thinking Skills (HOTS)

a)    _____

b)    _____

c)    _____

2) Observe the pattern and colour the figures



3) Try to draw patterns on the dress to create a design.



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NUMBERS UPTO 100



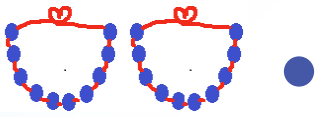
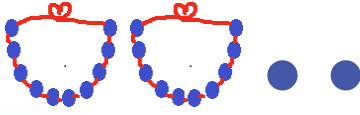
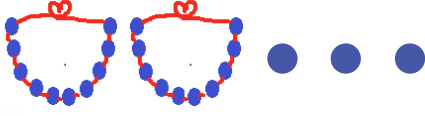
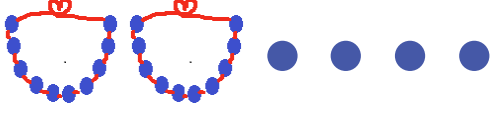
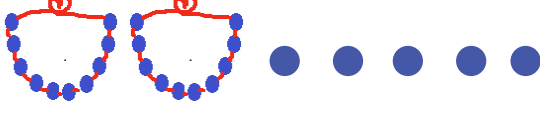
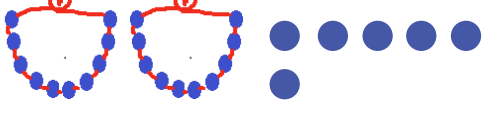
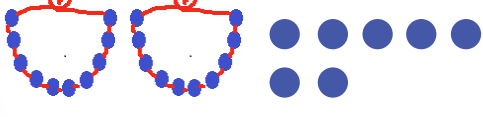


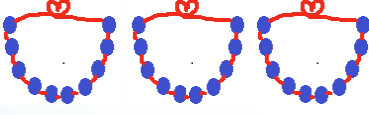
Learning Outcomes:

At the end of this lesson, children will be able to:
 Build numbers up to 100, Write numbers and number names, Write expanded form and standard form, Identify before, after and between numbers, Compare numbers, Ring the smallest and the greatest number, Arrange numbers in increasing and decreasing order and Understand the place value of numbers in a 2 digit number.

In the earlier chapters, you have learnt about the bundles of ten (or) groups of ten. Let us recollect.

TENS			
		1 ten	10
		2 tens	20
		3 tens	30
		4 tens	40
		5 tens	50
		6 tens	60
		7 tens	70
		8 tens	80
		9 tens	90
		10 tens	100

Numbers 21-30

	2 tens and 1 one	21	Twenty-one
	2 tens and 2 ones	22	Twenty-two
			
			
			
			
			
			
			
			



EXERCISE 6.1

1. Write the number and number name

a)  - _____

b)  - _____

c)  - _____

d)  - _____

2. Write the numeral for the given number name

a) Twenty-one - _____

b) Twenty-eight - _____

c) Thirty - _____

d) Twenty-three - _____

3. Fill in the missing numerals :












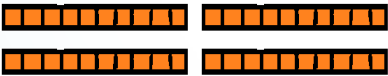
4) Draw the beads to show your favourite number between 21 and 30 and colour the beads.













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Numbers 31 - 40

	3 tens and 1 one	31	Thirty-one
	3 tens and 2 ones	32	Thirty-two
			
			
			
			
			
			
			
			

Numbers 41 - 50

	4 tens and 1 one	41	Forty-one
	4 tens and 2 ones	42	Forty-two
			
			
			
			
			
			
			
			



EXERCISE 6.2

1. Write the number and the number name

a) - T O _____

b) - T O _____

c) - T O _____

d) - T O _____

e) - T O _____

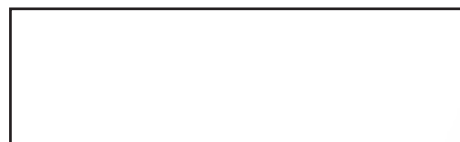
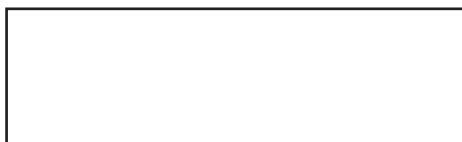
f) - T O _____

2. Draw the blocks to show the given numerals

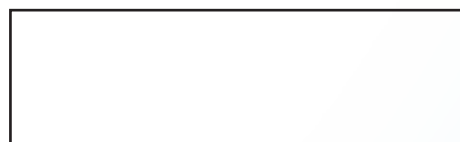
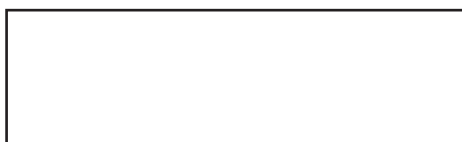
a) T O
3 8 -

