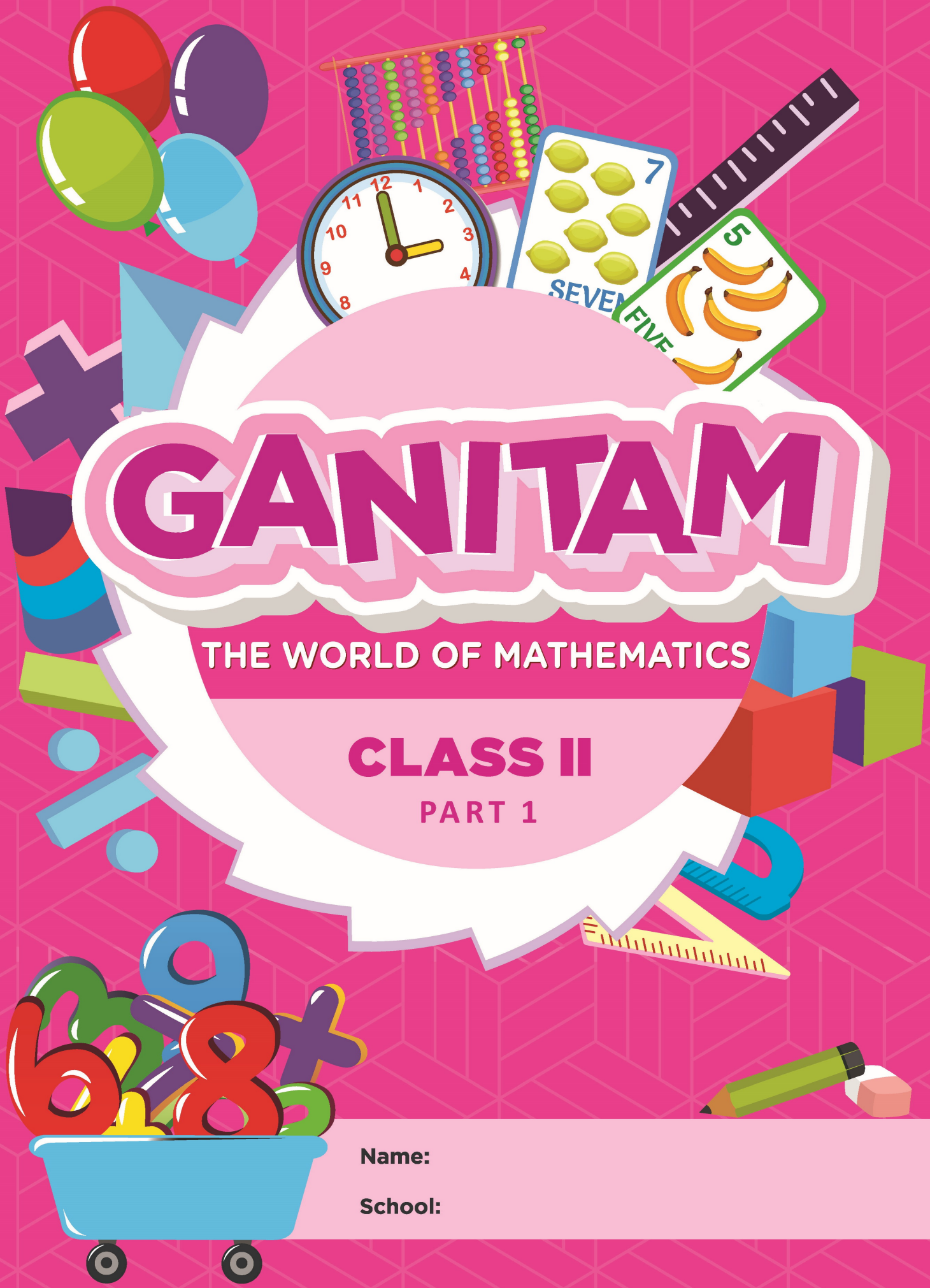
GANITAM
THE WORLD OF MATHEMATICS
CLASS II
PART 1
Name:
School:

‘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 first version of the book and could contain 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

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Lead Content Developer

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

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Content Developers/Editors

Smt. Jayashree Ajayakumar, M.Sc., B.Ed.,

Smt. Sucharitha, M.Sc., M.Ed.,

Smt. Sudha Narayanan, B.Com., B.Ed.,

Smt. Uma Sathyanandan, B.Sc., M.C.A, NTT

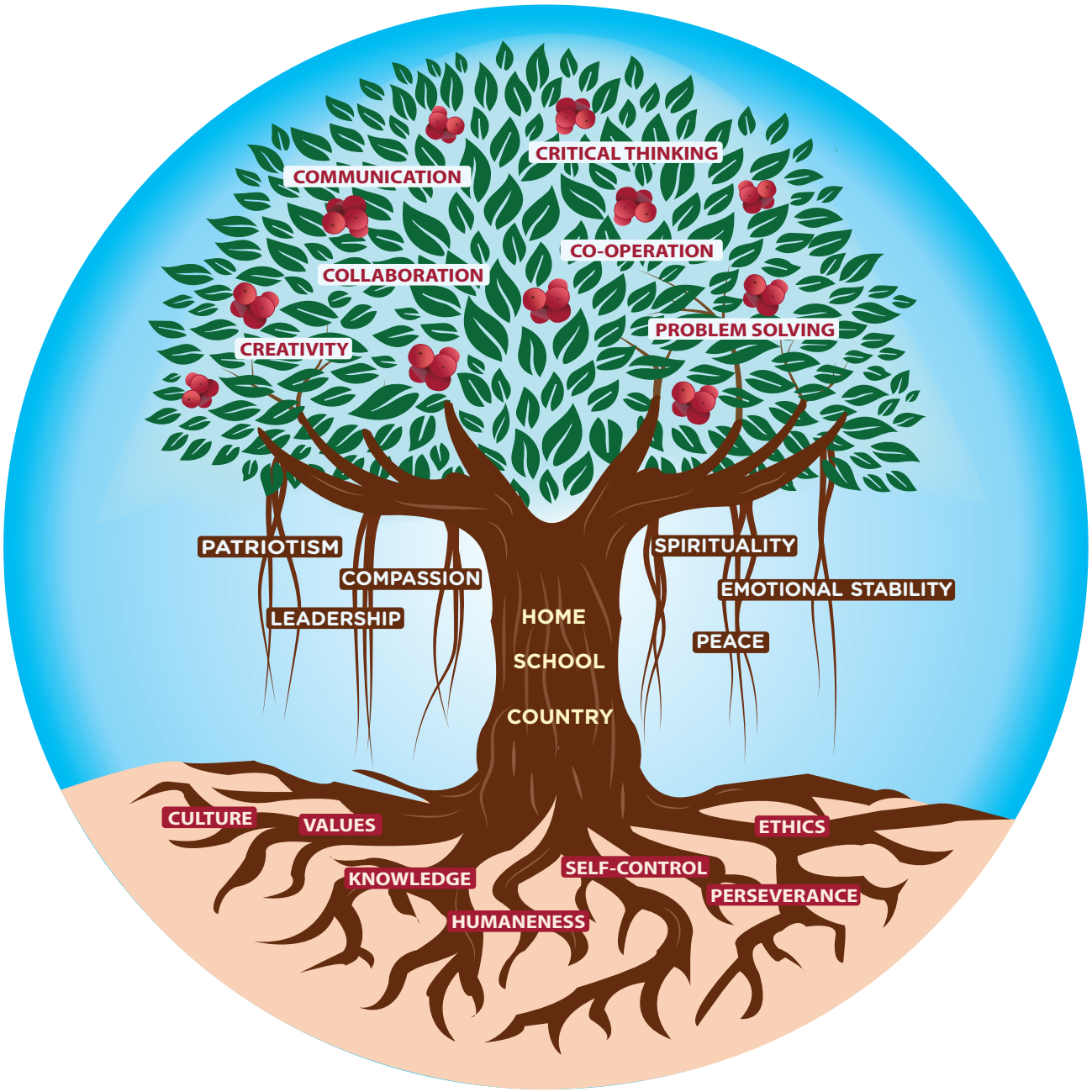
Smt. V. Kanchanamala, B.Sc., B.Ed.,

Smt. Geetha. R, B.Sc., B.Ed., PGDCA

Wrapper Design

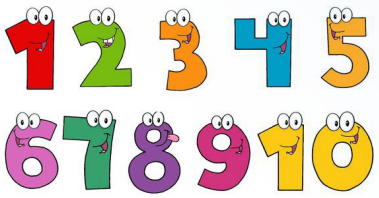
Ms. Hamsavani Raman & Team

The Learning Tree



Contents

NUMBERS



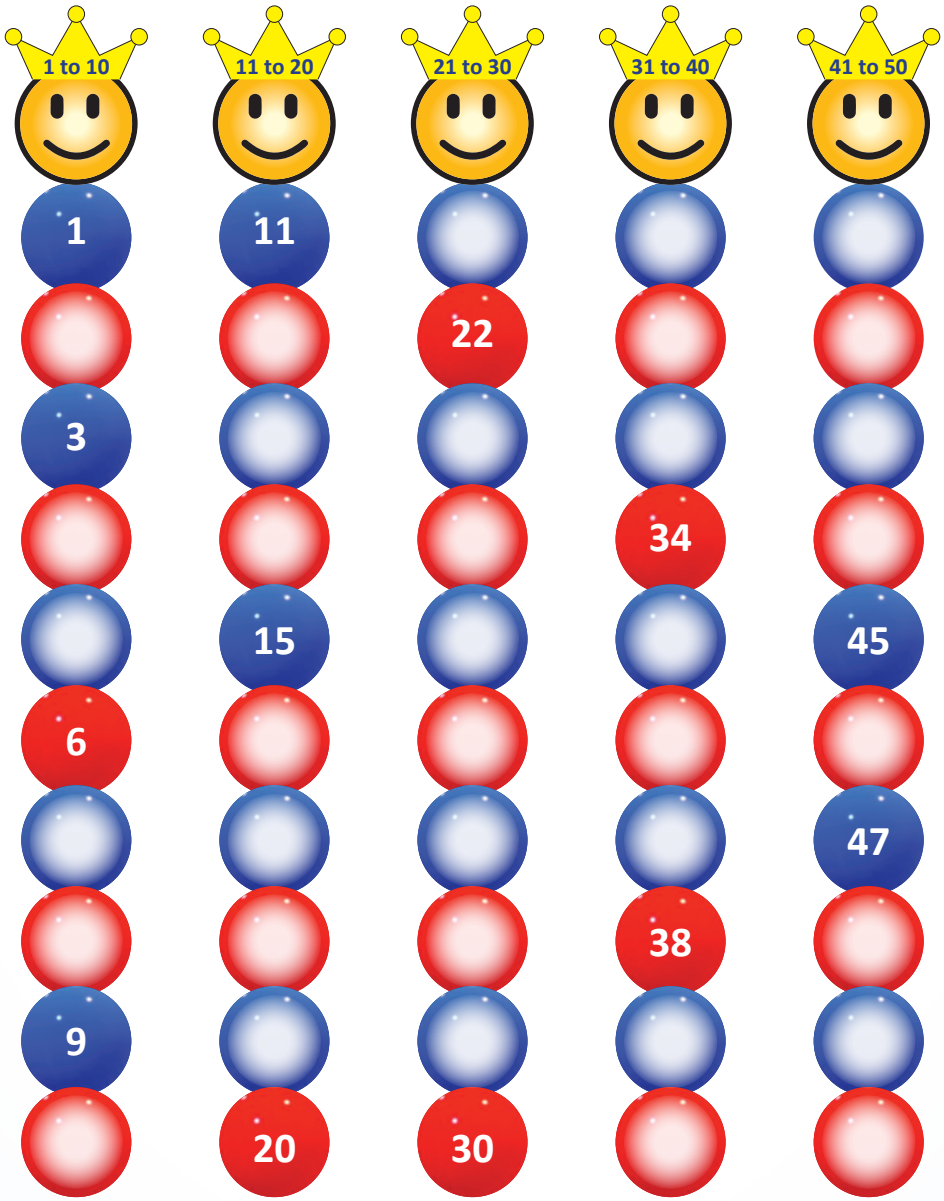
Learning Outcomes:

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

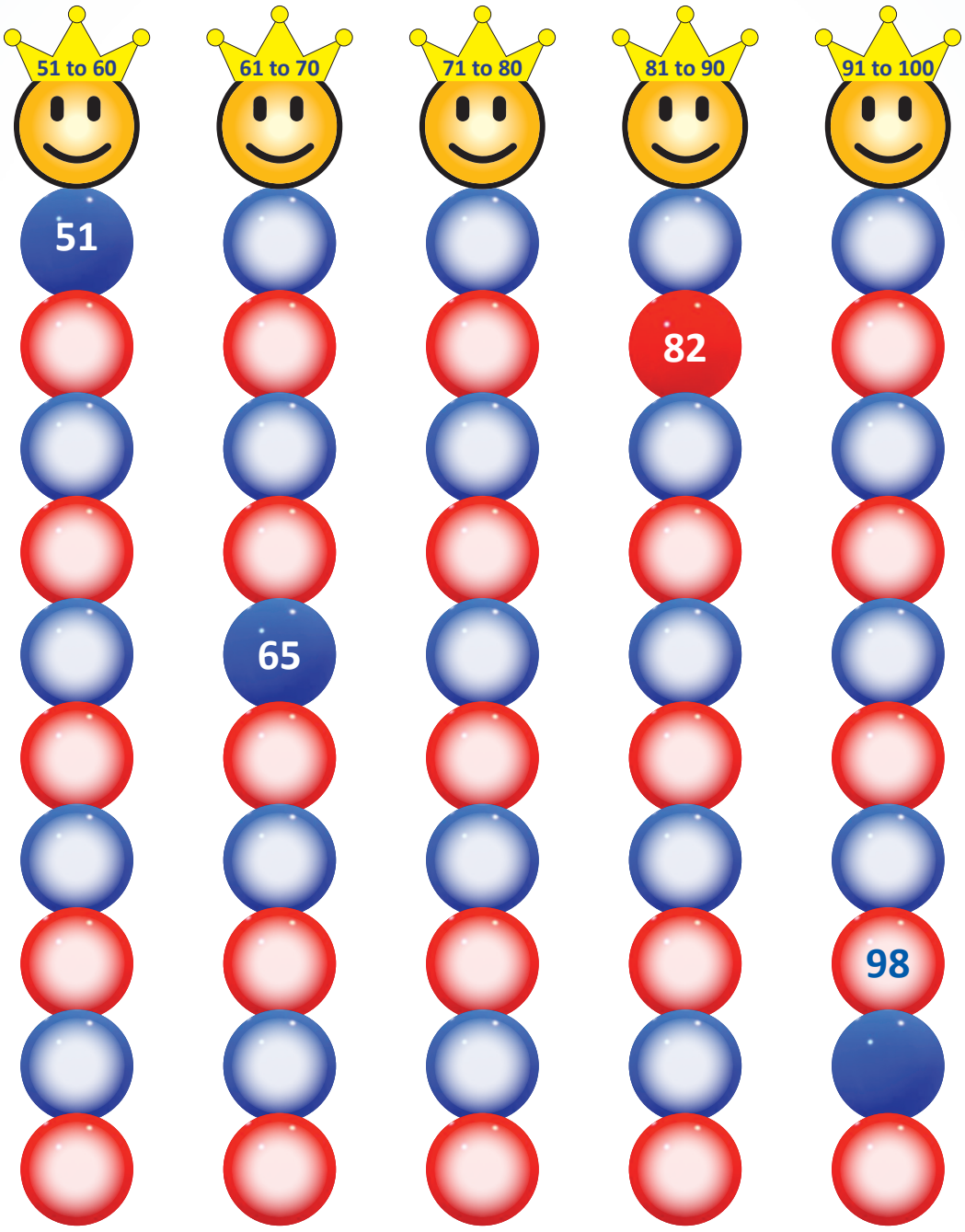
Recollect number concepts till 100.

EXERCISE 1.1

1. Fill in the missing numbers in the blank rings:



2. Fill in the missing numbers in the blank rings:



- ★ 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 are 1-digit numbers.
- ★ 10 to 99 are 2-digit numbers.

Teacher's Sign & date_____

EXERCISE 1.2

Match the following

a. Ninety four

b. Sixty five

c. Fifty six

d. Eighty seven

e. Forty nine

f. Seventy one

49

56

94

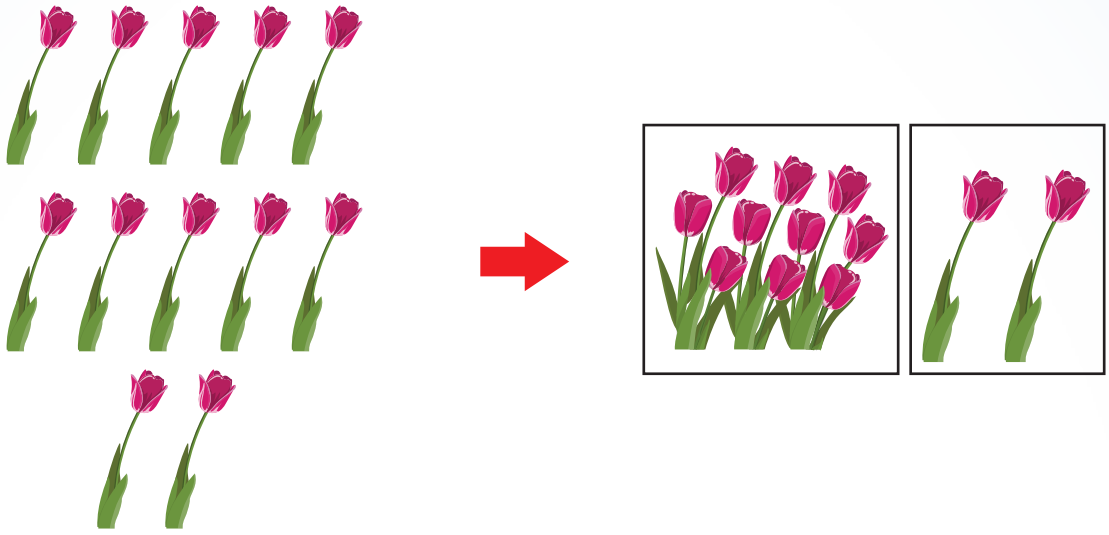
65

71

87

Teacher's Sign & date_____

Tens & Ones



12 ones = 1 tens and 2 ones = 12

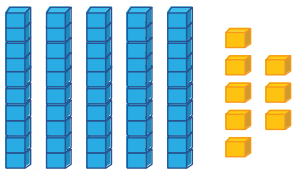
EXERCISE 1.3

Write the number and the number name:

a) 4 tens = ☐ _____

b) 3 tens and 6 ones = ☐ _____

c) 5 tens and 2 ones = ☐ _____

d)  = ☐ _____

e)  = ☐ _____

Teacher's Sign & date_____

Counting forward and backward

1. Here are 5 apples.

a) What would be the number of apples if 1 more is added? ☐

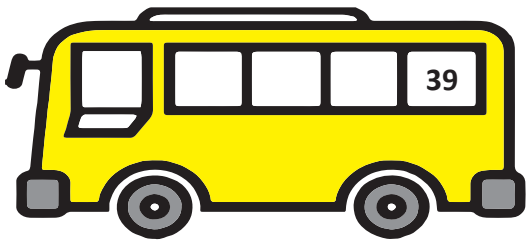
b) What would be the number of apples if 1 is taken away (one less)? ☐

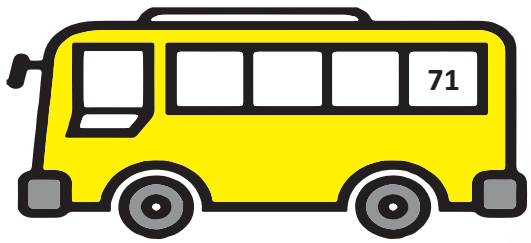
EXERCISE 1.4

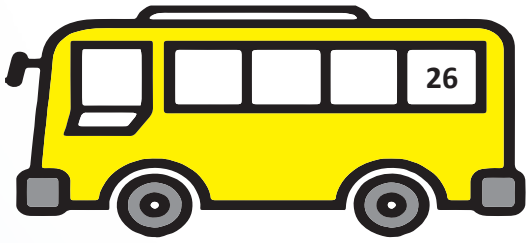
1. Write the number that comes just after:

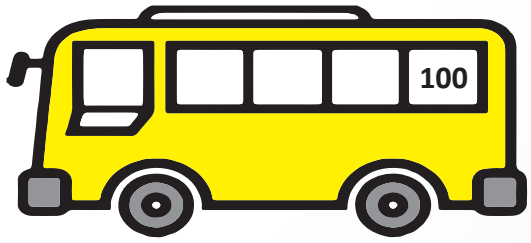
a.	7	b.	15	c.	49
d.	67	e.	80	f.	99

2. Write the four numbers that come just before:

a) 

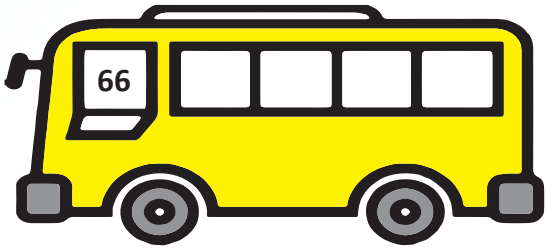
b) 

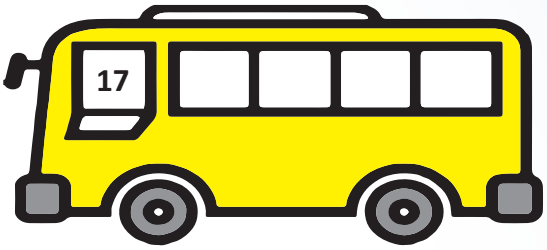
c) 

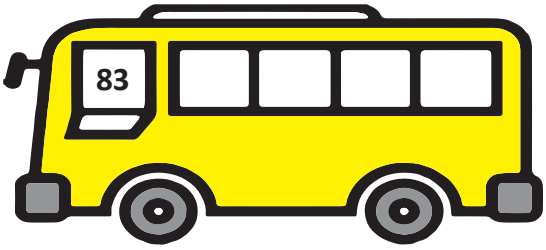
d) 

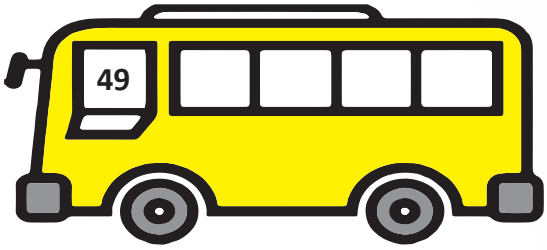
Teacher's Sign & date_____

3. Write four numbers that come just after:

a) 

b) 

c) 

d) 

4. Fill in the blanks:

a) One more than 5 is _____

b) One less than 9 is _____

c) One more than 59 is _____

d) One less than 92 is _____

e) One more than 76 is _____

f) 39 is just before _____

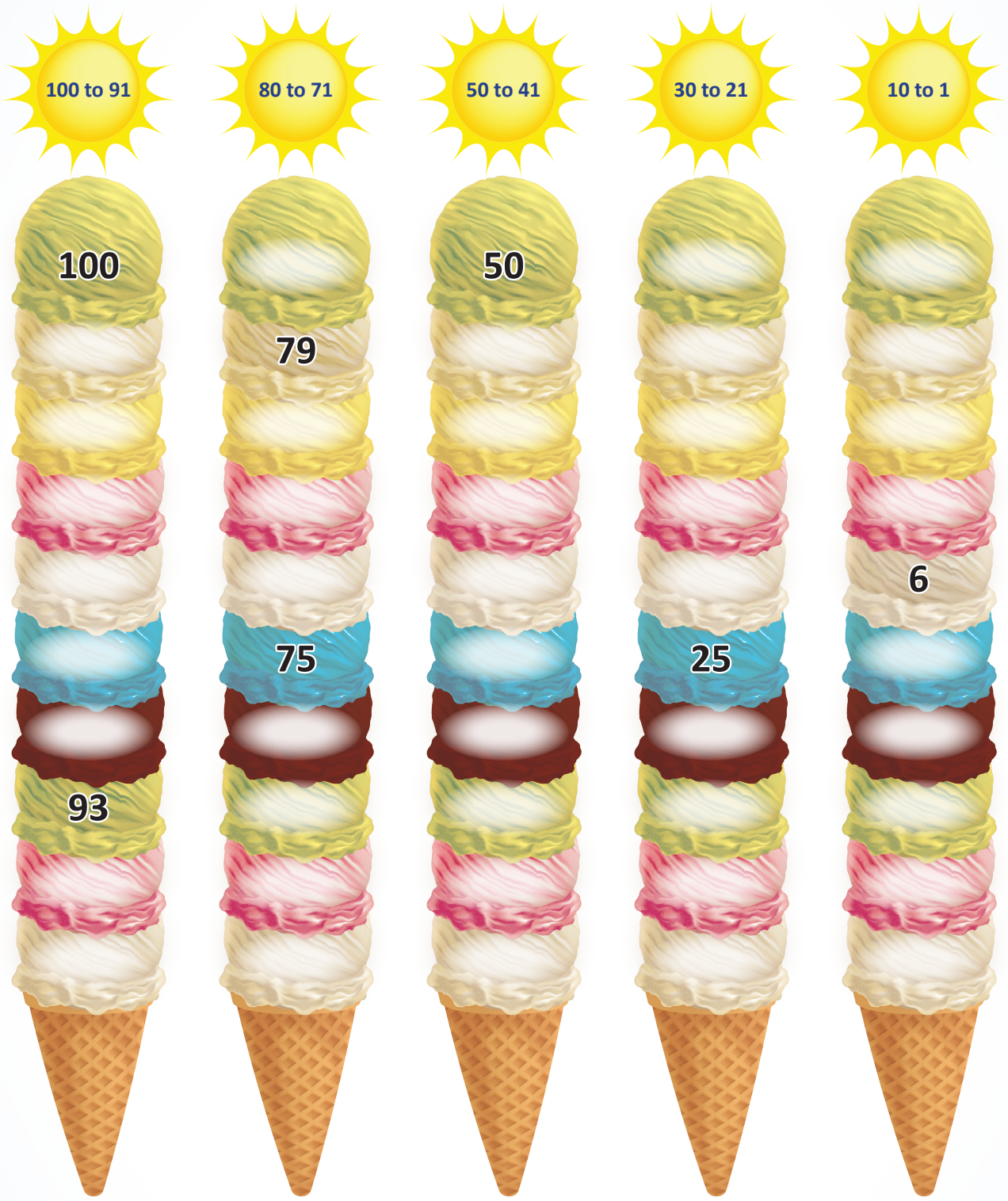
g) The number that comes just after 85 is _____

h) 77 comes just before _____

i) The number that comes just before 70 is _____

j) 100 comes just after _____

5. Count backwards and fill in before the ice-cream melts:

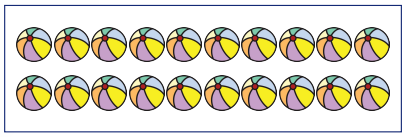


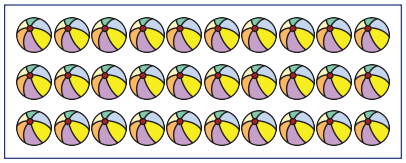
Teacher's Sign & date_____

EXERCISE 1.5

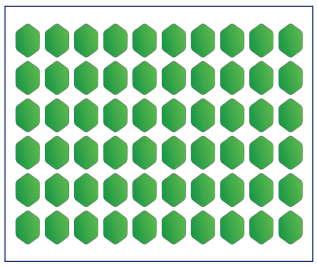
1. Compare and use the correct sign <, > or =

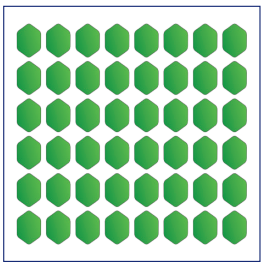
a.





b.

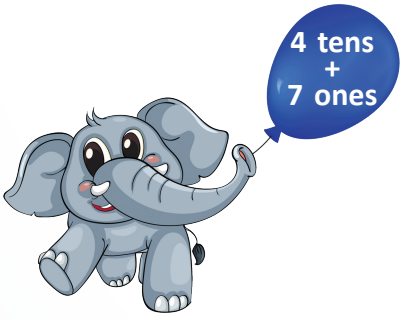


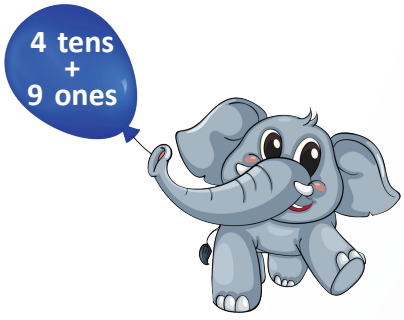


c.

d.

e.



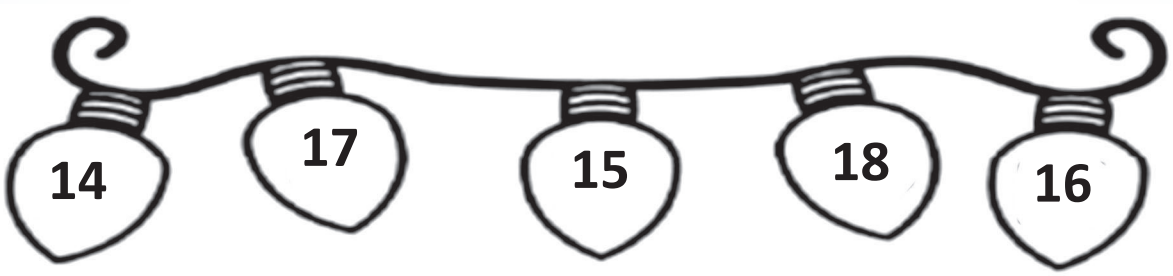


Teacher's Sign & date_____

Arts Integrated Activity

Colour the greatest number with blue and the smallest number with yellow in each of the following

a.



b.

EXERCISE 1.6

1. Circle the greatest number:

a) 32, 47, 27, 77 **b)** 86, 64, 59, 54 **c)** 75, 24, 98, 89

d) 10, 40, 80, 70 **e)** 14, 28, 33, 44 **f)** 56, 20, 65, 2

2. Circle the smallest number:

a) 11, 55, 22, 33 **b)** 61, 34, 47, 14 **c)** 73, 89, 98, 37

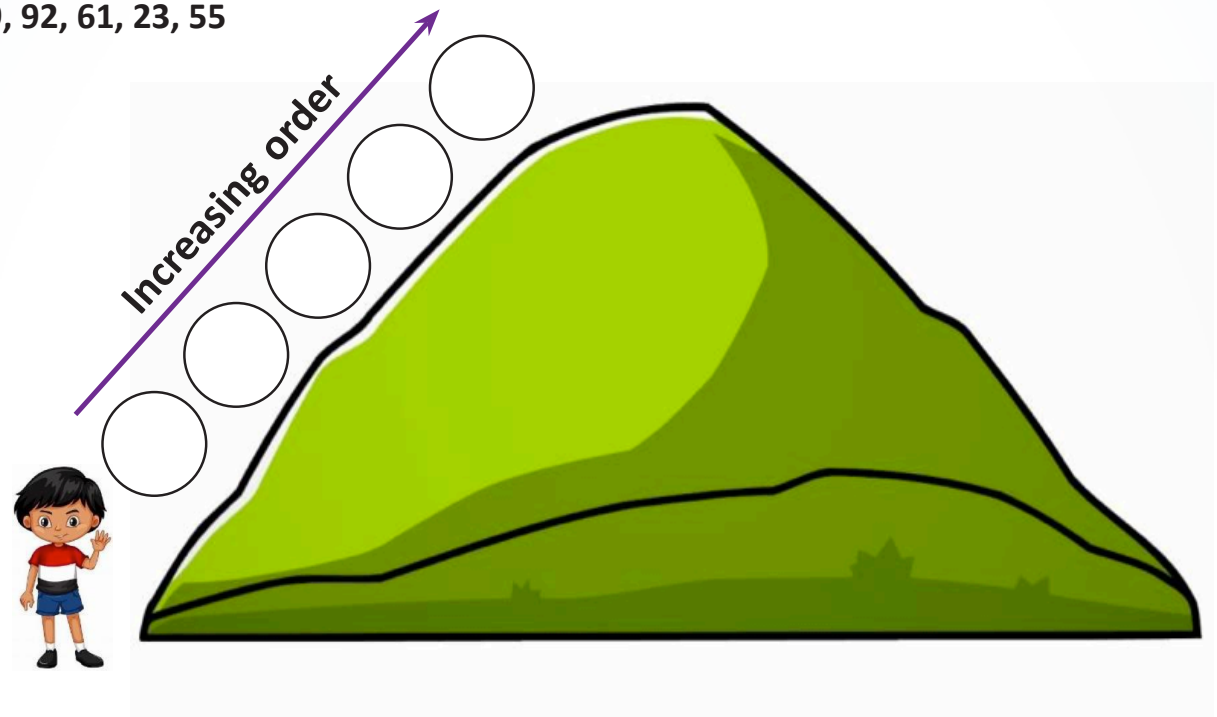
d) 8, 17, 71, 18 **e)** 35, 53, 59, 95 **f)** 26, 62, 6, 25

Teacher's Sign & date_____

Increasing and Decreasing Order

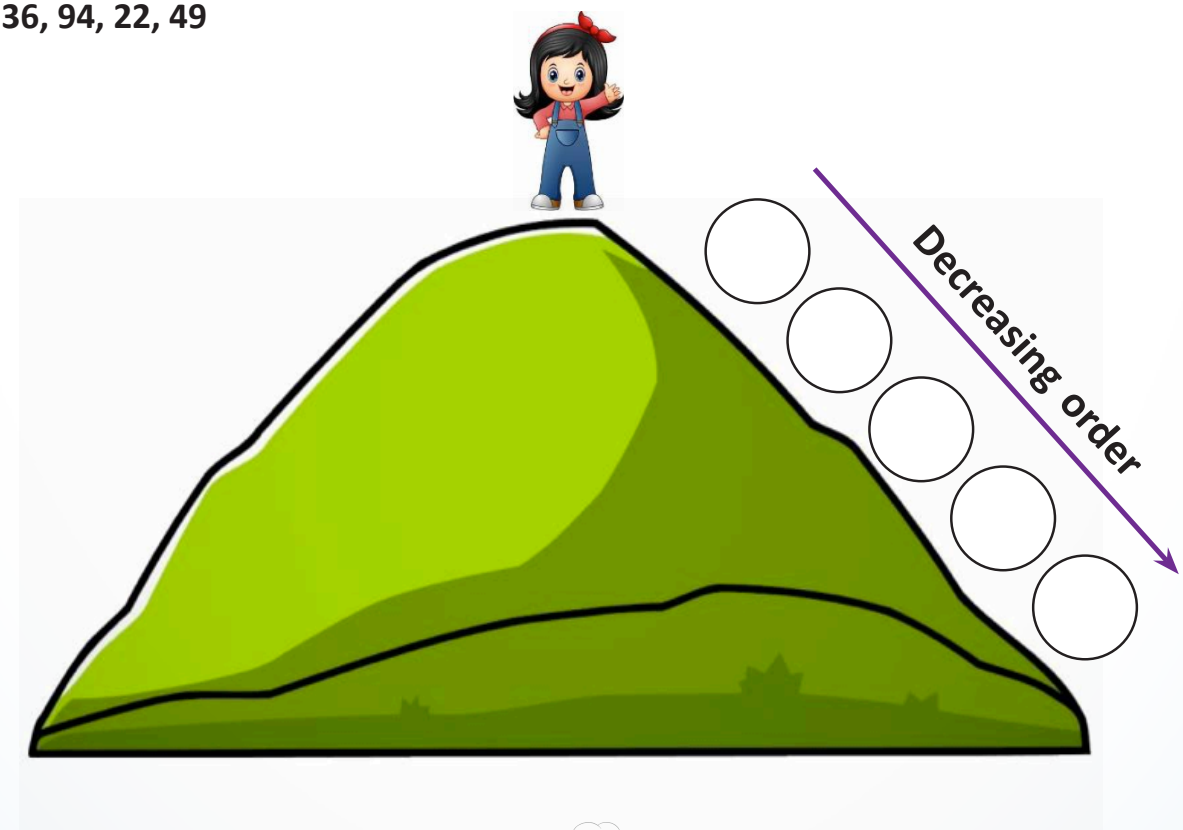
1. Help the boy to go up the mountain by placing the given numbers in the circles in increasing order.

79, 92, 61, 23, 55



2. Help the girl standing on the mountain top to come down by placing the given numbers in the circles in decreasing order.

81, 36, 94, 22, 49



Higher Order Thinking Skills

Who am I?

1. I am a 2-digit number, greater than 80 and less than 100.

   My digits are 6 and 8. I am _____.

2. I am the smallest 2-digit number. I am _____.

3. I am a 2-digit number. Both my digits are the same.

   I am greater than 50 and lesser than 60. I am _____.

4. I am the number of months in a year. I am _____.

5. I am the greatest 2-digit number. I am _____.

6. How many times the digit 3 will occur from 1 to 100?

   _____

7. What comes between 35 and 37? _____.

   It is 1 more than _____ and 1 less than _____.

Experiential Learning

Ilango and Iniya are students of class 2, who love reading books. They read a few pages of a story book every day. Presently, they are reading a book which has 100 pages. Ilango completed reading 78 pages and Iniya 65 pages.

a) Who has read more pages? _____

b) Who has read less pages? _____

c) Do you have the habit of reading books?

   _____ (Yes / No)

d) What kind of books do you read? _____

Teacher's Sign & date_____

2 NUMBERS UPTO 1000

Numbers Up to 1000

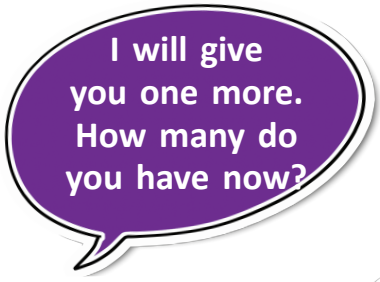
Learning Outcomes:

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

- Represent 3 digit numbers using abacus.
- Read and write 3 digit numbers
- Find the face value and the place value for the given numbers.
- Represent the given numbers in expanded form and standard form
- Compare the given numbers
- Arrange the numbers in ascending and descending order.
- Build 3 digit numbers.
- Identify odd and even numbers.

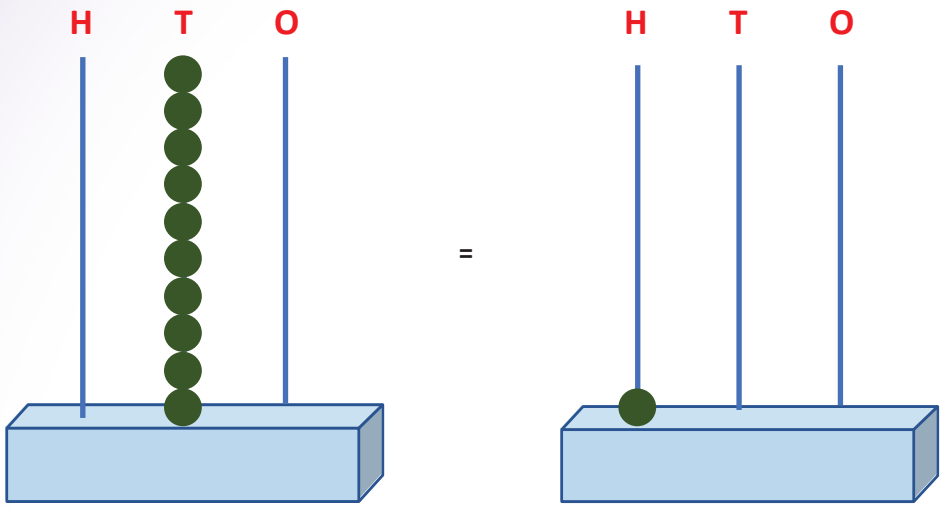
DO YOU KNOW 100?