T

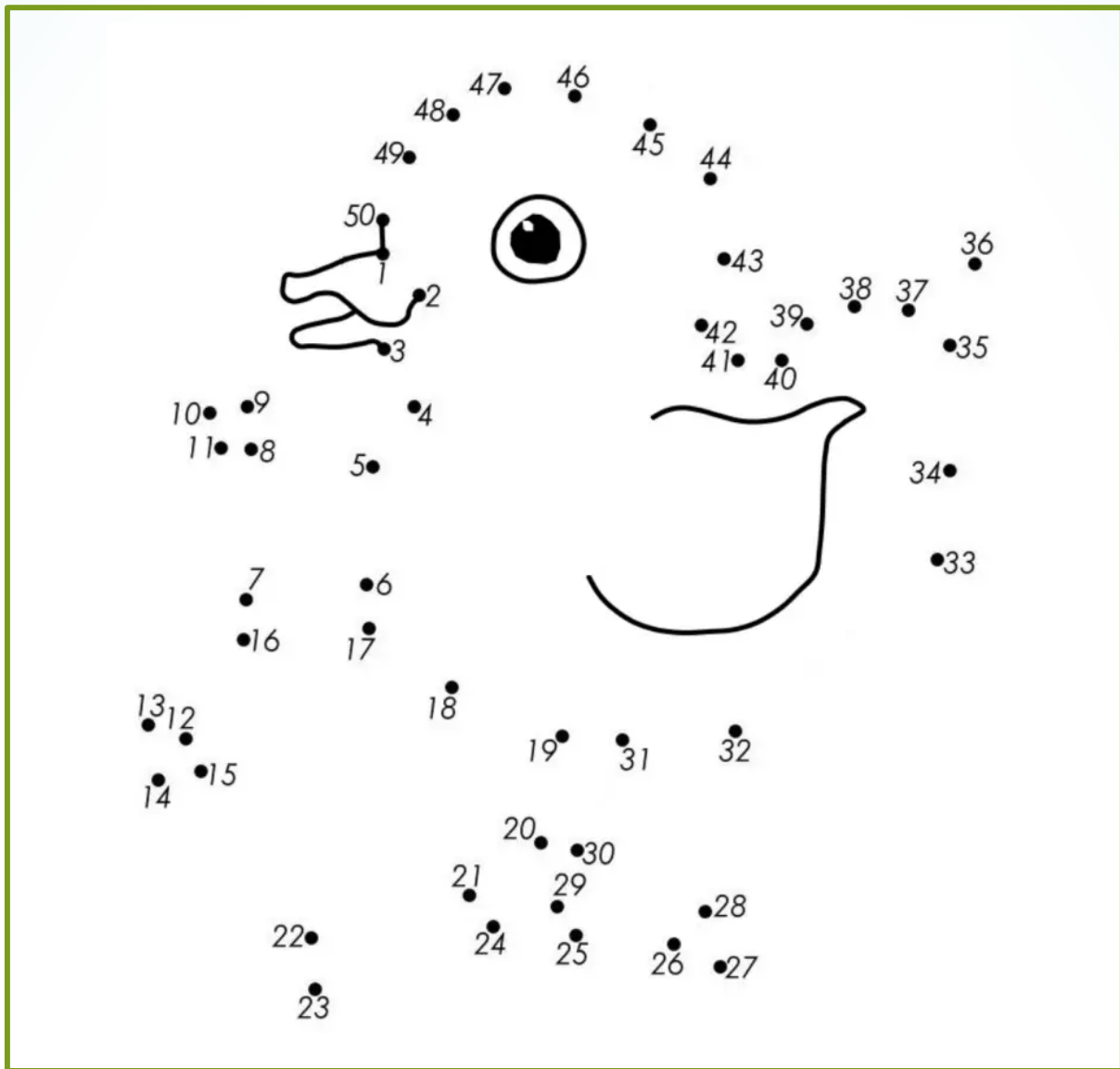
O



b) T O
4 5 -



3. Join the dots and colour the picture



4. Match the following

4 tens 6 ones
3 tens 8 ones
2 tens 4 ones
1 ten 7 ones
4 tens 2 ones

24
46
42
38
17

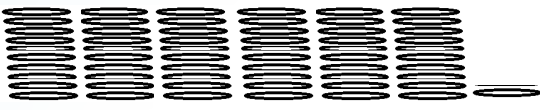
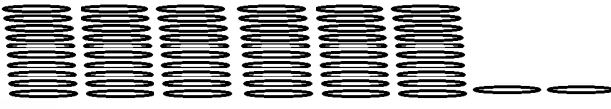





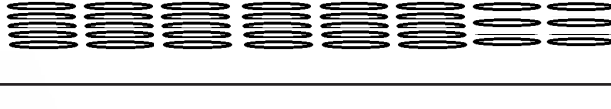
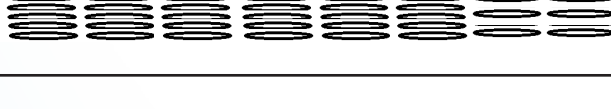

$40 + 2$
$20 + 4$
$30 + 8$
$10 + 7$
$40 + 6$

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Numbers 51 - 60

	5 tens and 1 one	51	Fifty-one
	5 tens and 2 ones	52	Fifty-two
			
			
			
			
			
			
			
			

Numbers 61 - 70

	6 tens and 1 one	61	Sixty-one
	6 tens and 2 ones	62	Sixty-two
			
			
			
			
			
			
			
			



EXERCISE 6.3

1. Write the number and number names

a)  —

T	O
---	---

b)  —

T	O
---	---

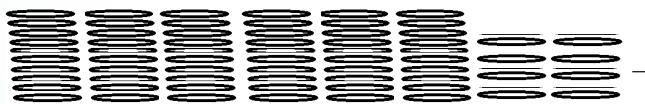
2. Fill in the missing numbers

1						7			
		13					18		
	22				26				
		33							40
41				45					
								59	

3. Write the number and number names

a)  —











T	O
---	---

b)  —

T	O
---	---

Teacher's sign & date _____

Numbers 71 - 80

	7 tens and 1 one	71	Seventy-one
	7 tens and 2 ones	72	Seventy-two
			
			
			
			
			
			
			
			



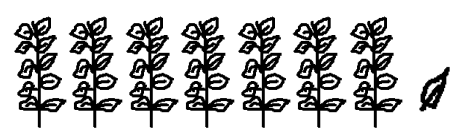




WORKSHEET A

1) Show the numbers on the abacus:

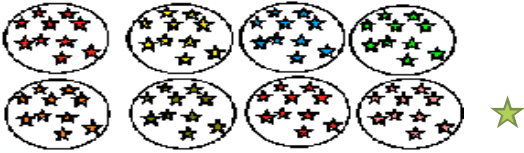
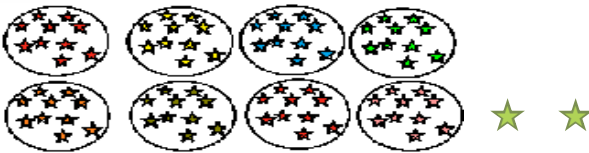
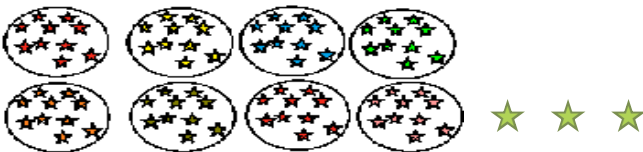
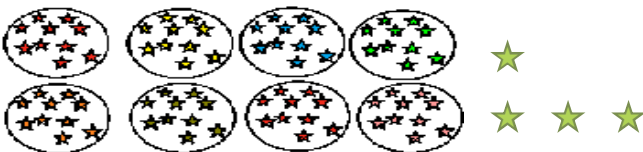
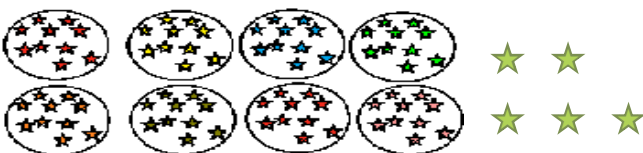
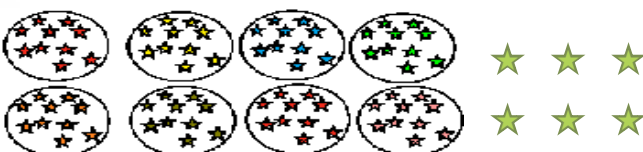
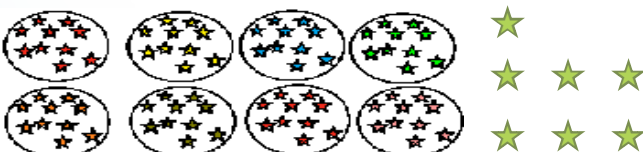
<p>a) 59 -</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;">T</td> <td style="text-align: center; padding: 0 10px;">O</td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> </tr> </table>	T	O					<p>b) 71-</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;">T</td> <td style="text-align: center; padding: 0 10px;">O</td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> </tr> </table>	T	O					<p>c) 64 -</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;">T</td> <td style="text-align: center; padding: 0 10px;">O</td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> </tr> </table>	T	O				
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T	O																			
T	O																			
<p>d) 38 -</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;">T</td> <td style="text-align: center; padding: 0 10px;">O</td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> </tr> </table>	T	O					<p>e) 45-</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;">T</td> <td style="text-align: center; padding: 0 10px;">O</td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> </tr> </table>	T	O					<p>f) 26 -</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;">T</td> <td style="text-align: center; padding: 0 10px;">O</td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; height: 80px;"></td> </tr> <tr> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> <td style="text-align: center; border-left: 1px solid black; border-right: 1px solid black; width: 50px;"></td> </tr> </table>	T	O				
T	O																			
T	O																			
T	O																			

2) Draw lines to match the numbers

Objects	Numbers
	39
	58
	23
	47
	71

Teacher's sign & date _____

Numbers 81 - 90

	8 tens and 1 one	81	Eighty-one
	8 tens and 2 ones	82	Eighty-two
			
			
			
			
			