10 10 10 10 10 10 10 10 10 9



10 Tens = 1 Hundred

On the Abacus



10 Tens

1 Hundred

ONE HUNDRED

It is the smallest 3 digit number.

EXERCISE 2.1

I. Write the numerals:

a. Complete the numbers from 101 to 200

100 is the smallest 3-digit number

101	102					107			110
		113					118		
121									
					136				
	142		144						
				155					
								169	
									180
						187			
				195					

b. Complete the numbers from 201 to 300

	202			205				209	
211						217			
		223							230
					236				
	242		244						
				255					
							268		
		273							
						287			
					296				

c. Complete the numbers from 301 to 400

301					306				
		313					318		
	322								
				335					
			344						
						357			
								369	
									380
							388		
391								399	

d. Complete the numbers from 401 to 500

	402			405					
411						417			
			424						430
		433			436				
				455					
								469	
	472						478		
481						487			
			494						

e. Complete the numbers from 501 to 600

501						507			
			514				518		
	522								
								539	
			544						
						557			
								569	
									580
							588		
				595					

Find me:

1) I lie between 4 hundreds and five hundreds. My tens digit is 0. My ones digit is just one less than 6. I am _____

f. Complete the numbers from 601 to 700

		603							610
	612							619	
621							628		
						637			
			644						
					656				
				665					
671							678		
					686				
	692					697			

Find me:

The digits in all my three places are same. Find the numbers from the grids.

_____.

g. Complete the numbers from 701 to 800

				705					
	712								720
721			724						
					736				
							748		
						757			
		763							
								779	
				785		787			
	792								

h. Complete the numbers from 801 to 900

			804				808		
									820
		823							
831									
					846				
								859	
						867			
				875					
									890
							898		

i. Complete the numbers from 901 to 1000

		903							
			914						
				925					
					936				
						947			
							958		
								969	
									980
	982								
991									1000

2) Find me:

a)What is the door number of your house?_____

b) Write it in words _____

c) What is the door number of your neighbour's house? _____

Neighbours help us in times of need. We should be friendly with them.

3. Write the number names:

a) 356– _____ b) 875 – _____

c) 241 – _____ d) 903 – _____

e) 420 – _____ f) 714 – _____

g) 509 – _____ h) 167 – _____

i) 689 – _____ j) 222 – _____

4. Write the numerals:

a) One hundred seventeen – b) Five hundred thirty two –

c) Six hundred sixty four – d) Seven hundred eighty six –

e) Eight hundred twenty five – f) Two hundred six –

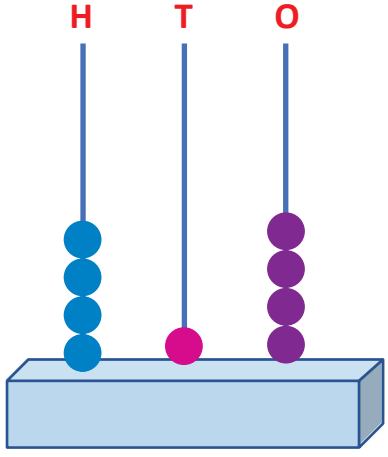
g) Nine hundred ninety nine – h) Three hundred forty eight –

i) Two hundred fifty – j) Five hundred fifty –

Teacher's Sign & date_____

Numbers on abacus

Write the number and number name shown in the abacus

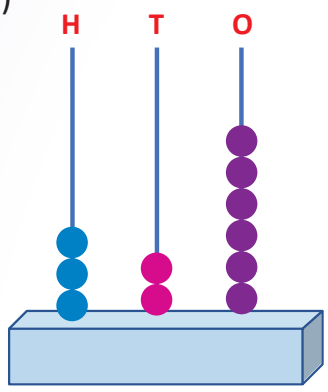


414 - Four hundred fourteen

EXERCISE 2.2

1. Count the beads. Write the number and the number names in the blanks provided

a)



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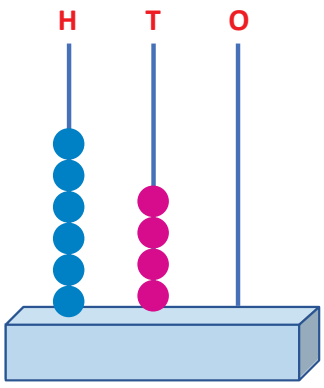

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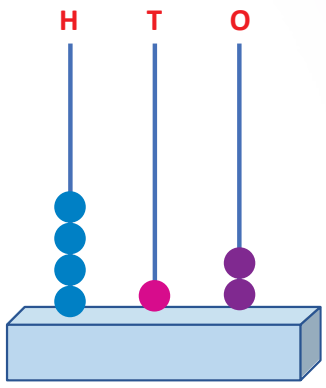

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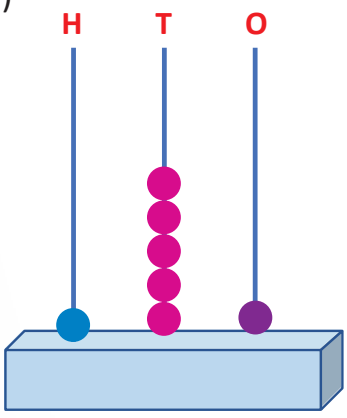
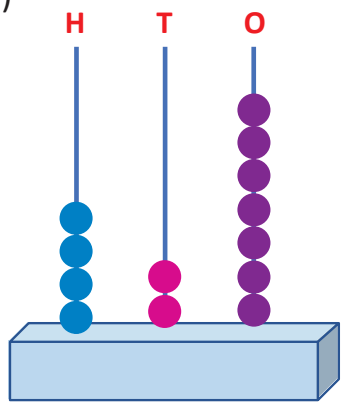
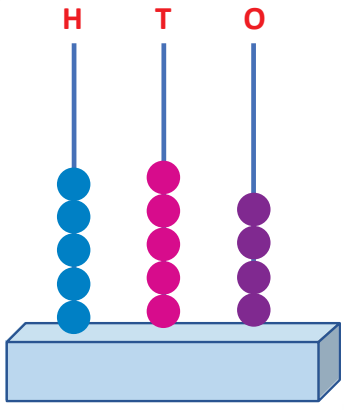


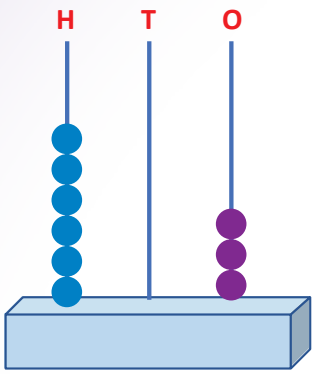
e)



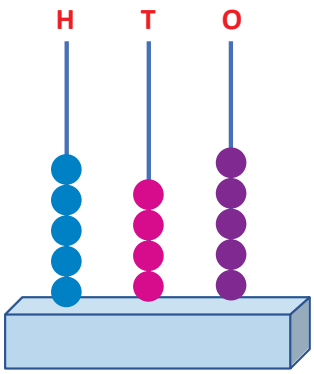
f)



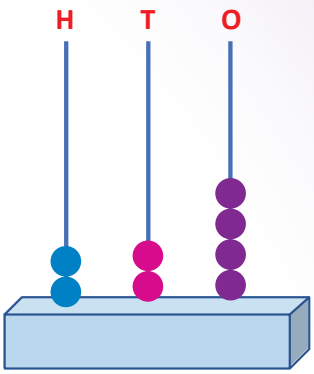
g)



h)

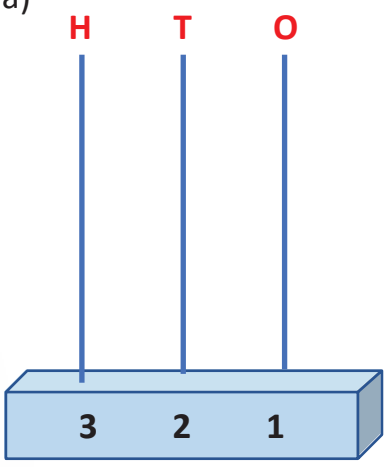


i)

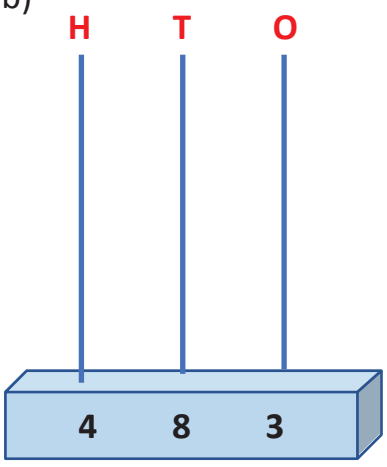


2. Draw the beads on the abacus and write its number name:

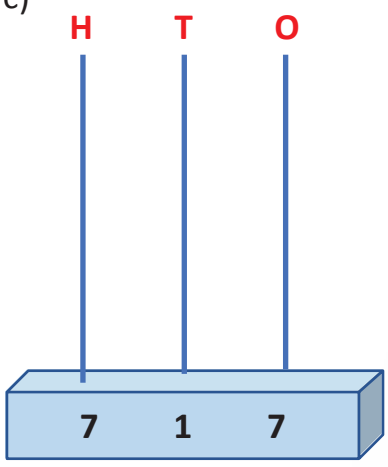
a)



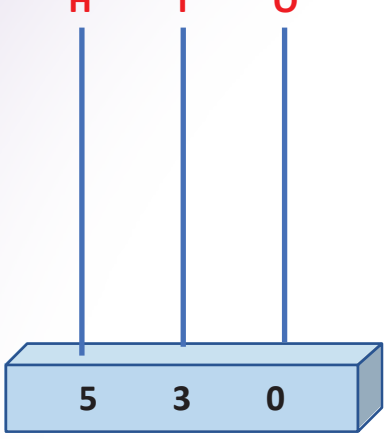
b)



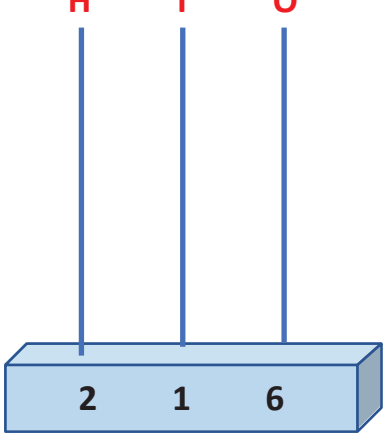
c)



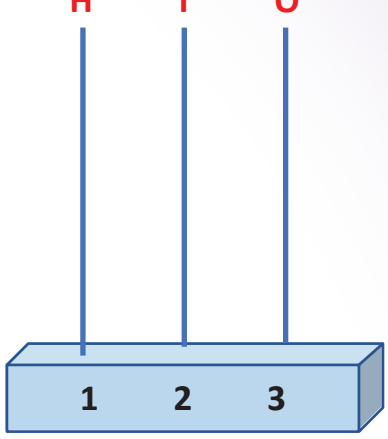
d)



e)



f)



EXERCISE 2.3

1. Write the digits in hundreds (H), tens (T) and ones (O) place in the given box

a) 614

H	T	O

b) 739

H	T	O

c) 807

H	T	O

d) 499

H	T	O

e) 760

H	T	O

f) 294

H	T	O

g) 132

H	T	O

h) 548

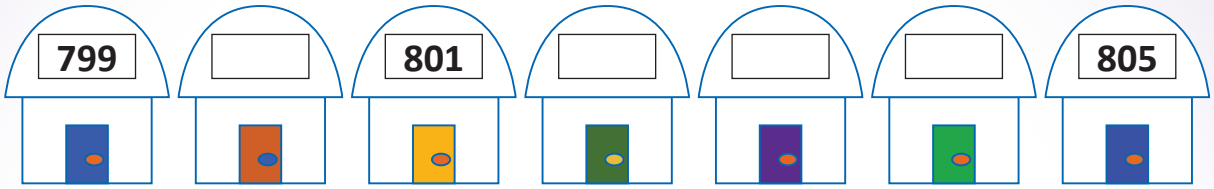
H	T	O

i) 928

H	T	O

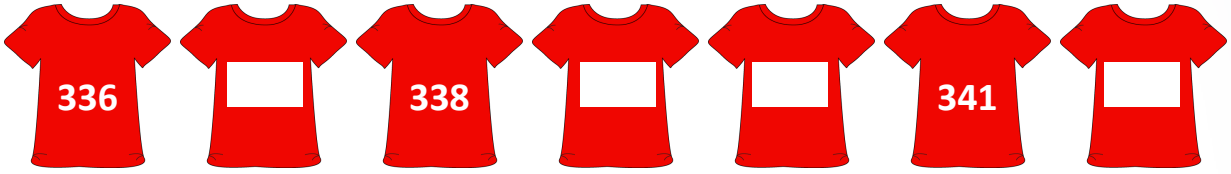
2.Write the missing numerals:

a)



b)

c)



d)

e)

Place Value and Face Value

Face value of a particular digit is the digit itself

Example 1:

Let us take the number 867

Face value of 8 is 8 Face value of 6 is 6 Face value of 7 is 7

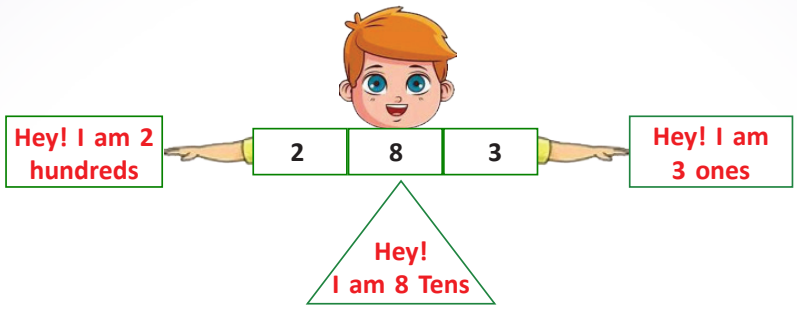
Example 2:

Now, let us take the number 916

Face value of 9 is ____ Face value of 1 is ____ Face value of 6 is ____

Place Value of the digits:

Take the number **283**



Example 1: 523

H	T	O
5	2	3

H	T	O
5	2	3

3 Ones — 3
2 Tens — 20
5 Hundreds — 500

Example 2: 908

H	T	O
9	0	8

H	T	O
9	0	8

8 Ones — 8
0 Tens — 0
9 Hundreds — 900

EXERCISE 2.4

1. Find the place value of all the digits. (First one is done for you):

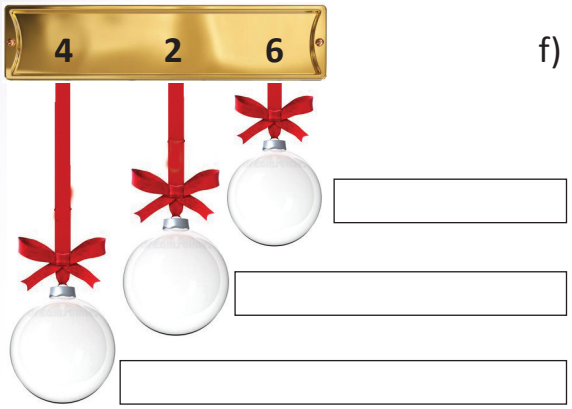
a) 8 2 4

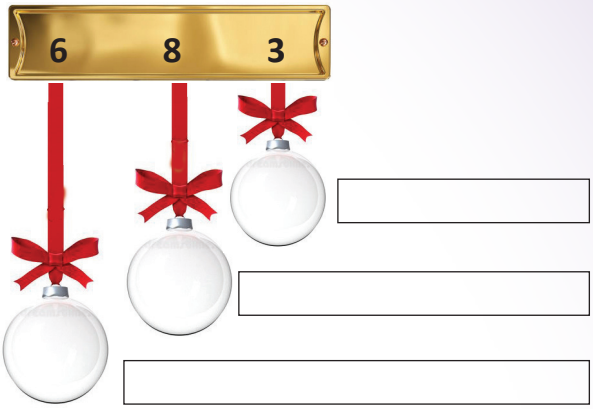
4 — 4 ones
20 — 2 tens
800 — 8 hundreds

b) 9 6 5

c) 7 0 7

d) 3 8 9

e) 

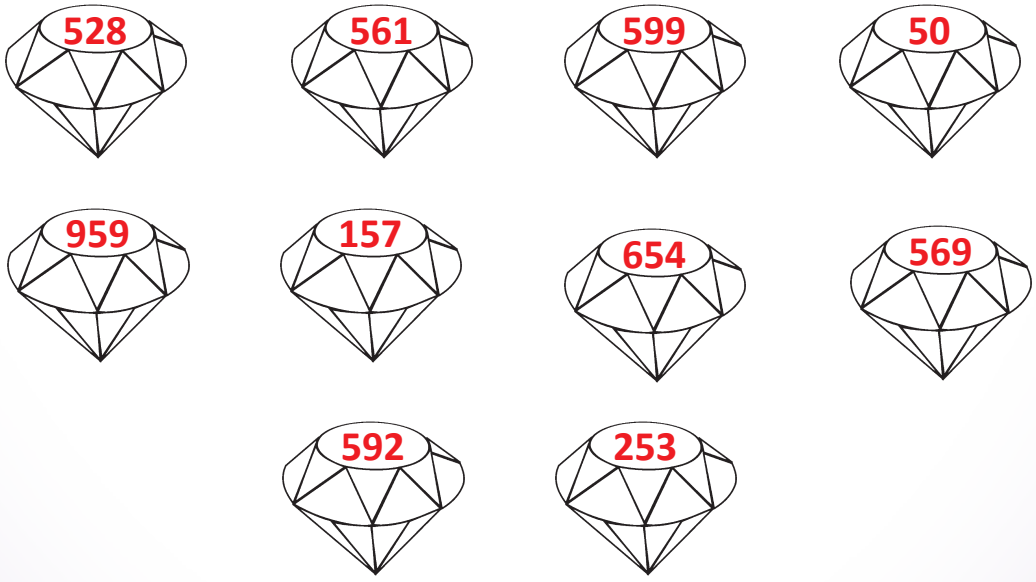
f) 

2. Tick the correct answer:

a)	Place value of 7 in 672 is	7 tens	7 ones
b)	Place value of 8 in 783 is	8 ones	8 tens
c)	Place value of 1 in 109 is	1 tens	1 hundreds
d)	Place value of 4 in 664 is	4 ones	4 tens
e)	Place value of 2 in 724 is	2 tens	2 ones

Arts Integration Activity

Colour the gemstones with **RED** if the place value of 5 is 500 and colour the gemstones with **GREEN** if the place value of 5 is 50.



Teacher's Sign & date_____

Higher Order Thinking Skills:

Write the numbers in the box provided according to the place values. Cross out the numbers as you go….

46	893	832	462	658
312	~~713~~	198	802	823
835	97	2	617	587

a)

Place value of 3 is 3

b)

Place value of 6 is 600

c)

Place value of 2 is 2

d)

Place value of 9 is 90

e)

Place value of 4 is 40

f)

Place value of 5 is 5

Teacher's Sign & date_____

EXERCISE 2.5

1. Write the expanded form (First one is done for you):

	Number	Expanded Form	
a	163	100+60+3	1 hundred + 6 tens+ 3 ones
b	729		
c	208		
d	346		
e	899		

2. Write the standard form:

a. 900 + 10 + 1 = _____ b. 500 + 6 = _____ c. 100 + 40 = _____

d. 800 + 60 + 8 = _____ e. 200 +10 + 2 = _____ f. 400 + 70 + 7 = _____

g. 300 + 50 + 3 = _____ h. 600 + 6 = _____ i. 700 + 20 + 5 = _____

j. 100 + 60 = _____

3. Tick the number that comes just.

a.	After 176	766	175	177
b.	After 989	990	980	970
c.	After 929	919	930	993
d.	Before 667	668	656	666
e.	Before 430	429	419	431
f.	Before 209	210	208	291
g.	Between 889 and 891	890	888	892
h.	Between 500 and 502	501	401	301
i.	Between 638 and 640	637	641	639

Higher Order Thinking Skills:

1) The greatest 3 digit number with different digits is _____.

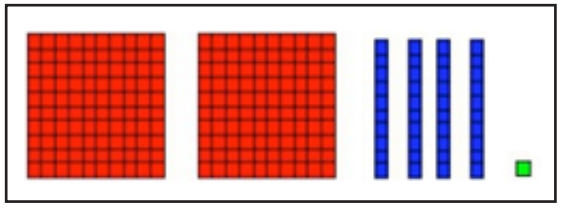
2) The smallest 3 digit number with different digits is _____.

3) Have a go at the riddle and circle the cap

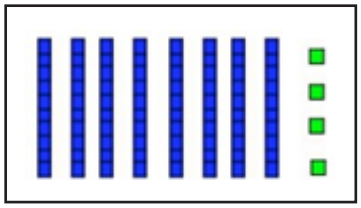
I am a 3 digit number. My hundreds digit is not 5. My tens digit is more than 6. My ones digit is less than 4

- Peacock feathers can grow up to 182 cm long.
- Giraffe can grow up to a height of 600 cm.

Comparison of 2-digit and 3-digit numbers



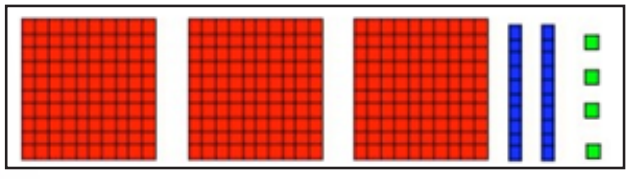
241



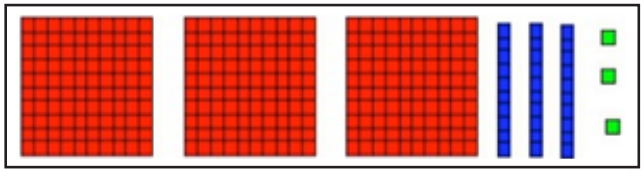
84

A 3 digit number is always greater than a 2 digit number. Example: 241 > 84.

Comparing same number of digits



324

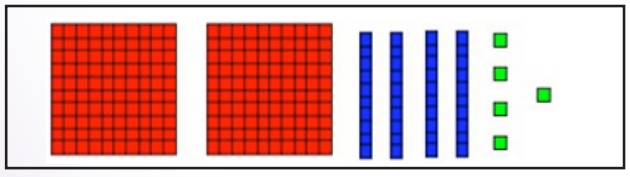


333

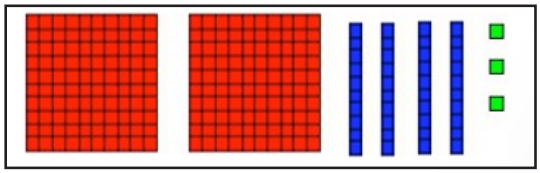
For a 3 digit number compare the hundreds place first. If the hundreds place is same, compare the tens

So 324 is less than 333

324 < 333



245



243

If the hundreds and tens place are same, compare the ones.

245 is greater than 243

So 245 > 243

Experiential learning:

Sumanth and Ram's parents started a saving plan on Diwali by gifting them each a piggy bank. They saved all their gift money in their piggy banks.

At the end of the year, their mother counted the money and found that Sumanth had saved ₹340 and Ram had saved ₹370.

1. Who had more money in the piggy bank? _____

2. Do you save money? _____

Teacher's Sign & date_____

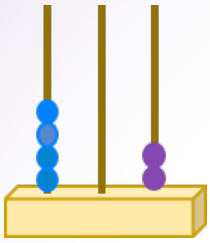
The world's tallest statue is Sardar Vallabhbhai Patel's statue which is known as the **Statue of Unity.**
It is 182 metres tall.

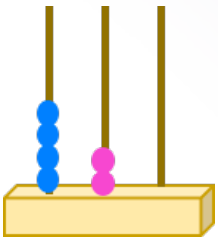
EXERCISE 2.6

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

a)	689		698
b)	200+ 10 + 5		200 + 50 + 5
c)	One hundred thirty		130
d)	360		306
e)	280 ones		2 hundreds + 7 ones + 8 tens
f)	372		327
g)	Three hundred nine		300 + 90

h)





i)

100	10	1	1
	10	1	1
	10	1	1
		1	1

100	10	1
		1
		1

j)

My age is
100 + 0 + 1.

My age is
100 + 10 + 0.

2. Compare, use the appropriate sign:

a. Ritesh is the captain of the cricket team in his school.

He scored 148 runs on the first day and 67 runs on the second day of a test match.

On which day did he score more runs? _____

b. In a school there are 142 children in class 2 and 132 in class 1.

Which class has more children? _____

c. Rita has 312 seashells and Nimmi has 57.

Who has less number of seashells? _____

3. Write the smallest number in the box:

a)	702	720	79	97	
b)	321	333	331	301	
c)	684	608	680	624	
d)	120	102	74	121	
e)	112	111	121	131	

4. Write the greatest number in the oval

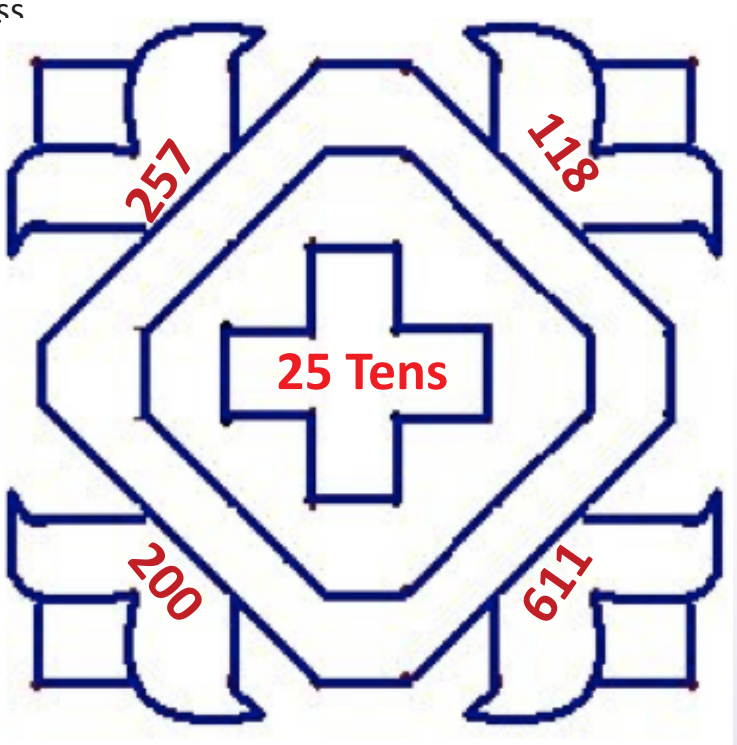
a)	825	889	850	817	
b)	99	464	465	455	
c)	338	331	335	319	
d)	499	399	599	699	
e)	9 tens	90 tens	63 tens	13 tens	

Arts Integrated Activity

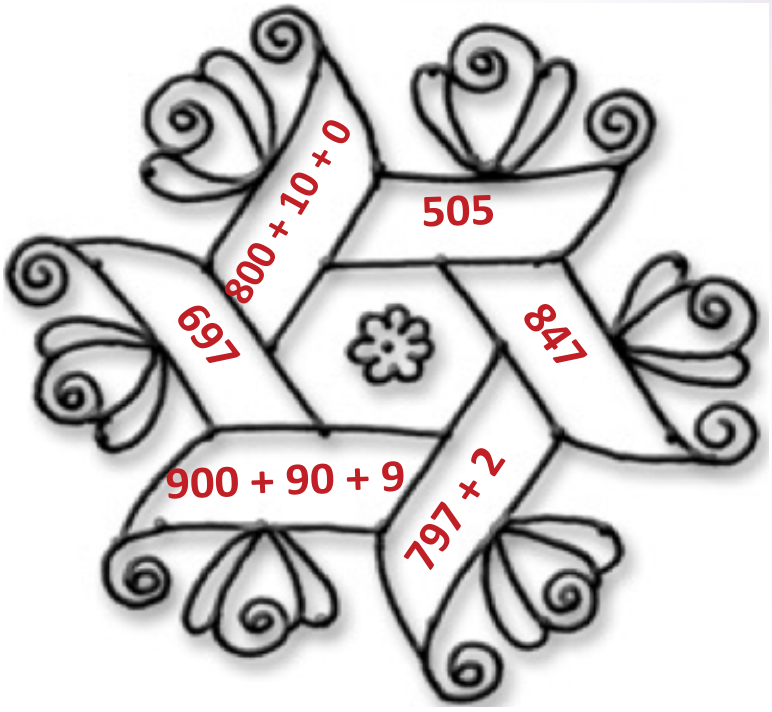
Vani and Varun were helping their mom to make colourful rangoli for Diwali. They decided to have math in the process

Join their fun challenge

Colour the numbers greater than 250 in pink, lesser than 250 in green and equal to 250 in yellow



Spot the numbers lesser than 800 and colour them pink. Colour the others in blue

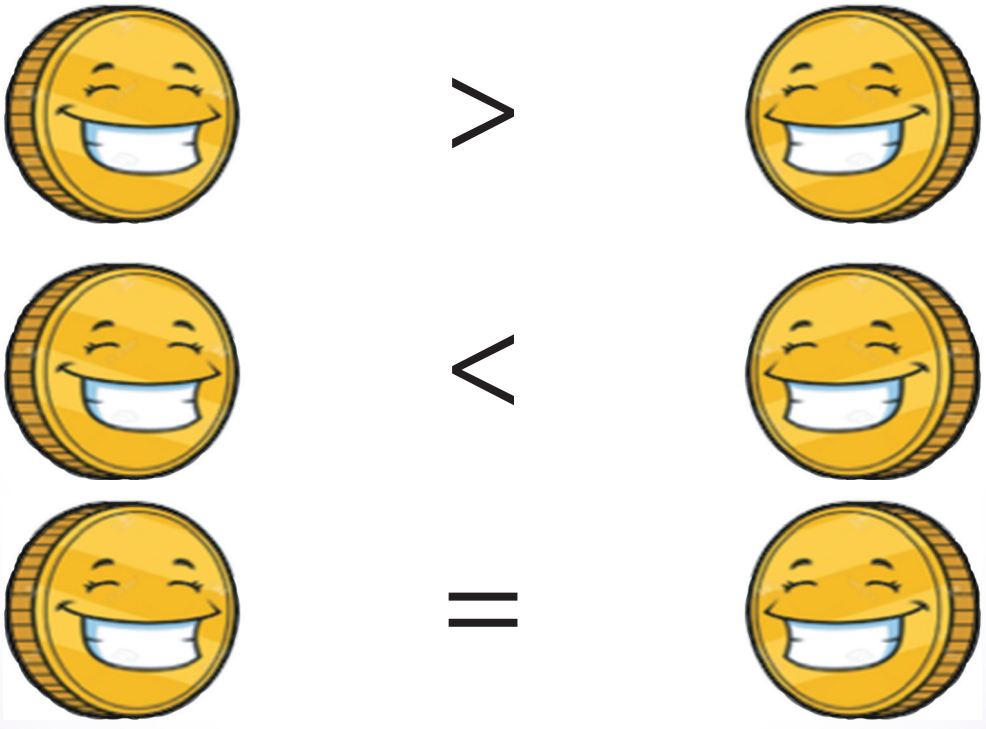


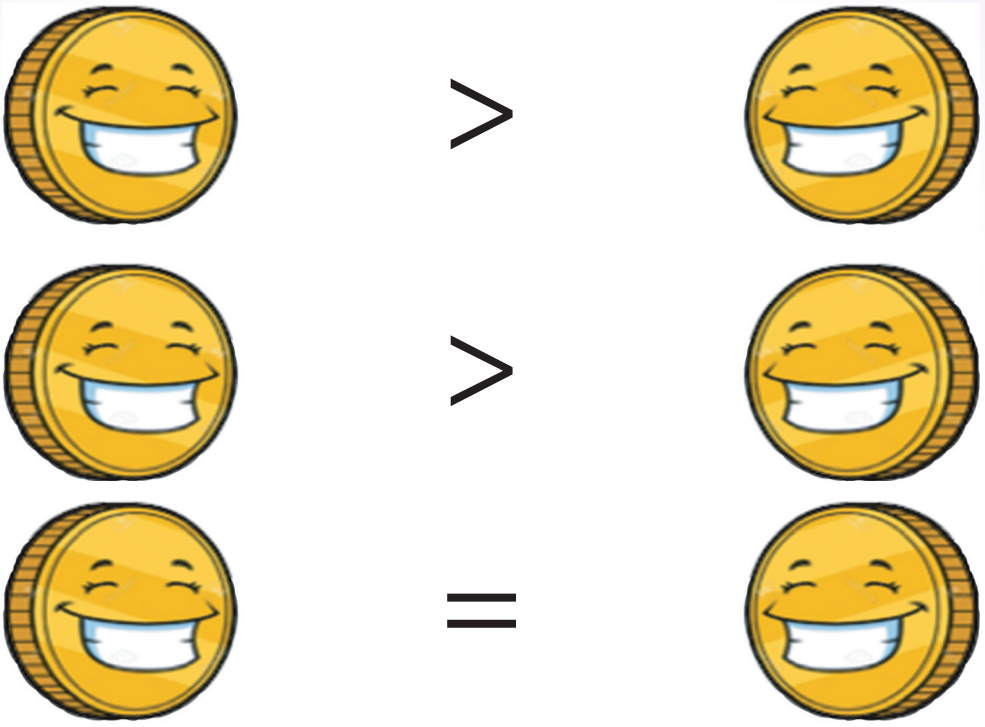
Thinking skills

Welcome to the Magic Land! Here you can collect "Happy coins" simply by entering your favourite 3 digit numbers! Oh, that's a lot of numbers to choose from, let your imagination run wild!!

The only rule is to follow the symbols and make the signs true.

Hint - Write any 3 digit numbers in the coins' mouth!





Teacher's Sign & date_____

Ascending order and Descending order

Akhil and his neighbour Vaibhav are living on the top floor of a big apartment complex.

They both love playing together and would race each other up and down the stairs all the time.

They prefer using elevator than the stairs to reach their floor. One day they see thatha climbing up the stairs while they offered to carry thatha's bags up the stairs, they also asked him why he was not taking the elevator.

Thatha replied that walking up and down the stairs was a good excerise and it kept him healthy. Akhil and Vaibhav was inspired and decided to use the stairs, henceforth.

EXERCISE 2.7

1) Help Nila to arrange the numbers in ascending order when she climbs up the ladder. Write the numbers in the provided in the ladder

322, 323, 232, 223, 230

Start from here

Ascending order:
Smallest to biggest

2) Now, help her arrange the numbers in descending order when she comes down the ladder. Write the numbers in blue boxes provided in the ladder

956, 945, 965, 950, 90

Start from here

Descending order:
Biggest to smallest

3) Write any four 3 digit numbers and arrange them in ascending and descending order

_____

Ascending Order. _____

Descending Order. _____

4) Arrange each set of numbers in ascending order.

a. 235, 532, 523, 325

b. 507, 705, 750, 570

c. 615, 516, 165, 156

d. 698, 968, 869, 689

5) Arrange each set of numbers in descending order.

a. 101, 110, 111, 100

b. 764, 467, 746, 476

c. 239, 932, 293, 923

d. 808, 880, 80, 800

Higher Order Thinking Skills:

Mathematics Quiz

Name	Score
Anu	667
Divya	680
Aswin	674
Pratap	601

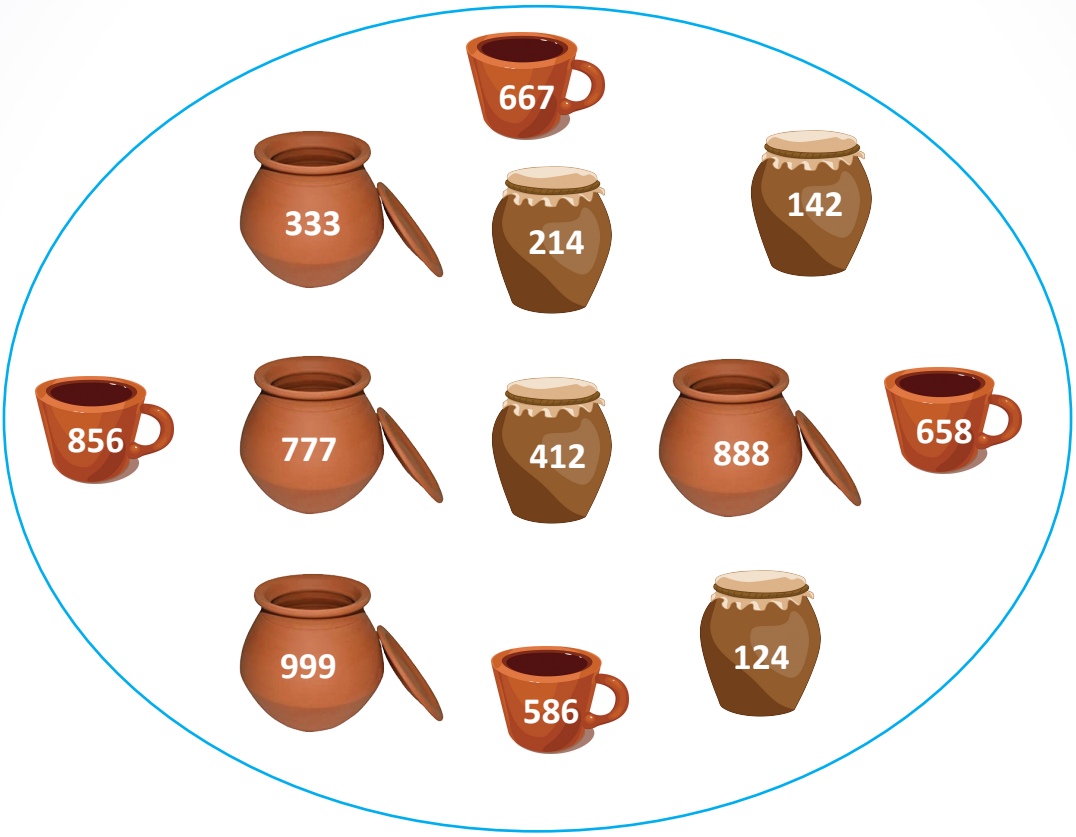
Read the scores and fill in the boxes:-

a) Arrange their scores in ascending order

b) Who is the winner?

Fun with Numbers

Choose the numbers from each object and arrange them in descending order accordingly

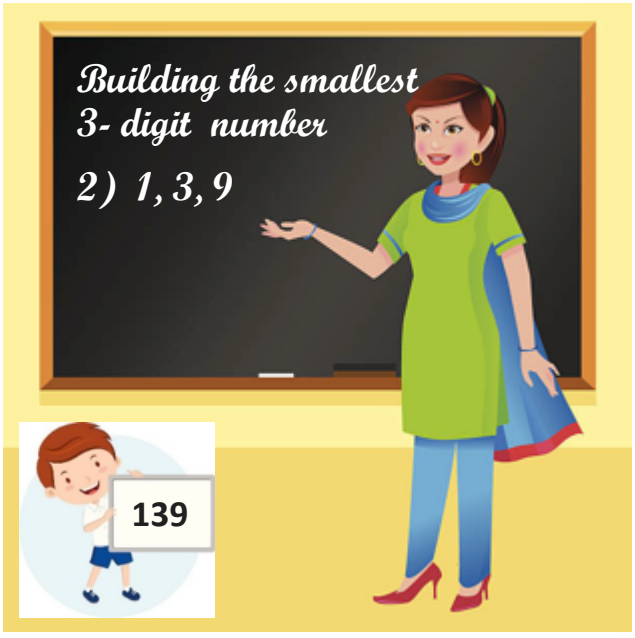


Teacher's Sign & date_____

Building 3-digit numbers

To form the greatest 3 digit number, write the digits in descending order

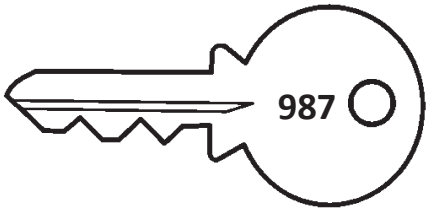
To form the smallest 3 digit number, write the digits in ascending order



EXERCISE 2.8

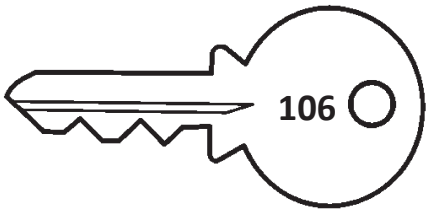
I. Match the lock with the correct key:

a. 