EXERCISE 6.4

1) Write the number and number name

a) \square \square _____

b) \square \square _____

2) Write the number and number name

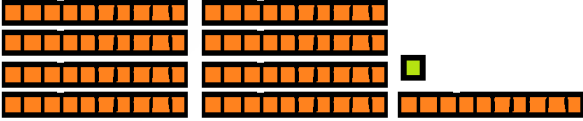
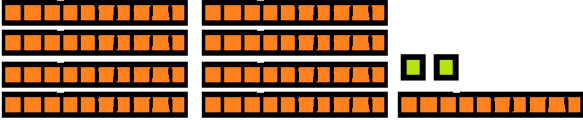
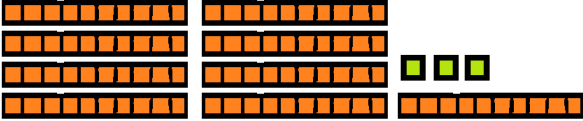
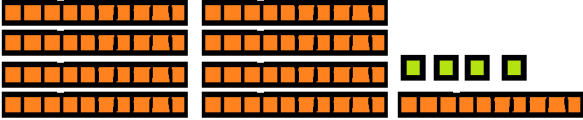
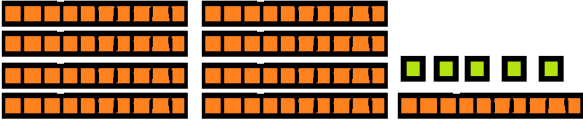
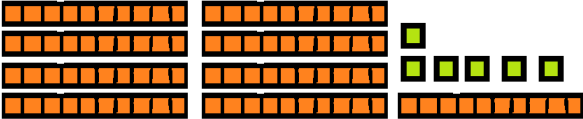
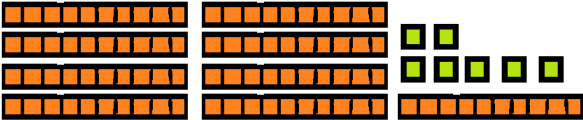
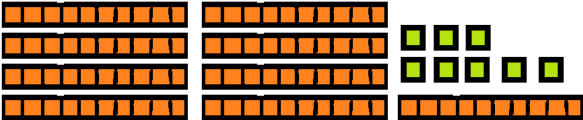
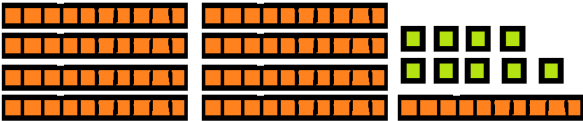
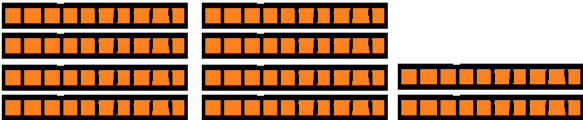
a) \square \square _____

b) \square \square _____

Teacher's sign & date _____




Numbers 91 - 100


	9 tens and 1 one	91	Ninety-one
	9 tens and 2 ones	92	Ninety-two
			
			
			
			
			
			
			
			

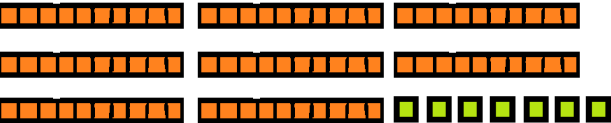
WORKSHEET B


1) Write the numerals in words and figures


Example:  5 tens 3 ones = 53

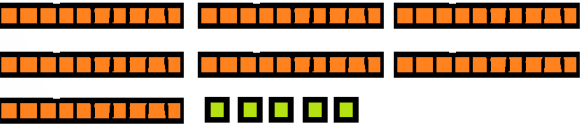
a)  = _____ = _____

b)  = _____ = _____

c)  = _____ = _____

d)  = _____ = _____

e)  = _____ = _____

f)  = _____ = _____

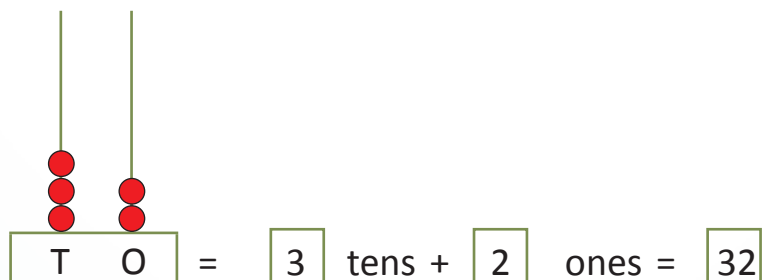
g)  = _____ = _____

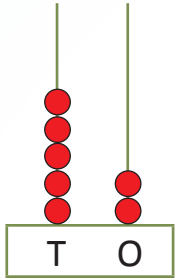
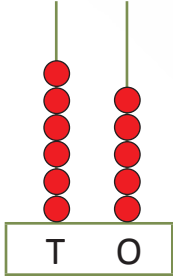
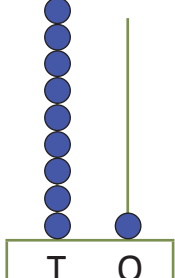
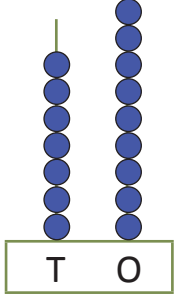
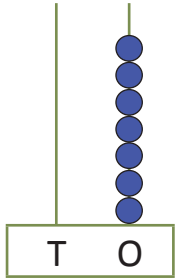
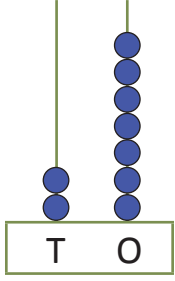
2) Complete the numbers from 1 to 100

1									
									20
				35					
51									
									100

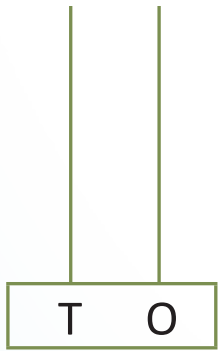
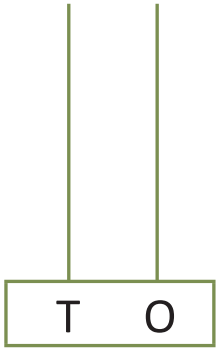
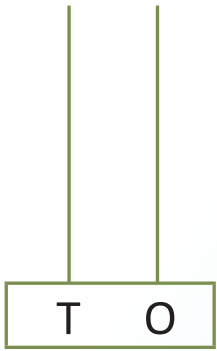
3) Count the beads in the abacus and fill in the boxes

Example:

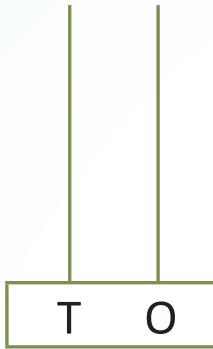


<p>a)</p>  <p>_____ tens + _____ ones = _____</p>	<p>b)</p>  <p>_____ tens + _____ ones = _____</p>
<p>c)</p>  <p>_____ tens + _____ ones = _____</p>	<p>d)</p>  <p>_____ tens + _____ ones = _____</p>
<p>e)</p>  <p>_____ tens + _____ ones = _____</p>	<p>f)</p>  <p>_____ tens + _____ ones = _____</p>

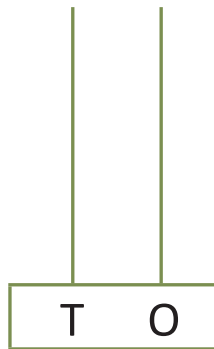
4) Represent the given number on the abacus

<p>a) 25</p> 	<p>b) 17</p> 	<p>c) 73</p> 
--	--	--

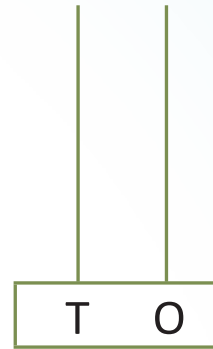
d) 34



e) 59



f) 86



5) Write the numbers from 50 to 1 using backward counting

50									41
					35				
30								22	
			17						11
	9								1

6) Write the numbers from 100 to 51 using backward counting

100									91
				86					
80							73		
	69				65				
60									51

Teacher's sign & date _____



Expanded form and standard form

Expanded Form:

Consider a number, 52.

52 can be expanded, according to its place value.

T O

$$5 \quad 2 = 5 \text{ tens} + 2 \text{ ones} = 50 + 2$$

(As 5 tens = 50 and 2 ones = 2)

50+2 is the expanded form of 52.

Standard Form:

Consider, 3tens + 7ones

$$3 \text{ tens} + 7 \text{ ones} = 30 + 7 = 37$$

37 is the standard form of 3 tens + 7 ones.



EXERCISE 6.5

1. Write the expanded form

a) $68 = \underline{\quad} \text{ tens} + \underline{\quad} \text{ ones} = \underline{\quad} + \underline{\quad}$

b) $95 = \underline{\quad} \text{ tens} + \underline{\quad} \text{ ones} = \underline{\quad} + \underline{\quad}$

c) $41 = \underline{\quad} \text{ tens} + \underline{\quad} \text{ ones} = \underline{\quad} + \underline{\quad}$

d) $32 = \underline{\quad} \text{ tens} + \underline{\quad} \text{ ones} = \underline{\quad} + \underline{\quad}$

2. Write the standard form

a) $5 \text{ tens} + 9 \text{ ones} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

b) $8 \text{ tens} + 0 \text{ one} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

c) $1 \text{ ten} + 6 \text{ ones} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

d) $7 \text{ tens} + 2 \text{ ones} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

After, before, between

Consider the number strip!

21	22	23	24	25	26	27	28	29	30
----	----	----	----	----	----	----	----	----	----

25



I am before 26

26



I am between 25 and 27

27



I am after 26



Example:

53 comes before 54

54 comes between 53 and 55.

55 comes after 54.



EXERCISE 6.6

1. Write the number that comes just after

a)

37	_____
----	-------

b)

63	_____
----	-------

c)

79	_____
----	-------

d)

15	_____
----	-------

e)

19	_____
----	-------

f)

98	_____
----	-------

2. Write the number that comes just before

a)

_____	99
-------	----

b)

_____	16
-------	----

c)

_____	25
-------	----

d)

_____	75
-------	----

e)

_____	48
-------	----

f)

_____	62
-------	----

g)

_____	80
-------	----

h)

_____	37
-------	----

3. Write the number that comes between the two given numbers

a) 36 _____ 38

b) 25 _____ 27

c) 69 _____ 71

d) 9 _____ 11

e) 74 _____ 76

f) 40 _____ 42

4. Complete the table with suitable numbers that comes just before, just after and between the given numbers.

_____	37	_____
72	_____	74
_____	86	_____
98	_____	100
45	_____	_____

Teacher's sign & date _____

WORKSHEET C

1. Write the number that comes just after :

a. 44 ____	b. 69 ____	c. 52 ____	d. 80 ____
e. 37 ____	f. 11 ____	g. 95 ____	h. 78 ____

2. Write the number that comes just before :

a. ____ 66	b. ____ 13	c. ____ 50	d. ____ 99
e. ____ 27	f. ____ 5	g. ____ 48	h. ____ 81

3. Write the number that comes between the given numbers

a. 10 ____ 12	b. 75 ____ 77	c. 30 ____ 32	d. 49 ____ 51
e. 63 ____ 65	f. 1 ____ 3	g. 22 ____ 24	h. 87 ____ 89

4. Write the expanded form

- a. $25 = \text{____ tens} + \text{____ ones} = \text{____} + \text{____}$
b. $68 = \text{____ tens} + \text{____ ones} = \text{____} + \text{____}$
c. $19 = \text{____ tens} + \text{____ ones} = \text{____} + \text{____}$
d. $74 = \text{____ tens} + \text{____ ones} = \text{____} + \text{____}$

5. Write the standard form

a. 8 tens + 3 ones = ____	b. 4 tens + 0 one = ____
c. $90 + 1 = \text{____}$	d. $30 + 6 = \text{____}$

Teacher's sign & date _____



Comparison of numbers

- ◇ A 1 digit number is always smaller than a 2 digit number. Example: $7 < 26$
- ◇ If both are two digit numbers, compare the tens digits. The number with a bigger digit in the tens place is bigger. Example: $48 > 16$
- ◇ If both numbers have same digit at the tens place, compare the ones place.

The number with a bigger digit at the ones place is bigger. Example: $85 < 89$

Remember! The hungry alligator always eats the larger number.



Understand

- > Is greater than $63 > 47$
- < Is less than $25 < 91$
- = Is equal to $80 = 80$



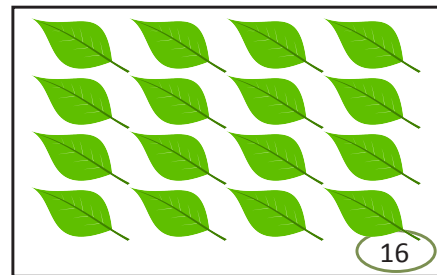
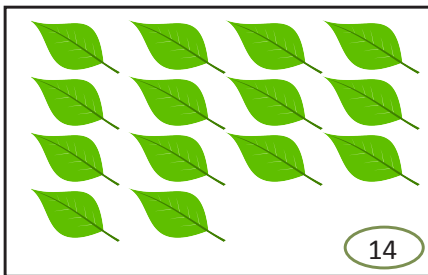
EXERCISE 6.7

1) Count and write the number of objects in the given circle.

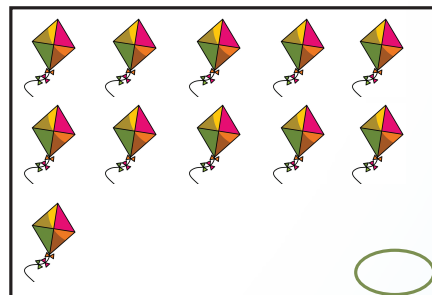
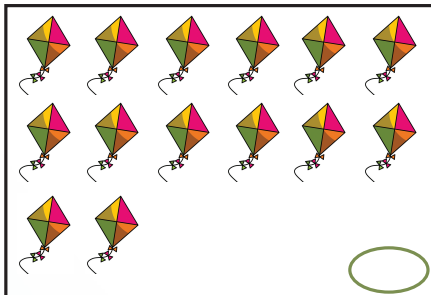
Compare using the symbol $<$ or $>$ or $=$

Example

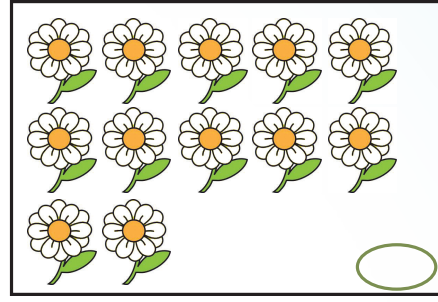
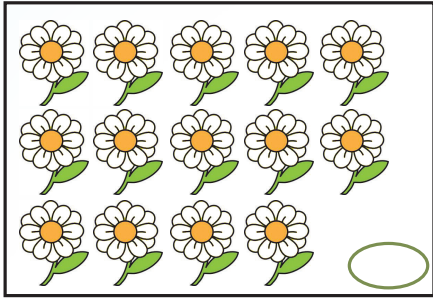
a)