( )

b. 



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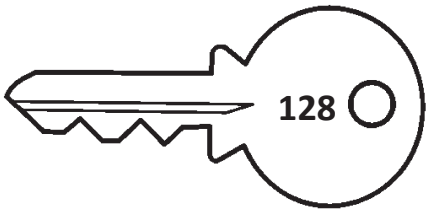
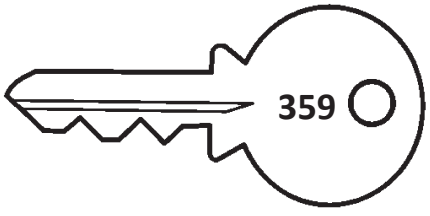
c. 



( )

d. 



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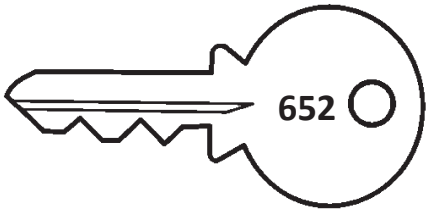
e. 



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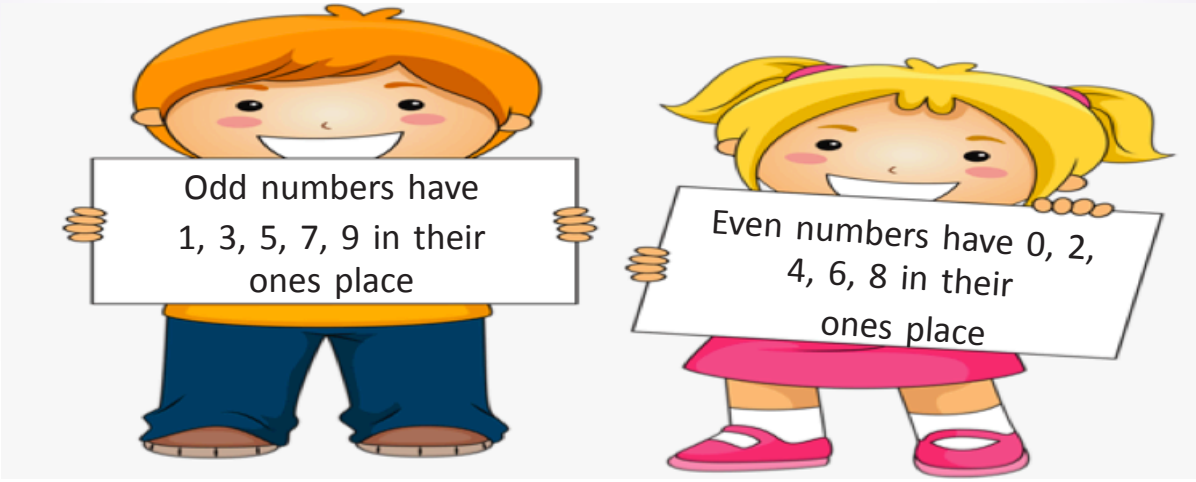
Teacher's Sign & date_____

Odd and Even numbers



EXERCISE 2.9

Bounce at the beach

Suraj and Smitha have colourful number balls to play with at the beach. Help them to identify the number as odd or even.

Odd numbers

Even numbers

Teacher's Sign & date_____

WORKSHEET A

1) Write the number names

a) 142 One hundred forty two

b) 450 _____

c) 355 _____

d) 578 _____

e) 674 _____

2) Write the numerals for the number names given below

a) Five hundred thirty seven

b) Three hundred sixteen

c) Six hundred six

d) Four hundred two

e) Seven hundred eighty four

3) Find the face value, place value of the encircled digit

	Face Value	Place Value
6(9)3		
(8)5 3		
2 7(8)		
(4)6 7		
(9)0 2		

	Face Value	Place Value
3 8(1)		
7(0)3		
1 2(0)		
9(8)7		
(5)3 4		

4) Fill in the blanks

a. Place value of 5 in 529 is _____(50 / 500)

b. Place values of 3 in 403 is _____(300 / 3)

c. Place values of 2 in 622 is _____(200, 2 / 20, 2)

5) Write in expanded form

a.	438 = 400 + 30 + 8
b.	761 =
c.	219 =
d.	800 =
e.	578 =

6) Write in standard form

a. 200+ 80 + 6 = _____

b. 400 + 0 + 3 = _____

c. 7 + 50 + 900 = _____

d. 1 hundreds + 3 tens + 8 ones = _____

7) Fill in the blanks

a. 700 + 30 + 6 = ___

b. 200 + ___ + 9 = 229

c. 100 + 70 + ___ = 176

d. 900 + ___ = 950

e. 700 + ___ = 750

f. _____ + 50 + 7 = 357

g. _____ + 8 tens + 2 ones = 182

8) What number comes ……..

Just Before	Between	Just After
a. _____, 116	g. 351____, 353	m. 398, _____
b. _____, 234	h. 996 ____, 998	n. 440, _____
c. _____, 573	i. 419____, 421	o. 892, _____
d. _____, 101	j. 378____, 380	p. 371, _____
e. _____, 710	k. 700____, 702	q. 699, _____
f. _____, 600	l. 499____, 501	r. 418, _____

9) Rearrange the numbers in ascending order

a) 234, 993, 243, 123 ⇒

b) 985, 984, 399, 199 ⇒

c) 232, 322, 185, 586 ⇒

d) 456, 453, 499, 596 ⇒

e) 987, 963, 359, 544 ⇒

10) Write the greatest and the smallest 3 digit number formed using the digits

	Greatest Number	Smallest Number		Greatest Number	Smallest Number
a) 8, 4, 0	_____	_____	f) 4, 4, 3	_____	_____
b) 4, 5, 0	_____	_____	g) 6, 8, 7	_____	_____
c) 9, 0, 3	_____	_____	h) 1, 9, 2	_____	_____
d) 2, 0, 5	_____	_____	i) 2, 4, 6	_____	_____
e) 7, 6, 0	_____	_____	j) 3, 7, 0	_____	_____

11) Fill in the blanks

a. The odd number that comes just after 145 is _____

b. The even number that comes just after 98 is _____

c. Write all odd numbers between 786 and 800

_____

_____

d. Write all even numbers from 200 to 220

_____

_____

e. The sum of an odd number and an even number is an _____ (odd number / even number)

f. The number just after 4 + 4 + 4 is _____, is an _____ (odd / even) number.

g. Can the sum of 2 odd numbers be an odd number? _____ (Yes / No)

12) 

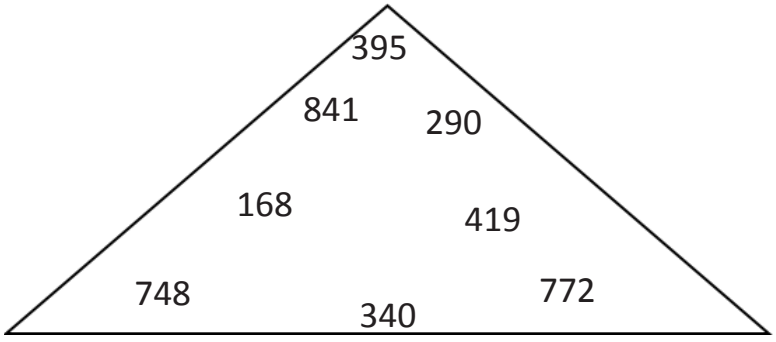
a) Is 319 an odd or an even number? _____

b) Write the five odd numbers that comes after 319.

_____

c) The greatest 3-digit number formed using the digits 3, 1, 9 is _____

13) Choose the numbers from the triangle and fill in the table



Even numbers	Numbers whose tens digit is more than 5	Numbers whose one digit is less than 6	Odd numbers
	395		**395**

Higher Order Thinking Skills

1) The digit in my tens place is more than 5 and less than 7. The digit in my ones place is between 7 and 9. My hundreds place is the greatest 1-digit number. I am _____.

2) How many 2 digit numbers are there? _____

3) Write the greatest 3 digit number using 6 two times and 5 once _____

4) Which number could be placed in the blank to make it the greatest possible 3 digit number using 3 different digits | | | | |?

WORKSHEET B

1) Write the number names

a) 999 Nine Hundred and Ninety Nine

b) 807 _____

c) 500 _____

d) 583 _____

e) 741 _____

2) Write the numerals for the number names given below

a) One hundred eleven

b) Nine hundred ninety

c) Two hundred fifty

d) Five hundred twenty nine

e) One hundred eighty three

3) Fill in the blanks

a. Place values of 9 in 969 is _____(900, 90 / 90, 9 / 900, 9)

b. Which is greater?
place value of 7 in 763 or place value of 7 in 879 _____

c. The place value of _____ remains the same irrespective of its position (0, 1)

4) Write in expanded form

a.	742 =
b.	333 =
c.	605 =
d.	140 =
e.	926 =

5) Write in standard form

a. 3 hundreds + 2 tens + 1 ones = _____

b. 6 hundreds + 5 tens + 4 ones = _____

c. 2 hundreds + 1 ten + 8 ones = _____

d. 5 hundreds + 0 tens + 0 ones = _____

6) Rearrange the numbers in descending order

a) 302,795,341,623 ⇒

b) 963,159,851,742 ⇒

c) 159,250,247,357 ⇒

d) 562,654,329,739 ⇒

e) 842,763,284,167 ⇒

7) Fill in the blanks

a. The odd number that comes just after 501 is _____

b. The even number that comes just after 76 is _____

c. Write all even numbers between 600 and 618 _____

d. Write all even numbers from 300 to 320

_____

_____

e. The number just after 8 + 8 + 8 is _____, is an _____ (odd / even) number.

f. Can the sum of 2 even numbers be an odd number? _____ (Yes / No)

Experiential Learning

8) All the children of Dev colony decided to clean their colony park. They collected 72 plastic bottles, 115 polythene bags and 107 candy wrappers in a week.

a) Write the number and tick in odd column if it is odd and the even column if it is even.

Objects	**Number**	**Odd**	**Even**
Plastic bottle			
Polythene bags			
Candy wrappers			

b) How would you keep your surroundings clean?

_____

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ADDITION

1+1 = 2

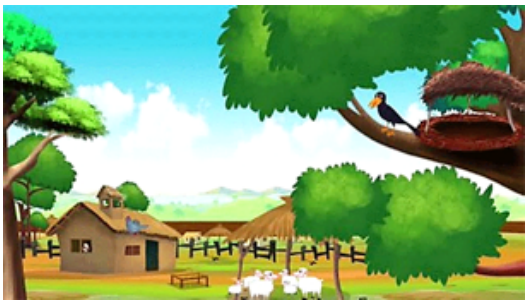
2+2 = 4

3+3 = 6

Learning Outcomes:

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

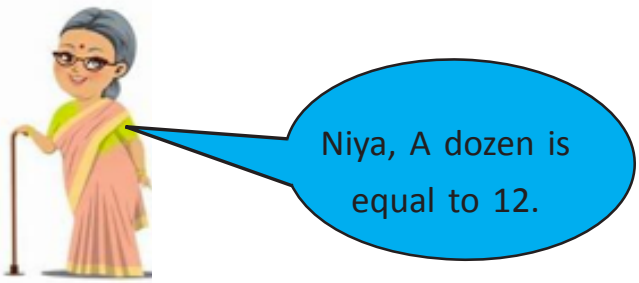
- Add up to 3-digit numbers with and without regrouping.
- Apply addition skills to solve real life problems.



Niya went to the Melur village to visit her grandmother. She took 4 sweets, 2 sarees and 5 bangles as gifts as she knew they will make her grandma very happy.

In the village, her grandmother had a farm with 6 sheep, 3 hens and 5 cows. Niya had a wonderful time helping her grandmother by taking care of the animals throughout her holidays.

When it was time to return, grandmother gave Niya a dozen bananas to share with her neighbours.



1. How many pieces of gifts did Niya take for her grandma altogether? _____

2. How many animals did Niya see in her grandma's farm altogether? _____

3. In what ways do you help your grandparents? _____

Properties of Addition

Sonu, Manu and their father sat at the dining table for their breakfast. Mother served idlis for their breakfast.

Sonu had 3 idlis in the first serving. He did not have any idlis in the second serving. 3 + 0 = 3

> '0' added to any number gives the same number as their sum.

Manu was served 3 idlis the first time and one more idly, in the second time. 3 + 1 = 4

> '1' added to any number gives the next number as their sum.

Father had 4 idlis in the first serving and 2 more idlis in the second serving. 4 + 2 = 6, 2 + 4 = 6.

> When we change the order of numbers that are added, their sum does not change.

EXERCISE 3.1

Answer the following

a) 1 added to 49 = _____	b) 99 + 0 = _____
c) 6 tens + 6 ones + 0 = _____	d) 25 + 52 = _____ + 25
e) _____ + 82 = 83	f) _____ + 0 = 100
g) 1 + the largest 2 digit number = _____	h) 0 + _____ = 75
i) 1 + _____ = 43	j) The smallest 1 digit number + 9 = _____

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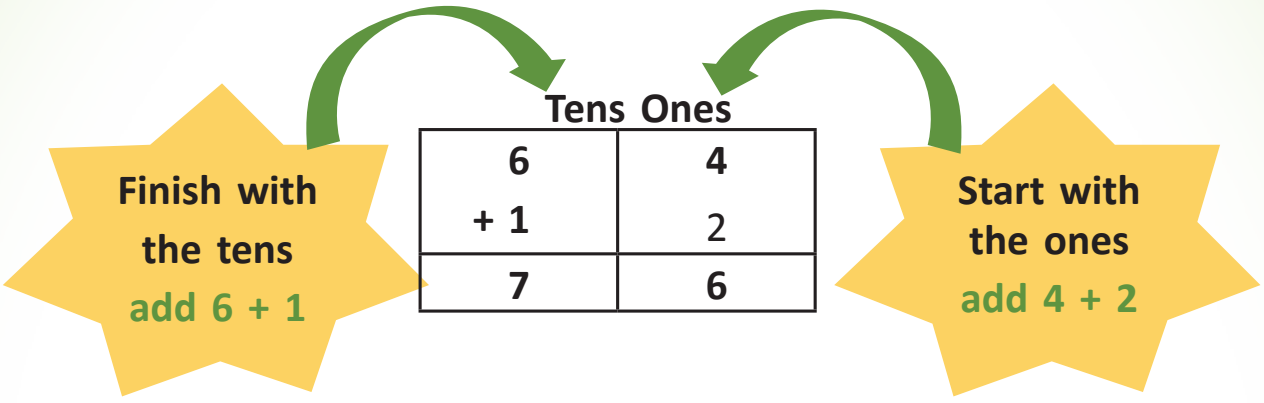
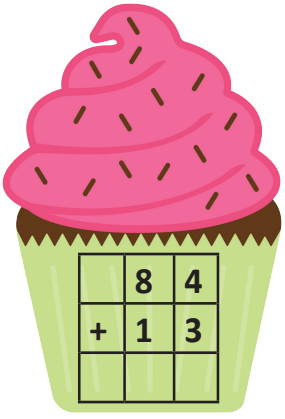
2-digit addition (without regrouping)



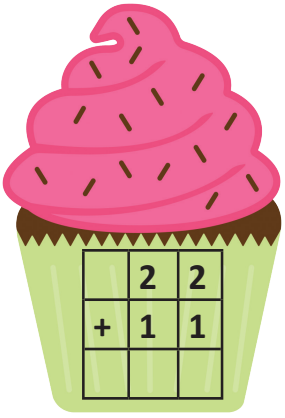
EXERCISE 3.2

1. Add

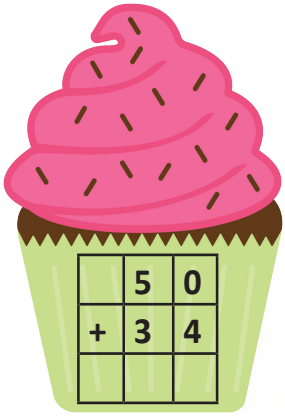
a)



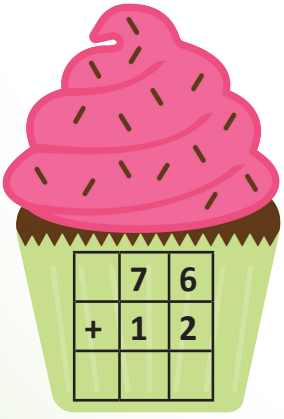
b)



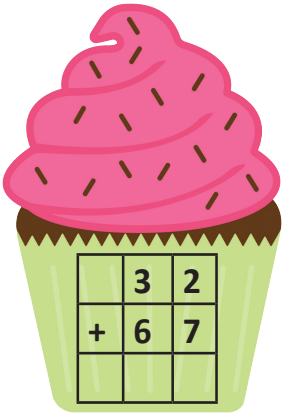
c)



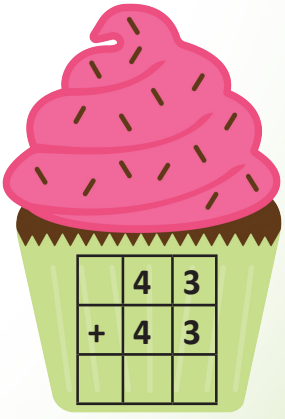
d)



e)



f)



2) Quick addition

The Maths teacher of grade 2 organized a Quick Addition contest in which the one who completes first grabs the prestigious title of "Clever Jumbo"!

Lets get started?

QUICK!! QUICK! QUICK!

19 + 7 = ____

39 + 5 = ____

13 + 5 = ____

10 + 15 = ____

99 + 1 = ____

44 + 4 = ____

22 + 11 = ____

20 + 20 = ____

25 + 6 = ____

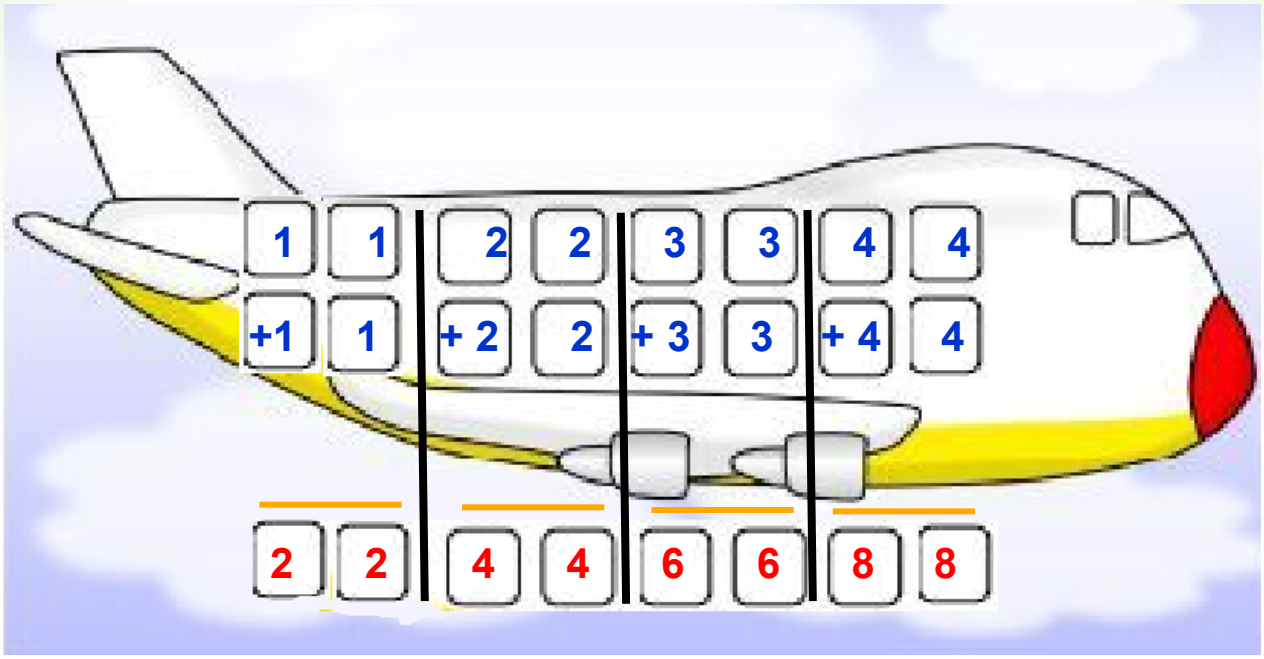
8 + 9 = ____

67 + 4 = ____

56 + 10 = ____

Who wants to win the title "Clever Jumbo"?

3) Do you see a pattern in the same number addition?



Can you find some more patterns?

_____

Complete the addition pattern

11 + 11 = _____ 12 + 12 = _____

13 + 13 = _____ 14 + 14 = _____

15 + 15 = _____

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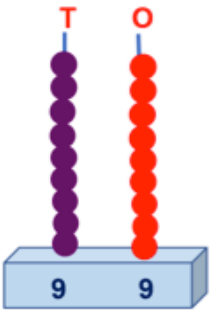
2-digit addition (with regrouping)

Sara and tara are good singers. They sing together in the tune of row, row, row your boat...

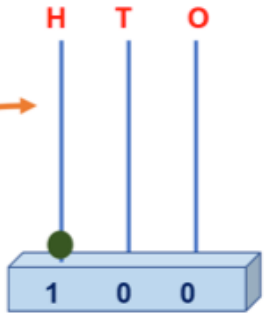
Addition Poem

Start, start, start with the ones adding up to 9.
If there is more carry next door
And you will add just fine

Example 1:

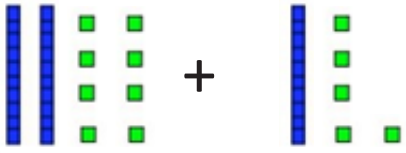


99 + 1 = 100



Example 2:

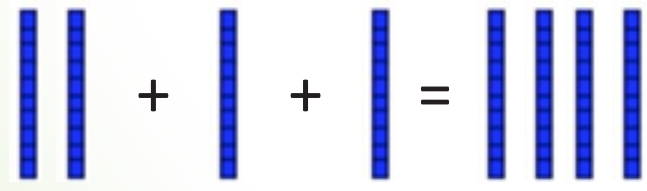
Add 28 and 15



Step 1 Add the ones

	Tens	Ones
	(+1)	
	2	8
+	1	5
		3

Step 2 Add the tens



	Tens	Ones
	(+1)	
	2	8
+	1	5
	4	3

EXERCISE 3.3

1) Fill in the blanks:

a. 19 ones = ____ tens + ____ ones

b. 1 tens + 12 ones = ____ tens + ____ ones

c. 5 tens + 13 ones = ____ tens + ____ ones

d. 7 tens + 14 ones = ____ tens + ____ ones

e. 10 tens = ____

f. 4 tens + 18 ones = _____

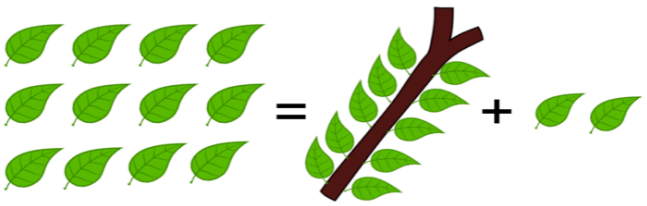
g. 34 ones = _____

h. 5 tens + 3 tens = _____

i. 12 ones + 3 tens = _____

j. 4 ones + 7 tens = _____

Remember



12 Ones = 1 Tens + 2 Ones

2) Find the sweet sum:

a.
```
  6 5
+   9
_____
_____
```

b.
```
  5 5
+   8
_____
_____
```

c.
```
  2 7
+ 6 7
_____
_____
```

d.
```
  5 8
+ 3 3
_____
_____
```

e.
```
  4 5
+ 5 9
_____
_____
```

f.
```
  7 8
+ 1 2
_____
_____
```

g.
```
  2 6
+ 1 4
_____
_____
```

h.
```
  3 8
+ 4 9
_____
_____
```

i.
```
  1 7
+ 4 6
_____
_____
```

Teacher's Sign & date_____

3) Arrange and Add:

a. 39 + 11

	Tens	Ones
	T	O
+		

b. 46 + 15

	Tens	Ones
	T	O
+		

c. 53 + 27

	Tens	Ones
	T	O
+		

d. 64 + 29

	Tens	Ones
	T	O
+		

e. 72 + 18

	Tens	Ones
	T	O
+		

f. 85 + 6

	Tens	Ones
	T	O
+		

4) Applications in real life:


a) Balu had 58 stamps. His father gave him 28 more. How many stamps does he have now?

_____ =

_____ = +

_____ =

T	O

Ans: _____

b) In a garden, there are 48 roses and 32 hibiscus flowers. How many flowers are there in the garden?

		T	O
_____	=		
_____	= +		
_____	=		

Ans: _____

c) Arun baked 64 cupcakes on Monday and 27 cupcakes on Tuesday. How many cupcakes did he bake on both the days?

		T	O
_____	=		
_____	= +		
_____	=		

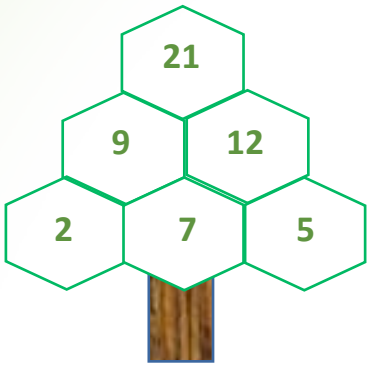
Ans: _____

5) How fast can you add?

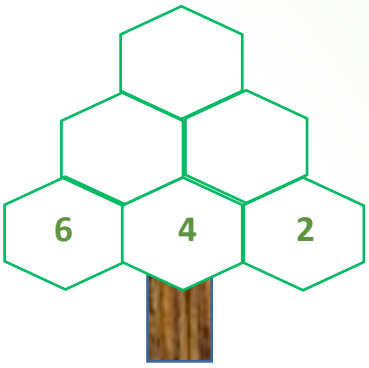
a)	____	+	50	= 100	b)	____	+	98	= 100
c)	20	+	____	= 100	d)	1	+	____	= 100
e)	____	+	60	= 100	f)	____	+	80	= 100
g)	0	+	____	= 100	h)	____	+	70	= 100
i)	100	+	____	= 100	j)	40	+	____	= 100
k)	10	+	____	= 100	l)	____	+	99	= 100
m)	____	+	30	= 100	n)	97	+	____	= 100

6) Fill in the tree puzzle:

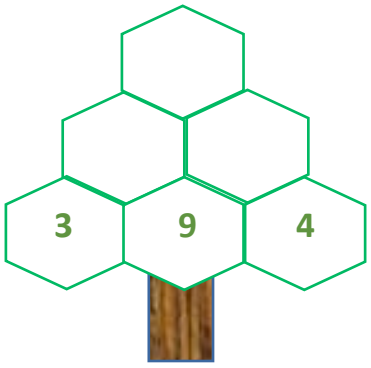
a)



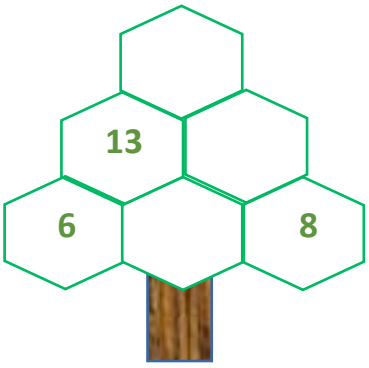
b)



c)

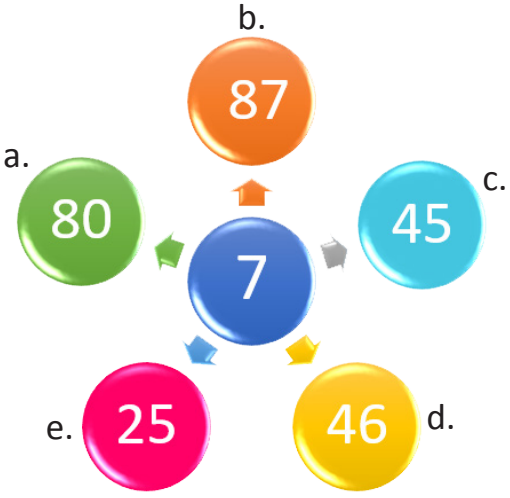


d)



Fun Activity

It all adds up!



Add the numbers in the outer circle with the number in the center circle.

a. 80 + 7 = 87

b. _____

c. _____

d. _____

e. _____

Experiential Learning

To celebrate Earth Day, you planted 50 saplings and your friend 100 saplings. Find the total number of saplings that you and your dearest friend planted.

a) Number of saplings that I planted = ☐

b) Number of saplings planted by my friend = ☐

Total Number of saplings planted = ☐

Fact Corner

Earth day is celebrated on 22nd April

Teacher's Sign & date_____

3-digit addition (with and without regrouping)

Example 1:

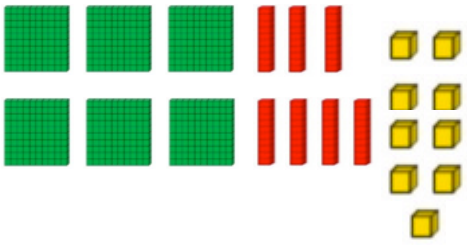
312 + 367

Step 1: Add the ones.

Step 2: Add the tens.

Step 3: Add the hundreds.

H	T	O
3	1	2
3	6	7
6	7	9



Answer: 679

Example 2:

Add 248 and 175

Step 1: Add the ones and regroup.

8 + 5 = 13 ones

13 ones = 1 tens + 3 ones

Step 2: Add the tens and regroup.

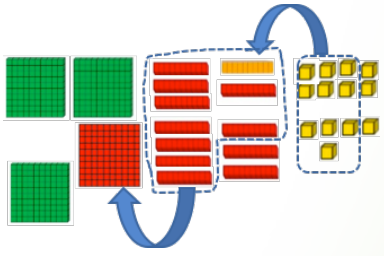
1 + 4 + 7 = 12 tens

12 tens = 1 hundred + 2 tens

Step 3: Add the hundreds.

1 + 2 + 1 = 4 hundreds

H	T	O
+1	+1	
2	4	8
1	7	5
4	2	3



Answer: 423

Higher Order Thinking Skills

a) 45 tens = ___ hundreds + ___ tens = ☐

b) 32 tens + 57 ones = ___ hundreds + ___ tens + ___ ones = ☐

c) 54 tens + 52 ones = ___ hundreds + ___ tens + ___ ones = ☐

d) 71 tens + 71 ones = ___ hundreds + ___ tens + ___ ones = ☐

e) 24 tens + 16 ones = ___ hundreds + ___ tens + ___ ones = ☐

f) 3 hundreds + 26 tens + 14 ones =
___ hundreds + ___ tens + ____ ones = ☐

g) 2 hundreds + 15 tens + 51 ones =
___ hundreds + ___ tens + ___ ones = ☐

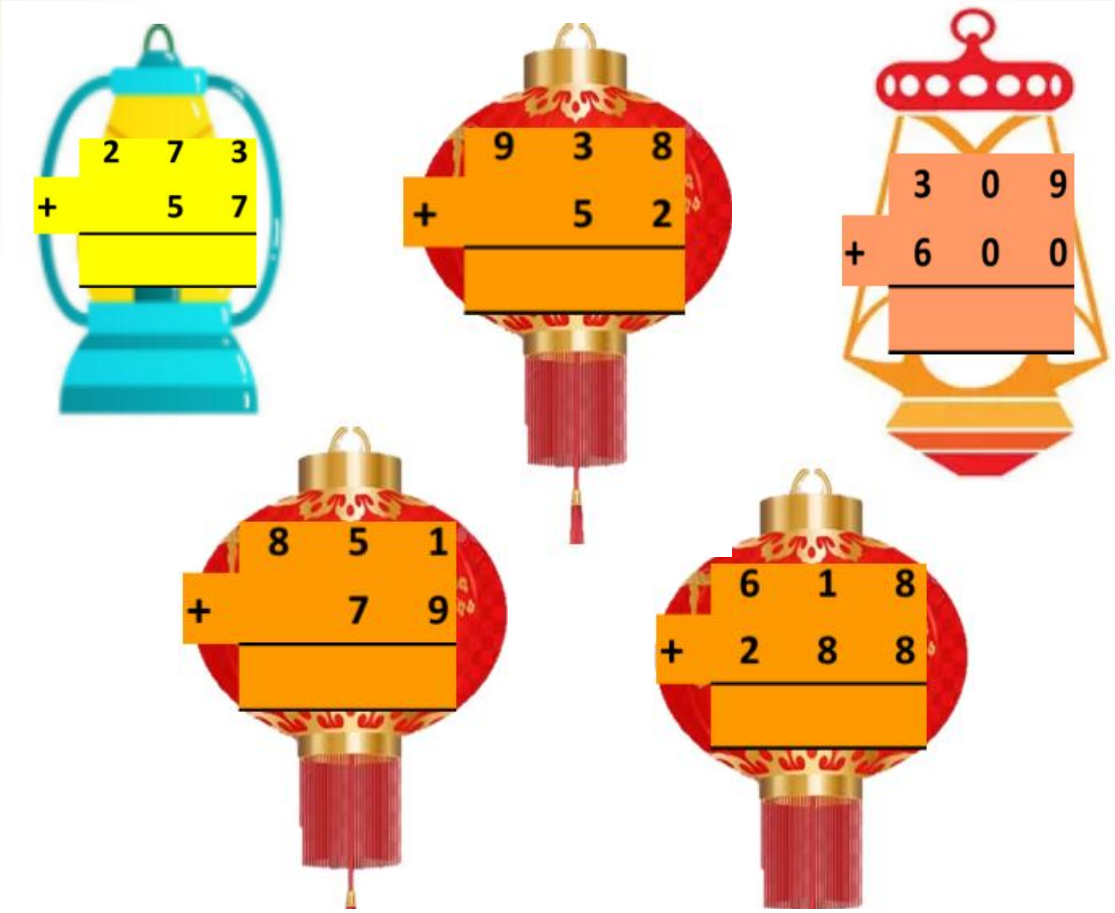
h) 18 tens = ☐

i) 12 tens + 18 tens = ☐

j) 16 ones + 2 hundreds + 14 tens = ☐

EXERCISE 3.4

1) Help Shanti light up the lantern by finding the sum:



2) More makes Mani happy! Add 1 more! Add 10 more!! Add 100 more!!!

		Add 1 more	Add 10 more	Add 100 more
a)	352	353	362	452
b)	746	_____	_____	_____
c)	463	_____	_____	_____
d)	689	_____	_____	_____
e)	507	_____	_____	_____
f)	270	_____	_____	_____
g)	128	_____	_____	_____
h)	314	_____	_____	_____
i)	899	_____	_____	_____
j)	035	_____	_____	_____

3) Find the sum:

a. 248 + 112

	H	T	O
+			

b. 364 + 475

	H	T	O
+			

c. 473 + 298

	H	T	O
+			

d. 517 + 383

	H	T	O
+			

e. 866 + 37

	H	T	O
+			

f. 99 + 621

	H	T	O
+			

4) Value based question

Vinod wanted to celebrate his birthday in a special way this year. He used the gift money given by his grandparents to help the wounded dogs in the animal shelter.

He got ₹657 worth of medicines and ₹325 worth of dog biscuits.

a. How much money did he gift the animal shelter altogether?

	H	T	O

Teacher's Sign & date_____

Thinking skills

Quick Quiz!!!

a) If 5 + 4 = 9

50 + 40 = ____

500 + 400 = ____

b) if 6 + 2 = 8

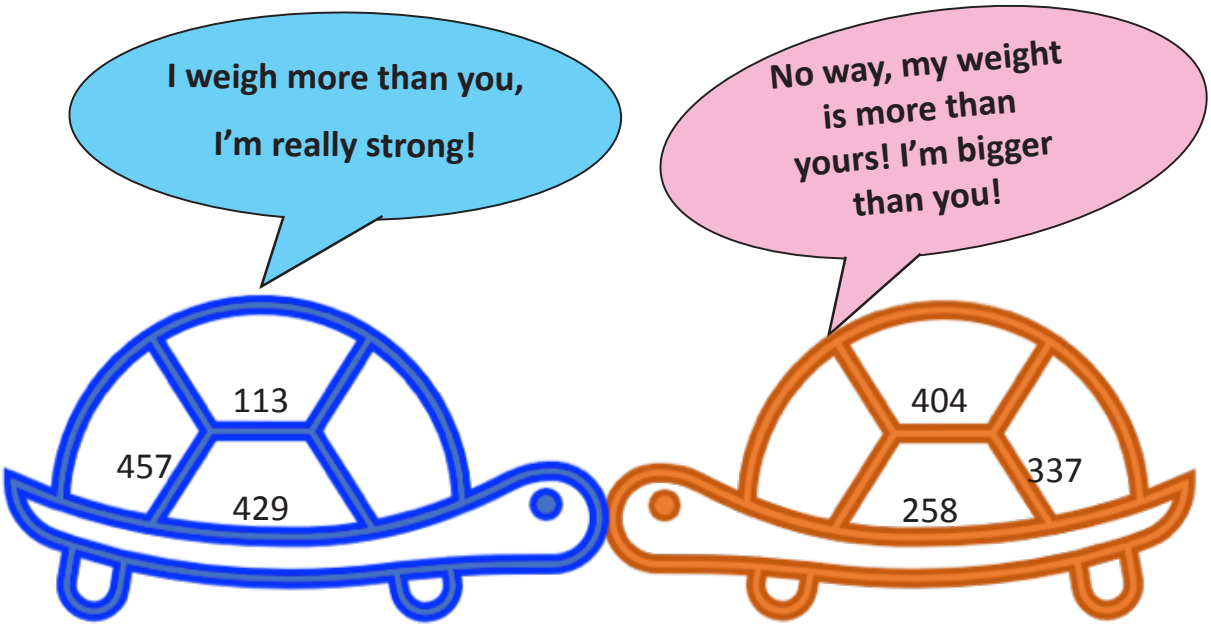
60 + 20 = ____

600 + 200 = ____

c) When you add 509 to 12, the digit in the tens place is _____.

d) What is the sum of the greatest 2 digit number and the smallest 3-digit number? _____

e) Add the numbers on the turtles' shells to find out who weighs more!



A's weight

4 5 7
\+ 1 1 3
\+ 4 2 9
_____
_____

B's weight

3 3 7
\+ 4 0 4
\+ 2 5 8
_____
_____

Answer: _____

f) Find without actual addition

The ones digit of the sum of 373 + 277 + 190 is _____ (10, 0, 9)

Teacher's Sign & date_____

EXERCISE 3.5

1) The scores of Jai and his friends in the bowling game is given below.

Names	Scores
Jai	230
Sriya	175
Anbu	156
Nila	85
Hema	312

1. How many points did Jai and Anbu score together? ☐
2. Sriya played again and scored 25 morepoints. What is her score at the end of the 2nd game? ☐
3. Nila played again and doubled her score. What is her score now? ☐
4. The sum of the place values of 3 in Jai's and Hema's score is _____

2) Applications in real life

a) In a parking lot, there were 156 white cars and 379 red cars. How many cars were there altogether?

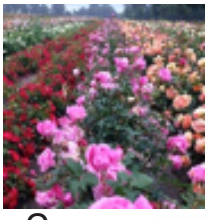
		H	T	O
_____	=			
_____	= +			
_____	=			

Ans: _____

b) There were 540 people in a train. When the train halted at the next station 289 got in and no one got out.How many are there in the train now?

		H	T	O
_____	=			
_____	= +			
_____	=			

Ans: _____



c) There were 318 rose plants in a garden. Manjo planted 89 more the following day. How many rose plants would there be now?

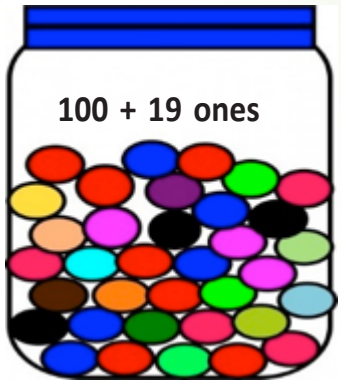
		H	T	O
_____	=			
_____	= +			
_____	=			

Ans: _____

d) The number of marbles in each jar is shown. How many marbles are there altogether?