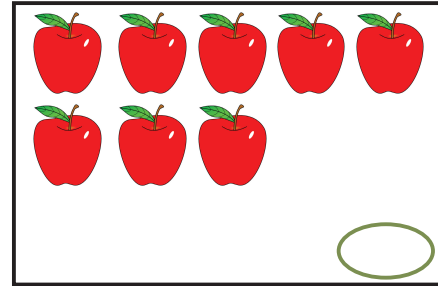
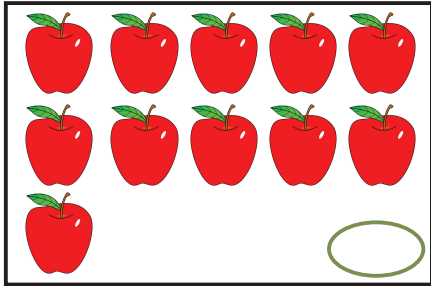
b)



c)



d)



EXERCISE 6.9

Fill in using “greater than” , “ lesser than” or “ equal to” and put the symbol $>$, $<$ or $=$ in the circle

<p>a) 38 is _____ 45 38 ○ 45</p>	<p>b) 13 is _____ 31 13 ○ 31</p>
<p>c) 58 is _____ 58 58 ○ 58</p>	<p>d) 75 is _____ 75 75 ○ 75</p>
<p>e) 94 is _____ 95 94 ○ 95</p>	<p>f) 8 is _____ 18 8 ○ 18</p>

Teacher’s sign & date _____

Value based question



Arun's family



Nikita's family

1) Which family do you like? Why?

2) How many members are there in your family? _____

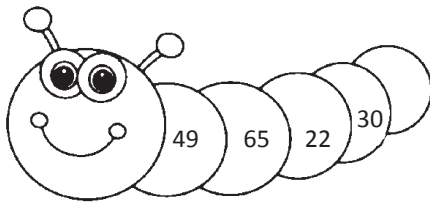


EXERCISE 6.10

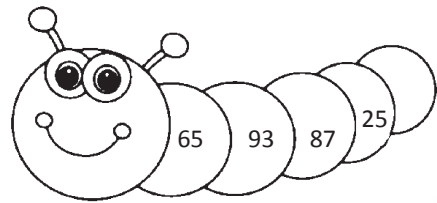
Greatest and smallest

1) Colour the greatest number in green.

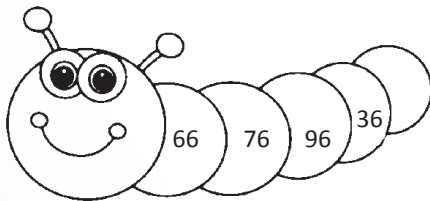
a)



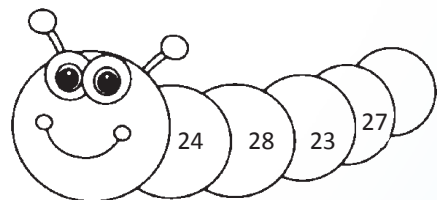
b)



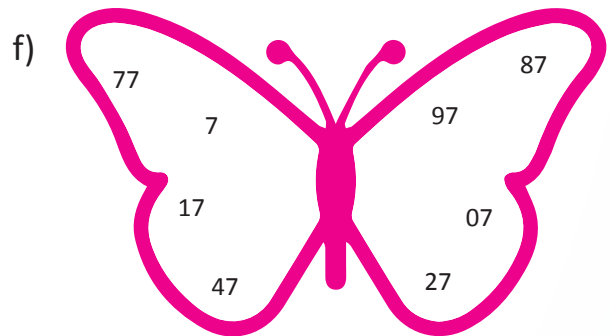
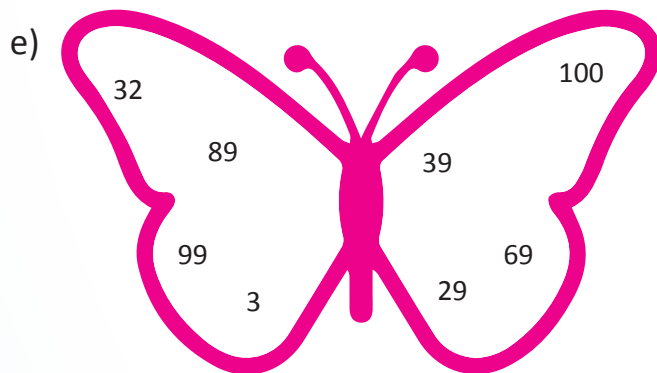
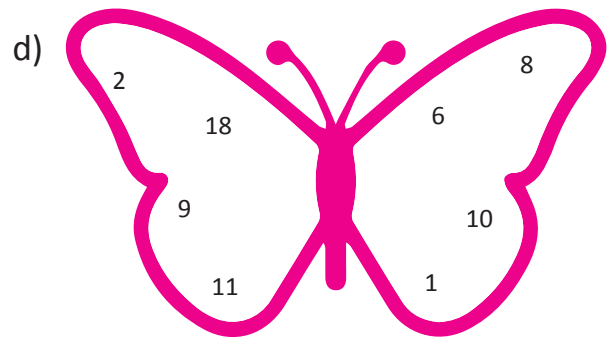
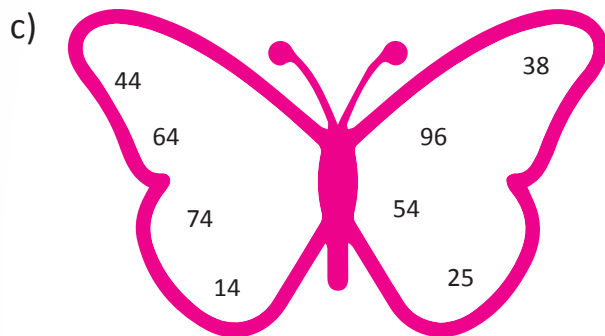
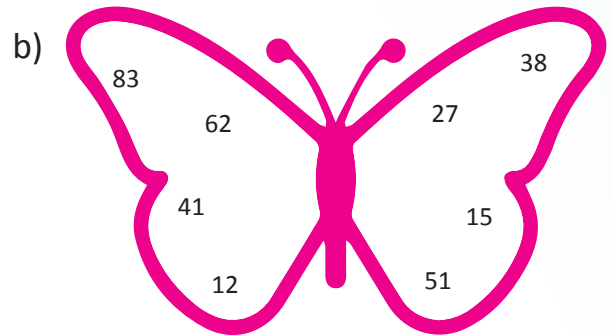
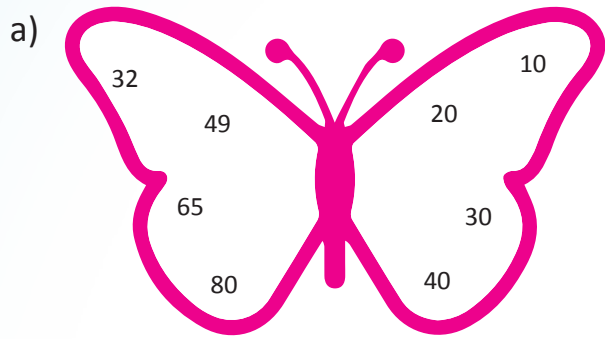
c)



d)



2) Compare the numbers on the wings of the butterfly and circle the smallest in each wing.



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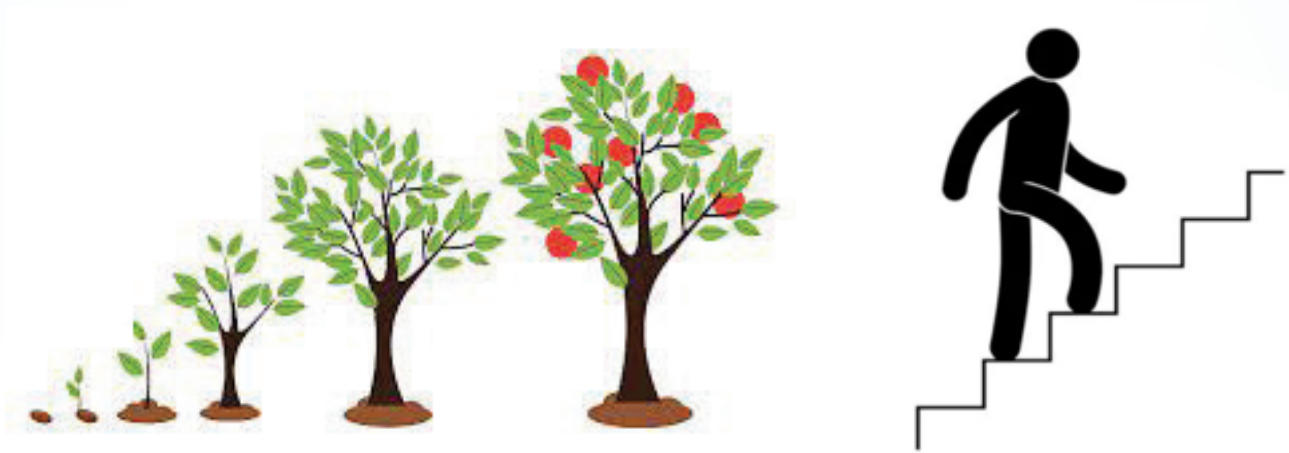


Ordering of numbers

Increasing order and Decreasing order

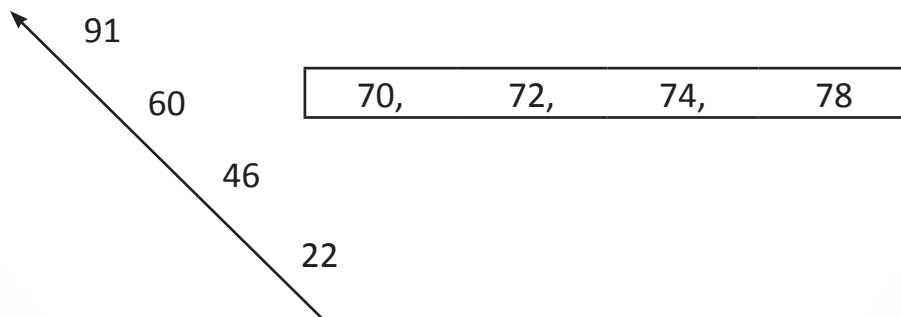
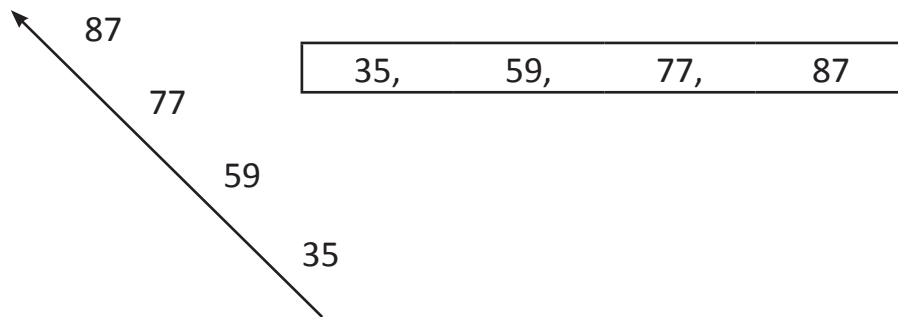
Ordering or arranging of numbers from the smallest to the greatest is called increasing order.

Look at the picture given below:



The size is increasing.

The numbers can be arranged in increasing order as follows

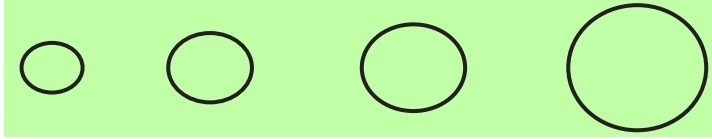




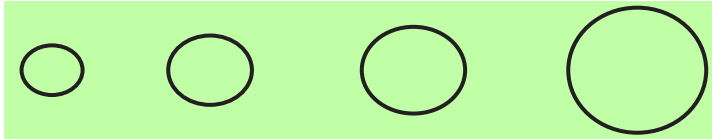
EXERCISE 6.11

Arrange the numbers in increasing order(Small to big)

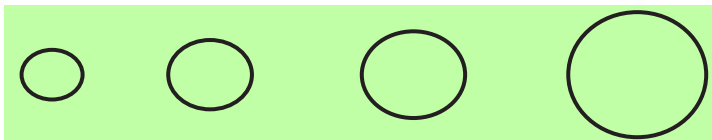
a. 98, 52, 63, 74



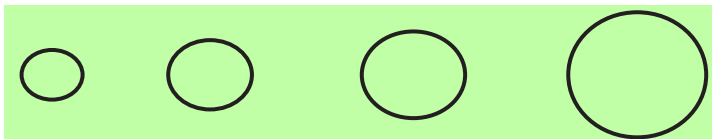
b. 35, 47, 82, 23



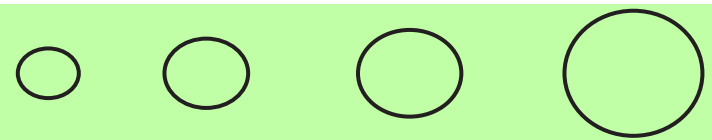
c. 80, 60, 10, 40



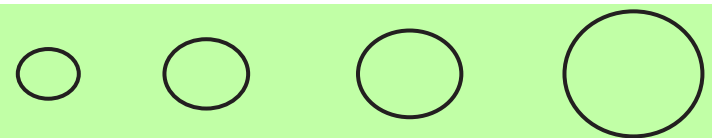
d. 59, 50, 56, 54



e) 42, 97, 85, 29



f) 65, 9, 37, 86



Ordering or arranging of numbers from the biggest to smallest is **decreasing order**.

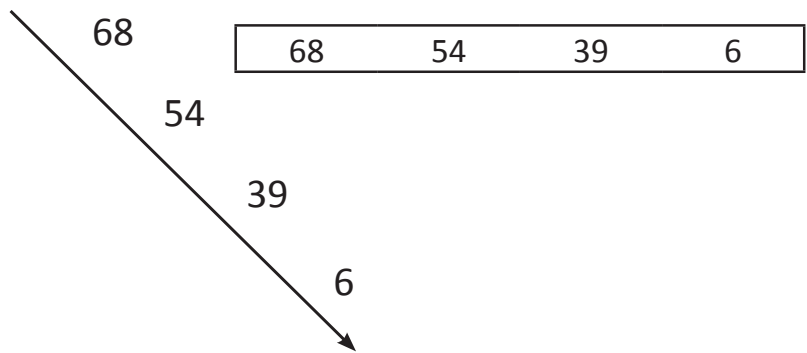
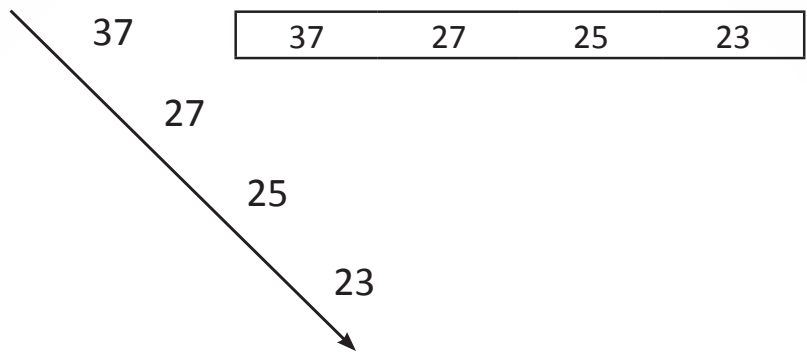
Look at the picture given below:

CANDLE

The size is decreasing



The numbers can also be arranged in decreasing as follows



EXERCISE 6.12

Arrange the numbers in decreasing order (Big to small)

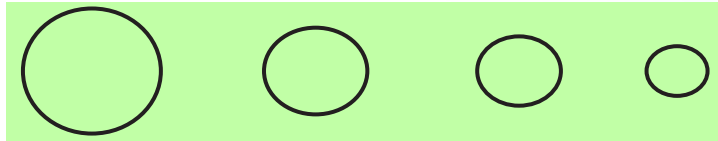
a. 35, 62, 11, 43

b) 72, 39, 28, 46

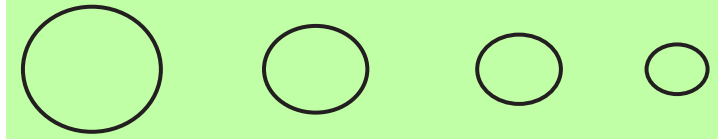
c) 98, 46, 29, 3

d) 77, 11, 99, 44

e) 60, 80, 40, 30



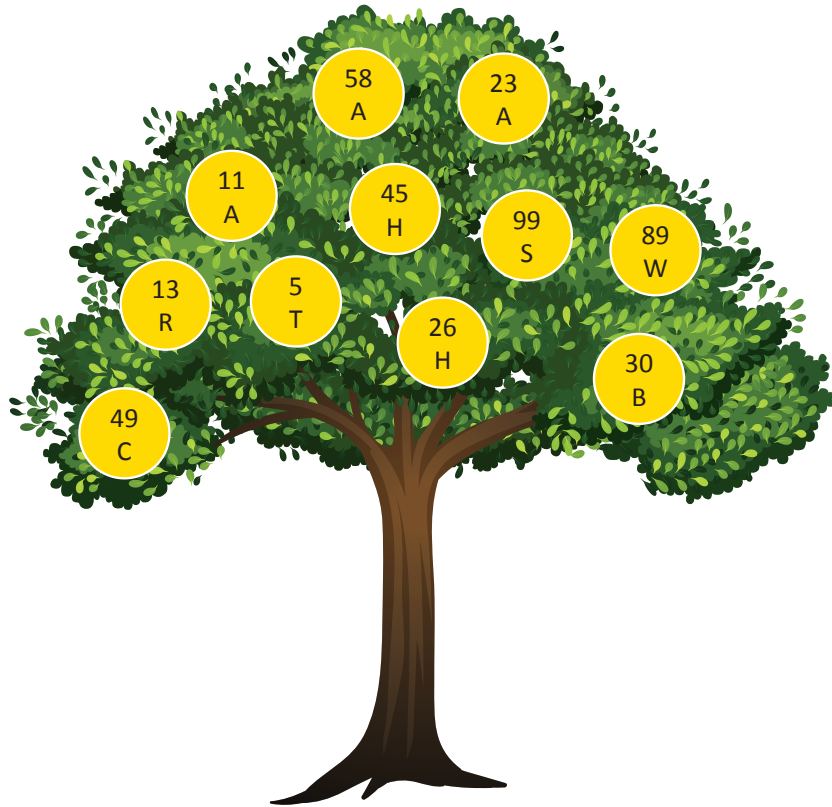
f) 49, 40, 45, 4



Arts Integrated Activity

Write the numbers given on the tree in the decreasing order along with their corresponding letters.

Read the message!



NUMBERS											
LETTERS											

How will you keep your surroundings clean? Discuss



15 m tall Mango tree



20 m tall Neem Tree

Name the tallest tree in your school campus. _____

Teacher's sign & date _____

WORKSHEET D

1) Compare the numbers and put the correct sign > or < or =

a. 35 ___ 68	b. 99 ___ 100	c. 75 ___ 57	d. 69 ___ 55	h. 60 ___ 20
e. 4 ___ 40	f. 18 ___ 81	g. 98 ___ 89	g. 98 ___ 89	i. 95 ___ 90

2) Circle the smallest number

a. 32, 96, 42, 80

b. 62, 53, 95, 71

c. 11, 18, 14, 10

d. 43, 58, 99, 3

e. 1, 8, 5, 4

f. 9, 2, 5, 1



3) Circle the biggest number

- a. 53, 78, 96, 25 b. 44, 34, 94, 64
- c. 85, 58, 13, 31 d. 63, 73, 42, 99
- e. 5, 8, 12, 3 f. 7, 8, 5, 6

4) Arrange the numbers in increasing order

- a. 42, 38, 14, 22 _____
- b. 65, 74, 60, 73 _____
- c. 81, 91, 31, 71 _____
- d. 24, 63, 26, 36 _____
- e. 58, 85, 79, 97 _____

5) Arrange the numbers in decreasing order

- a. 66, 78, 95, 44 _____
- b. 39, 49, 89, 29 _____
- c. 81, 41, 14, 10 _____
- d. 68, 86, 23, 48 _____
- e. 70, 48, 9, 21 _____

6) Write the number names

- a. 98 :- _____ b. 74:- _____
- c. 52 :- _____ d. 14 :- _____
- e. 92 :- _____ f. 66 :- _____

WORKSHEET E

1) Fill in the missing numbers

a. 48, _____, _____, 51 _____

b. 96, _____, 98, _____, _____

c. 31, _____, _____, _____, 35

d. 65, 66, _____, _____, 69, _____

e. 15, _____, _____, _____, 19

f. 29, 30, _____, 32, _____, _____.

2) Fill in with the appropriate symbols < or > or =

a. 68 _____ 86	b. 99 _____ 10	c. 4 _____ 34
d. 38 _____ 100	e. 54 _____ 45	f. 7 _____ 19

3) Circle the greater number

a. 92 99	b. 83 46	c. 12 21
d. 65 23	e. 48 84	f. 11 1

4) Circle the smaller number

a. 23 13	b. 82 92	c. 48 74
d. 2 25	e. 64 46	f. 11 21

5) Colour the smallest number in yellow

48	96	21	20
----	----	----	----

35	6	75	90
----	---	----	----

73	85	97	89
----	----	----	----

Fact of a Dozen **12**



A dozen is a **group** of **twelve** objects, shapes or numbers

Teacher's sign & date _____



WORKSHEET F

1) Colour the biggest number in orange

90	70	20	40
----	----	----	----

85	63	72	9
----	----	----	---

26	20	85	89
----	----	----	----

2) Rearrange the numbers in increasing order

a. 42, 96, 25, 8 _____

b. 85, 67, 58, 76 _____

c. 24, 36, 42, 6 _____

d. 96, 79, 63, 60 _____

3) Rearrange the numbers in decreasing order

a. 10, 51, 15, 61 _____

b. 62, 72, 12, 52 _____

c. 26, 31, 13, 62 _____

d. 85, 75, 15, 55 _____

4) Write the number that comes just after

a. 68 b. 10 c. 6

d. 92 e. 74 f. 8

5) Write the number that comes just before

a. 2 b. 83 c. 20

d. 42 e. 59 f. 34

6) Write the number that comes between the two given numbers

- a. 40 42 b. 82 84
c. 98 100 d. 21 23
e. 33 35 f. 69 71

7) Write the expanded form of the given numbers in both ways

Ex: 62 = 6 tens + 2 ones = 60 + 2

- a. 94 = _____ b. 38 = _____
c. 16 = _____ d. 20 = _____
e. 3 = _____ f. 45 = _____

8) Write the standard form

- a. 2 tens + 7 ones = _____ b. 40 + 0 = _____
c. 8 tens + 1 one = _____ d. 5 + 60 = _____
e. 6 ones + 9 tens = _____

9) If a box shows a number less than 50, colour the box blue, for a number greater than 50, colour the box orange.

52	60	11	51	84
77	9	80	36	76
3	58	27	93	22
88	24	56	16	80
79	65	38	78	99

Teacher's sign & date _____

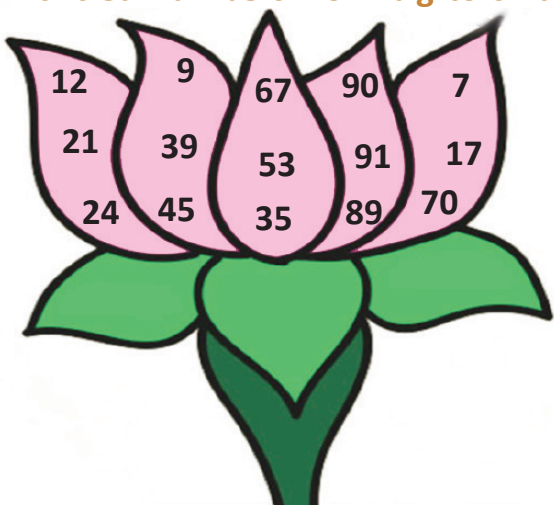


WORKSHEET G

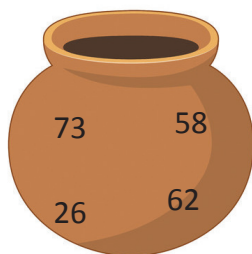
1) Match the following

- a) 3 tens + 8 ones 95
- b) 69, _____ 71 40
- c) Forty ones 60
- d) 5 ones + 9 tens 38
- e) Six tens 70

2) Identify the biggest number in each petal and circle it. Then arrange these circled numbers from big to small.



3) Which of the following number is not found in the pot?



- a. 7 tens + 3 ones
- b. 6 tens + 2 ones
- c. 2 tens + 2 ones
- d. 5 tens + 8 ones

Teacher's sign & date _____



4) KNOW ABOUT OUR COUNTRY



Have you seen our National flag? _____

How many colours are there in our National flag? _____

How many spokes are there in Ashoka Chakra? _____

Count the number of spokes of the wheel in our National Flag.

Compare



Draw our National flag and colour it

Our National Emblem

5) Colour the boxes which has 7 in the tens place

79	17	7	27	71
47	70	1	76	37
16	3	75	6	5
39	77	40	78	97
72	9	57	25	74

6) The age of Rohit's Atte (Aunt in Kannada) is 43 years and his mother's age is 34 years:

Who is older ? Rohit's Atte / Rohit's mother

7) Quick Math

- I am the number that comes just before 46. Who am I? _____
- I am the number that comes just after 89. Who am I? _____
- We are the numbers that come in between 48 and 51. We are _____ and _____
- I am greater than 37, but lesser than 39. Who am I? _____
- I have 6 in ones place and 2 in the tens place I am _____

8) a. There are 28 boys and 23 girls in a class. They form two lines separately in the assembly.

Which line will be longer? Boys line / Girls line

b. Compare the numbers using the symbol $>$ or $<$ or $=$

28 23

c) Do you have assembly in your school?

d) What values do you learn from your school assembly? Discuss



9. Look at the set of numbers and write whether they are in increasing or decreasing order.

a. 29, 42, 76 - _____

b. 81, 18, 8 - _____

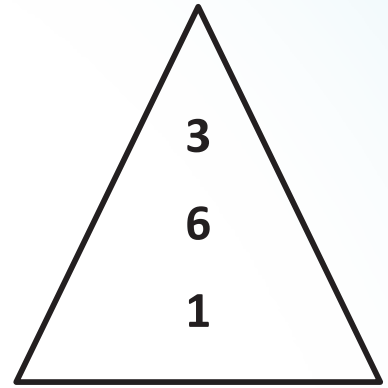
c. 2, 1, 0 - _____

d. 78, 53, 34 - _____

e. 14, 40, 64 - _____

10. Vinita's roll number comes just after Umesh's roll number in the class, If Vinita's roll number is 40, what is Umesh's roll number? _____

11. Using the digits from the given triangle, form as many two digit numbers as possible. Write them in the box given below.



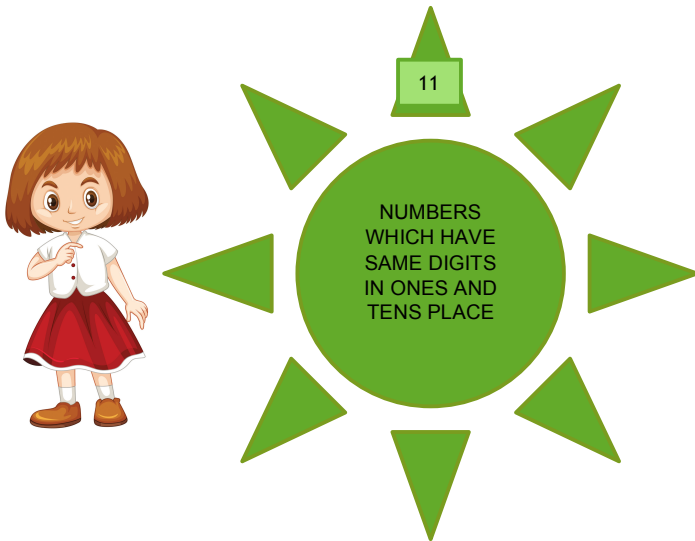
13					
----	--	--	--	--	--

Which among the above number is the

a) greatest? _____

b) smallest ? _____

Fun Activity



Teacher's sign & date _____



Vedic Mathematics

AKHILAM & NIKHILAM

What is अखिलम् (Akhilam) ?

The word अखिलम् (Akhilam) in Sanskrit means complete.

For a 1 digit number, the smallest 2 digit number (10) is the Akhilam

For a 2 digit number, the smallest 3 digit number (100) is the Akhilam and so on.

What is निखिलम् (Nikhilam) ?

The word निखिलम् (Nikhilam) in Sanskrit means that which makes it complete (Akhilam) or it also means complement.

The Nikhilam of 1 is 9 $(1+9 = 10)$

The Nikhilam of 96 is 4 $(96+4 = 100)$



Srinivasa Ramanujan was an Indian mathematical genius who was born on December 22, 1887. Every year, his birth anniversary is celebrated as National Mathematics Day.