Jar A

Jar B



Jar C

		H	T	O
_____	=			
_____	= +			
_____	=			

Ans: _____

e) Find the number which is 248 more than 654.

Solution:

H	T	O

Ans: _____

Teacher's Sign & date_____

EXERCISE 3.6

1) Solve:

a) What is the sum of the largest 3-digit odd number and the smallest 3-digit even number?

b) In a primary section of a school, there were 492 girls. The number of boys was 280 more than the number of girls. Find the number of boys in the primary section of the school.

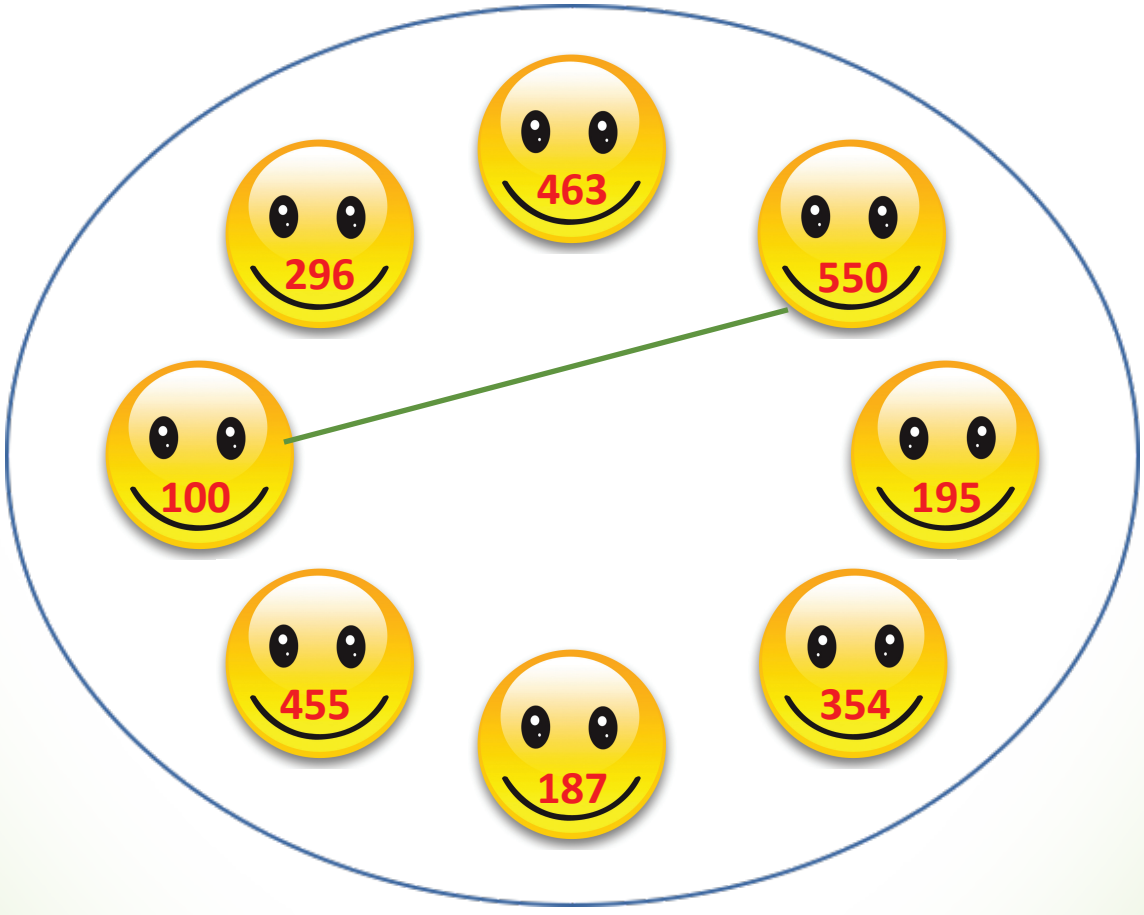
c) Veena's basket has 685 roses. Rani's basket has 185 roses. How many roses are there altogether?

d) A factory produces 423 bulbs on Monday and 389 bulbs on Tuesday. How many bulbs does the factory produce on both the days?

e) An engineer took 1 year (not a leap year) and 146 days to complete a building. How many days has she taken to complete the task?.

2) Thinking skills:

Identify the pairs that would fetch 650 as the sum. One is done for you.



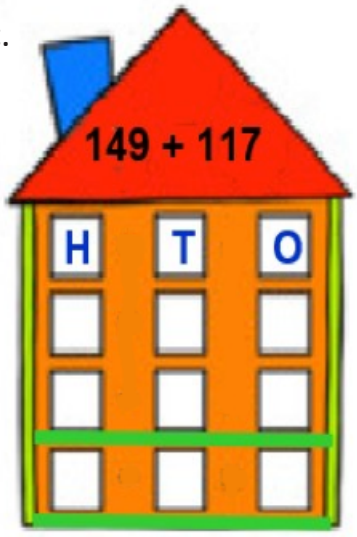
EXERCISE 3.7

1) Arrange the numbers in the house and find the sum:

a.

b.

c.



2) Find the sum:

a.

	H	T	O
	2	3	7
+	2	4	9

b.

	H	T	O
	2	9	0
+	1	8	0

c.

	H	T	O
	5	6	9
+		9	7

d.

	H	T	O
	4	4	4
+	4	5	8

e.

	H	T	O
	3	5	6
+	5	7	4

f

	H	T	O
	6	7	3
+			9

g.

	H	T	O
	7	6	1
+	1	6	8

h.

	H	T	O
	8	4	3
+		7	4

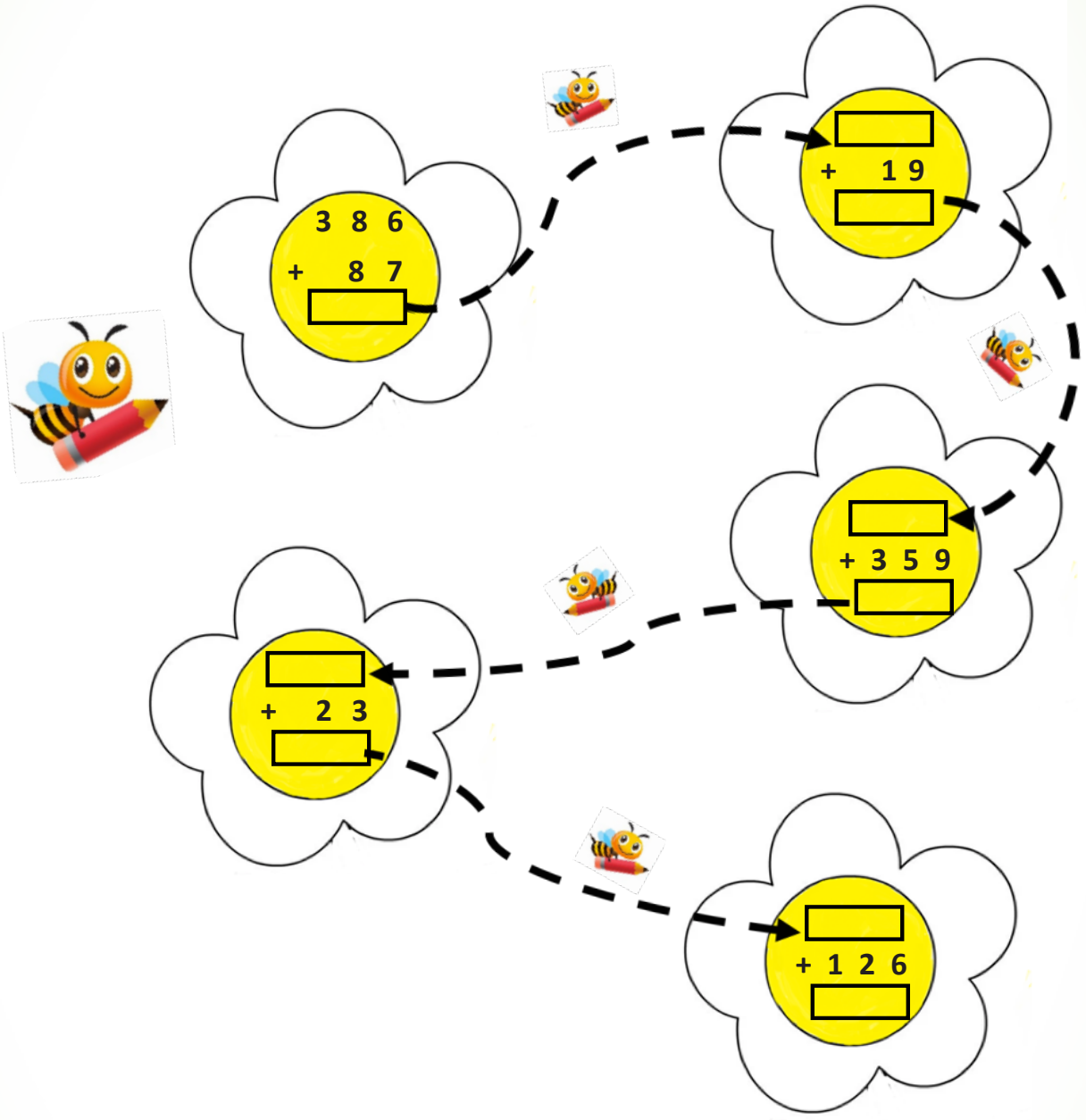
i.

	H	T	O
	6	2	0
+	1	8	9

Teacher's Sign & date_____

Arts Integrated Activity

Help the bee fly from one flower to another and reach the big flower with the most honey! Remember, the bee needs you to add quickly to reach her final flower – She is ready with the pencil, what are you waiting for? Buzz away!! Colour the flower with pink if the sum is even and colour the flower with purple if the sum is odd.



WORKSHEET

1) Fill in the blanks:

a) 9 + 0 = _____

b) 96 + _____ = 97

c) _____ + 0 = 899

d) 763 + 1 = _____

e) 412 + _____ = 412

f) 509 + 1 = _____

2) Do as directed:

a) 1 more than 234 is _____

b)10 more than 887 is _____

c) 100 more than 90 is _____

d)1 more than 675 is _____

e) 10 more than 913 is _____

f) 100 more than 899 is _____

3) Fill in the blanks:

a) 9 tens + 6 ones = ____ tens + 16 ones

b) 4 tens + 1 ones = 3 tens + ____ ones

c) 84 tens = _____ hundreds + _____ tens + _____ ones

d) 6 hundreds + 1 tens + 9 ones = 5 hundreds + _____ tens + 9 ones

e) 1 hundreds + 5 tens + 9 ones = 1 hundreds + ____ tens + 19 ones

4) Add:

a)

	H	T	O
	3	9	2
+	3	4	8

b)

	H	T	O
	7	4	0
+	1	6	6

c)

	H	T	O
	2	0	8
+		6	5

5) Answer the following:

a) What is the sum of the greatest 2 digit even number and the smallest 2 digit odd number?

b) What should be added to an even number to get an even number as the sum?

c) Is the sum of 127 and 654 > 900?

d) What is double of 10 + 10?

e) What is the sum of the greatest 3 digit even number and the smallest 1 digit odd number?

f) What is the sum of the place values of 8 in 858?

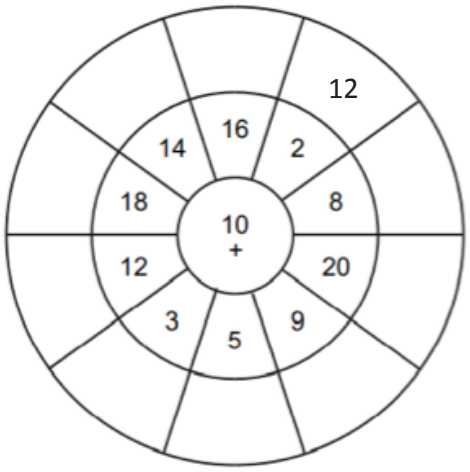
g) What is double of 444?

h) The sum of 36 and 59 is an _____ number (even/odd)

i) Observe the pattern and fill in the box

i. 5+3 = ☐ ii. 50 + 30 = ☐ iii. 500 + 300 = ☐

j) Find the sum of number in the centre and the number in the next ring. Write the sum in the outermost ring. One is done for you.



k) Add

17	+	8	=	
				+
				37
				=

	+	36	=	

l) Complete the table

+	14	8	9	13	17
15					
18					
22					
10					
12					

m) Fill in the empty boxes with a suitable number such that sum of the numbers in each row and column is same

?	9	?
3	?	7
8	1	6

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4 SUBTRACTION

3 – 1 = 2

6 – 2 = 4

5 – 3 = ?

Learning Outcomes:

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

- Recollect subtraction concepts done in class I
- Subtract 2 and 3 digit numbers with and without regrouping
- Check subtraction by addition
- Apply the skill of subtraction to solve real-life situations

Ramani paati (paati – Grandmother in Tamil) prepared 18 ladoos. She gave 11 ladoos to her family members.

How many ladoos remain with her now?

18 ladoos – 11 ladoos = _____ ladoos

Sudha acharya (Teacher) has a box of 12 chalk pieces. She used 2 of them. How many pieces are left in the box?

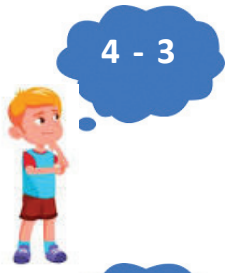
12 pieces – 2 pieces = _____ pieces

The answer that we get when we subtract is called the difference.

EXERCISE 4.1

1. Match and catch:

a. 

b. 

c. 

d. 

e. 

f. 

2. Subtract:

a. 82 – 1 =

b. 53 – 6 =

c. 100 – 4 =

d. 24 – 7 =

e. 72 – 5 =

f. 95 – 2 =

g. 49 – 8 =

h. 17 – 9 =

i. 68 – 3 =

3. Subtraction by crossing out:

a. Amma took 3 out of 10 tomatoes for making tomato soup. Find the number of tomatoes left.

10 – 3 =

Number of tomatoes left =

b. Raju took 7 out of 12 carrots for making carrot soup. Find out the number of carrots left.

12 – 7 =

Number of carrots left =

4. Complete the table:

a) 5 is taken away from 12	12 – 5 =	
b) 19 minus 2		17
c) Subtract 4 from 64	64 – 4 =	
d) 3 is taken away from 51		48
e) Find the difference between 35 and 10	35 – 10 =	

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Properties of Subtraction

★ Subtracting a number from itself

5 birds were sitting on a tree. All of them flew away.

How many birds are on the tree now?

5 - 5 = ☐

When we subtract a number from itself, the difference is always 0.

★ Subtracting 0 from any number

5 birds were sitting on a tree. There was a heavy wind but all the 5 birds were still on the tree. How many birds flew away?

5 - ☐ = 5

When we subtract 0 from any number, the difference is always the number itself.

EXERCISE 4.2

1. Fill in the blanks using the properties of subtraction:

a) 90 – 90 = ☐

b) 81 – ☐ = 0

c) ☐ – 42 = 0

d) 75 – ☐ = 0

e) 69 - ☐ = 69

f) 502 – 502 = ☐

g) 6 - 6 = ☐

h) ☐ - 0 = 24

i) 476 - ☐ = 476

j) 31 - 31 = ☐

k) ☐ - 805 = 0

l) 117 - ☐ = 117

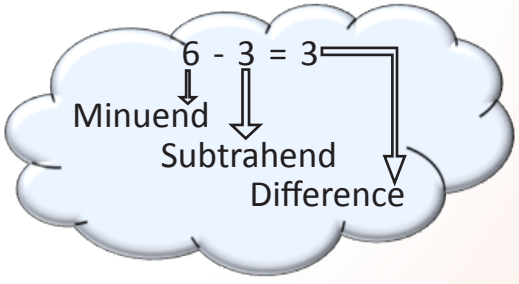
2. Difference / how many more / how many less

Raj is 4 years old and Ravi is 14 years old

Who is older? _____

Who is younger? _____

Difference in their ages is 14 – 4 = ☐ years



3.

Basket 1

10 papayas

Basket 2

3 papayas

Which basket has more papayas ? _____

Which basket has less papayas? _____

Basket 1 has _____ papayas more than basket 2.

4. Adharva has 23 story books. Apoorva has 20 story books. How many story books does Apoorva have less than Adharva?

Adharva has _____ story books.

Apoorva has _____ story books.

Apoorva has _____ story books lesser than Adharva.

EXERCISE 4.3

1. Find the difference between:

a) 9 and 5 → 9 – 5 = 4

b) 4 and 11 → 11 – 4 = _____

c) 6 and 6 → _____

d) 0 and 31 → _____

e) 45 and 46 → _____

f) 19 and 3 → _____

2. How much is:

a) 8 less than 15 → 15 – 8 = 7

b) 2 less than 5 → 5 – 2 = _____

c) 10 less than 10 → _____

d) 1 less than 60 → _____

e) 0 less than 9 → _____

f) 5 less than 16 → _____

3. Help me to complete the board:

	1 less	10 less	100 less
a) 672	671	662	572
b) 340	_____	_____	_____
c) 816	_____	_____	_____
d) 519	_____	_____	_____
e) 723	_____	_____	_____
f) 284	_____	_____	_____
g) 951	_____	_____	_____
h) 135	_____	_____	_____
i) 467	_____	_____	_____
j) 598	_____	_____	_____

4. Subtract by forward counting:

a. 23 – 20 = 3

After 20 → 21 22 23 → 3

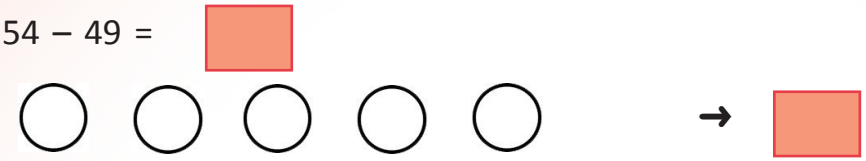
b. 47 – 42 = ☐

43 44 45 46 47 → ☐

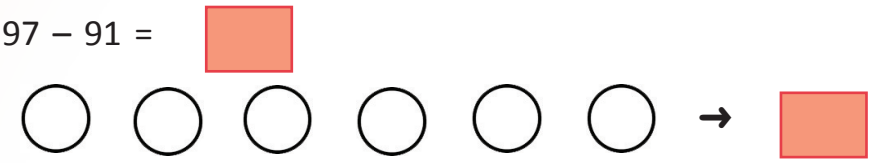
c. 79 - 75 = ☐

○ ○ ○ ○ → ☐

d. 54 – 49 =

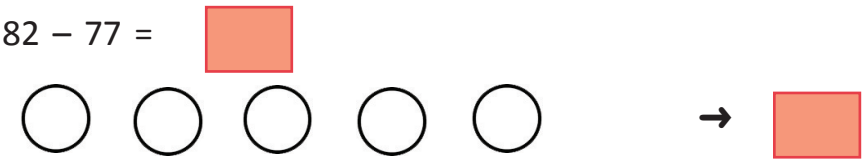


e. 97 – 91 =



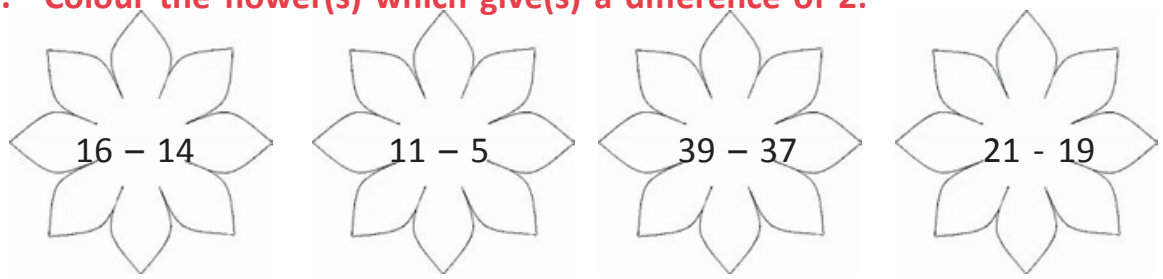
f. 11 – 8 =

g. 82 – 77 =

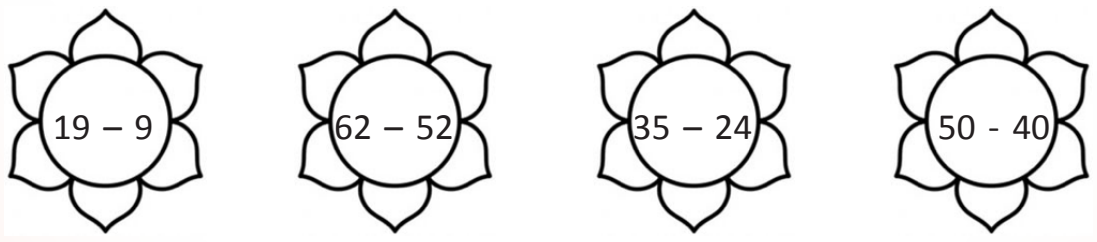


Arts Integrated Activity

a. Colour the flower(s) which give(s) a difference of 2:



b. Colour the flower(s) which give(s) a difference of 10:



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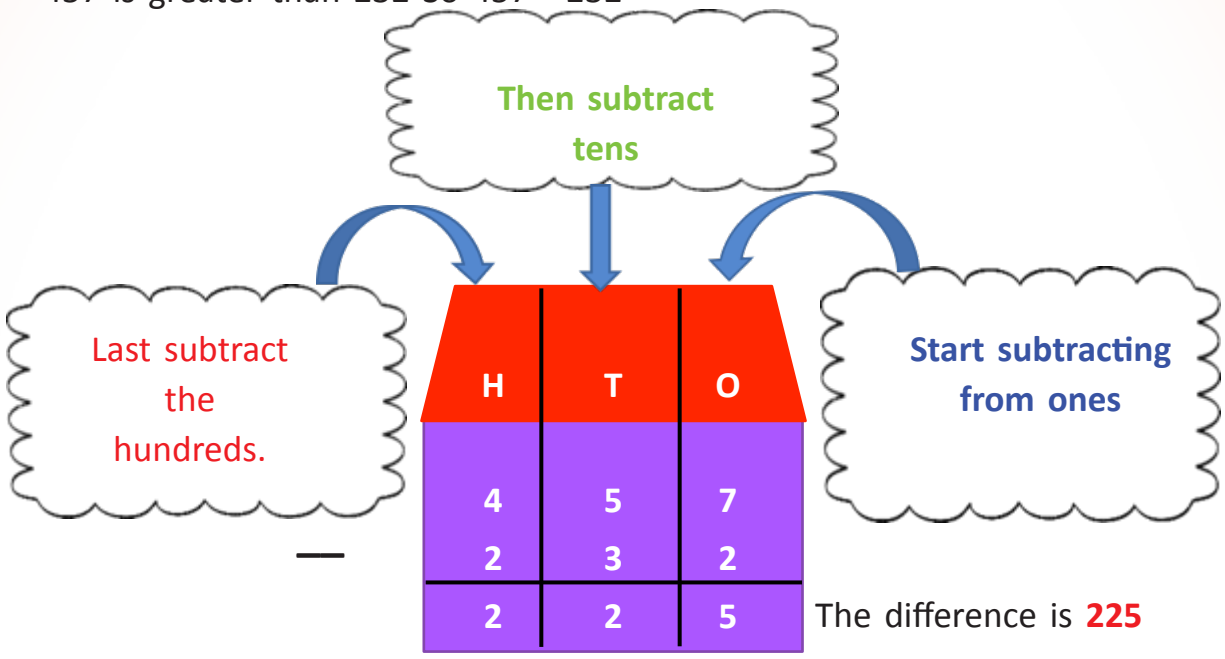
Subtraction without regrouping

Example:

a. Subtract 232 from 457

457 is greater than 232 So 457 - 232



The difference is **225**

b. Subtract 198 from 699.

The difference is

EXERCISE 4.4

1. Find the difference:

a.	T	O	b .	T	O	c..	T	O
	7	5		9	0		6	9
–	3	1	–	8	0	–	3	9

d.

	T	O
	4	8
–		8

e.

	T	O
	9	6
–	6	1

f.

	T	O
	8	7
–		5

g.

	H	T	O
	2	8	9
–			7

h.

	H	T	O
	6	4	8
–			6

i.

	H	T	O
	7	8	4
–		3	1

j.

	H	T	O
	4	9	9
–	3	9	9

k.

	H	T	O
	9	7	2
–	8	6	1

l.

	H	T	O
	8	2	9
–	1	2	6

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Subtraction (without regrouping) - Continued

a) Subtract 4 tens 3 ones from 6 tens 5 ones.
Which number is greater? 65
Let us arrange and subtract.

4 tens 3 ones = 43
6 tens 5 ones = 65

	T	O
	6	5
-	4	3
	2	2

Start from ones place

Ans: 22

b) 8 tens 7 ones – 3 tens 5 ones

8 tens 7 ones = ☐

3 tens 5 ones = ☐

Step 1: COMPARE **Find the bigger number**

The Bigger number is ☐

Step 2: ARRANGE (Bigger number minus smaller number)

The difference is _____

T	O

EXERCISE 4.5

a. 7 tens 6 ones – 4 tens 3 ones

7 tens 6 ones =

4 tens 3 ones =

	T	O
	7	6
–	4	3

b. 9 tens 6 ones – 4 tens 5 ones

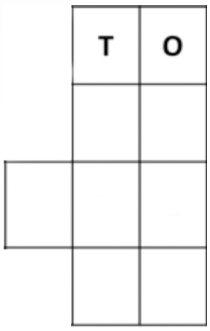
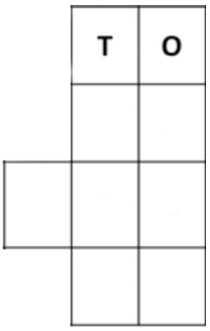
T	O

c. 4 tens 3 ones – 1 tens 2 ones

T	O

d. 5 tens 0 ones – 2 tens 0 ones

T	O

e. 9 tens 9 ones – 6 tens 1 ones	f. 8 tens 5 ones - 7 tens 4 ones
	

Value based question

"Gita Samaj" celebrated DHAN UTSAV DAY on October 17.

The people of the samaj prepared 725 food packets to distribute to elderly people living in an old age home and to people living on the streets.

They distributed 500 food packets to the elderly people in a home.

They distributed the rest to the homeless poor. How many packets were distributed to the homeless poor?

		H	T	O
Number of packets prepared	=	7	2	5
Number of packets distributed in an old age home	=	- 5	0	0
Number of packets distributed to the homeless poor	=			

International day against poverty - Oct 17th.

World Food day - Oct 16th

Higher Order Thinking Skills

Anand collects coins of different countries as a hobby.

He had 1 coin less than 100, when his father gave him 17 coins.

How many coins did he have in the beginning?

EXERCISE 4.6

1. Find the difference:

	H	T	O
	5	6	8
–	1	2	7

	H	T	O
	9	6	9
–			8

	H	T	O
	3	8	2
–	1	7	1

	H	T	O
	4	9	0
–		6	0

	H	T	O
	1	4	7
–		2	5

	H	T	O
	7	5	3
–	6	5	3

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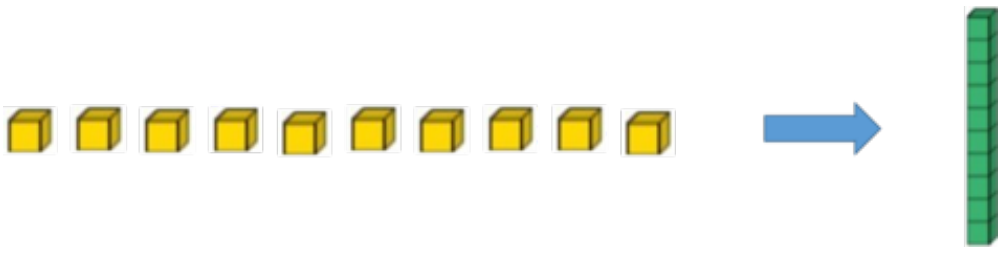
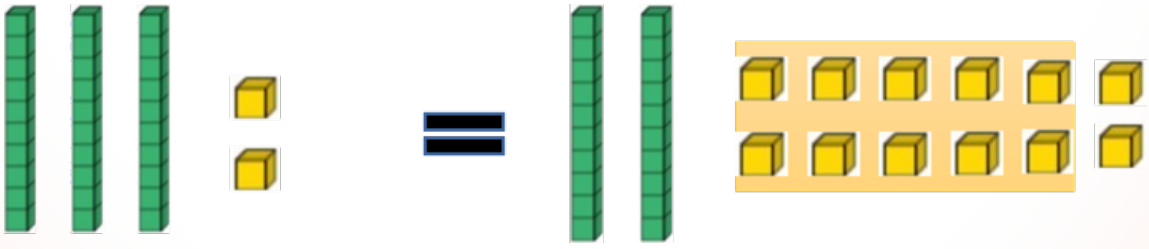
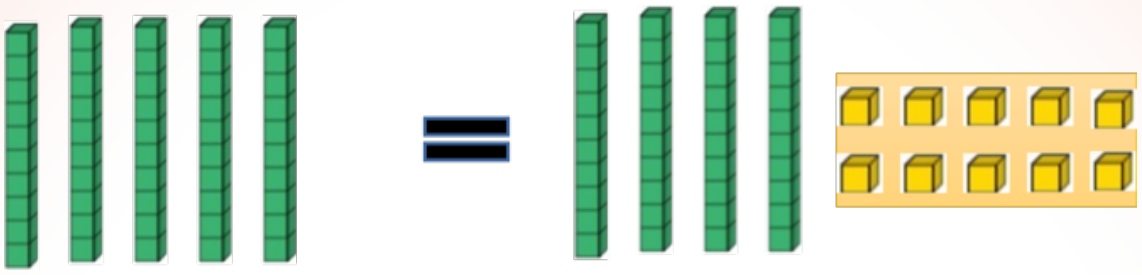
Regrouping of tens and ones



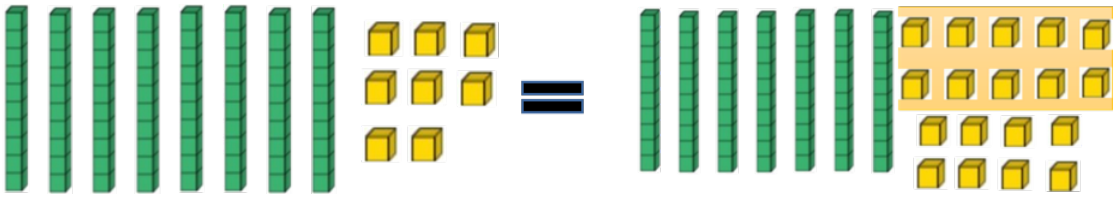
10 ones make 1 ten



3 tens 2 ones **2 tens 12 ones**



5 tens 0 ones = 4 tens 10 ones



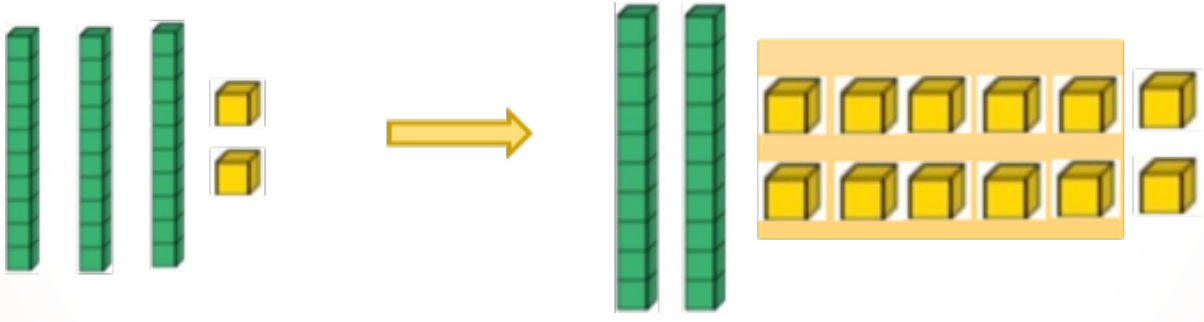
8 tens 8 ones = 7 tens 18 ones

Subtraction by regrouping

Subtract 19 from 32

3 tens 2 ones - 1 tens 9 ones

32 can be regrouped as 2 tens 12 ones



Now, when you subtract 19 from 32, we are actually subtracting 1 tens 9 ones from 2 tens 12 ones.

2 tens 12 ones – 1 tens 9 ones = 1 tens 3 ones

	T	O
	2	12
	3	2
–	1	9
	1	3

EXERCISE 4.7

1. Fill in the blanks:

a) 7 tens 3 ones = 6 tens _____ ones

b) 4 tens 6 ones = ___ tens 16 ones

c) 8 tens 5 ones = 7 tens ___ ones

d) 6 tens 1 ones = ___ tens 11 ones

e) 9 tens 0 ones = 8 tens ___ ones

f) 3 tens 2 ones = ___ tens 12 ones

g) 2 tens 4 ones = 1 tens _____ ones

2. Subtract:

a)

T	O
4	1
– 1	2

b)

T	O
5	0
– 3	1

c)

T	O
9	7
– 6	9

d)

T	O
7	2
– 3	3

e)

T	O
6	3
– 2	9

f)

T	O
8	5
– 4	6

g)

T	O
2	4
– 1	5

h)

T	O
3	6
– 1	7

Applications in real life:

1) Sita and her brother were reading a story book consisting of 62 pages. After reading the 45th page, they went to help their mother for arranging clothes in the cupboard. How many more pages should they read to complete the book?

_____ =

_____ =

_____ =

Ans: _____

2) In an army camp, there were 95 soldiers. Due to a sudden flood, 48 soldiers were asked to report for relief operations in a village. How many soldiers remained in the camp?

_____ =

_____ =

_____ =

Ans: _____

3) An office worked 25 days in the month of May. Find the number of holidays in that month.

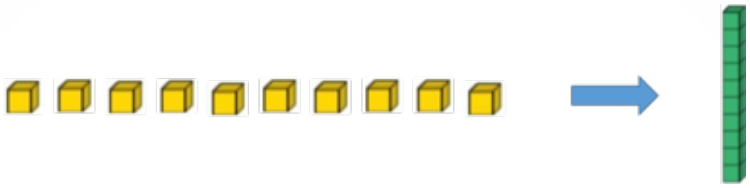
_____ =

_____ =

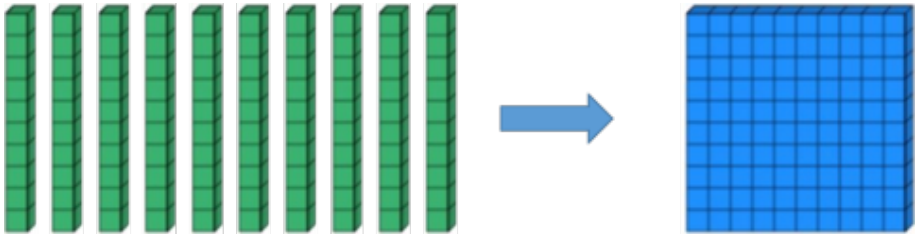
_____ =

Ans: _____

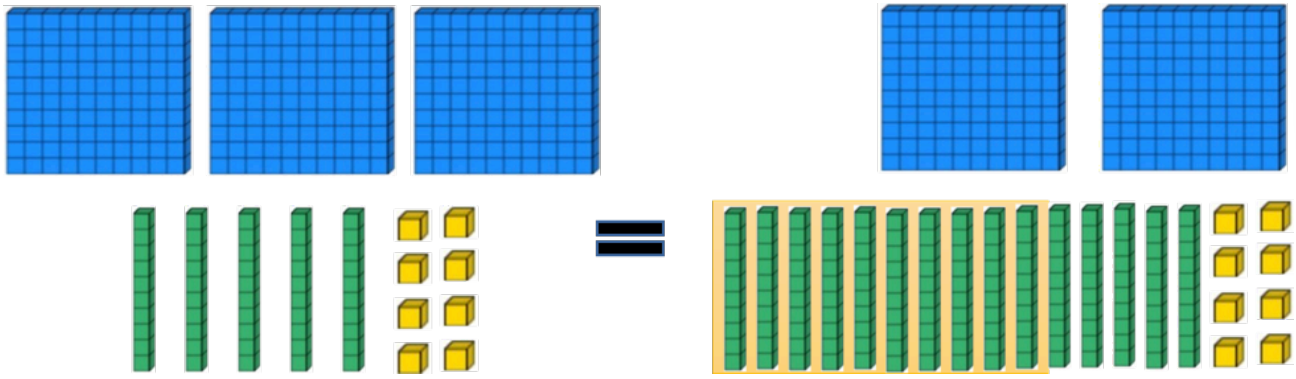
Regrouping of hundreds and tens



10 ones make 1 ten

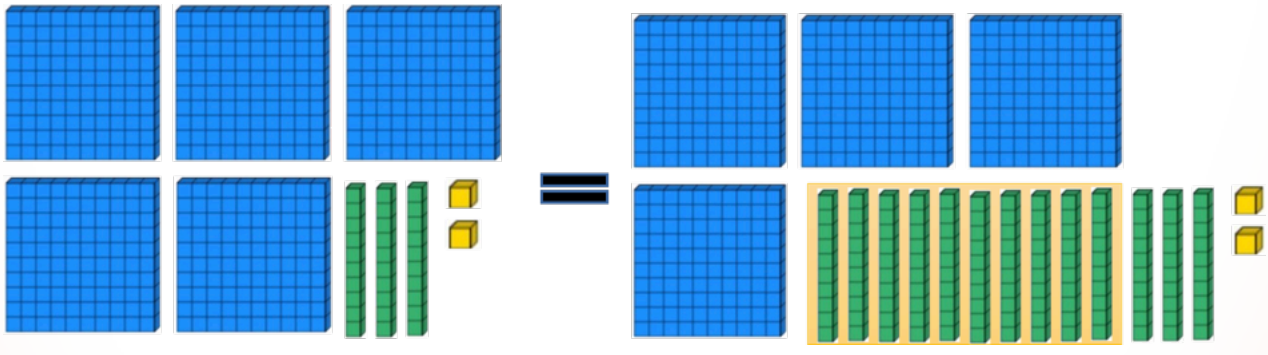


10 tens make 1 hundred



3 hundreds 5 tens 8 ones

2 hundreds 15 tens 8 ones

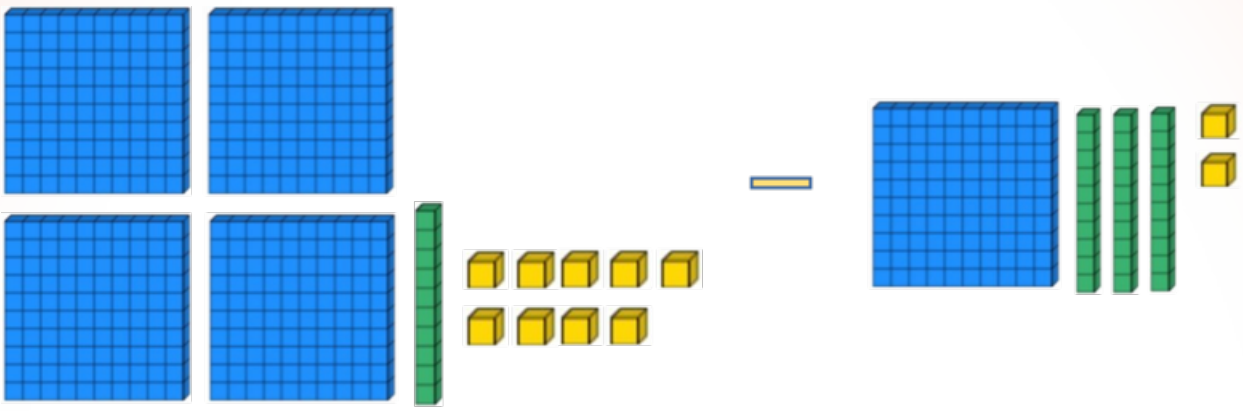


5 Hundreds 3 Tens 2 Ones

4 Hundreds 13 Tens 2 Ones

Subtraction by regrouping

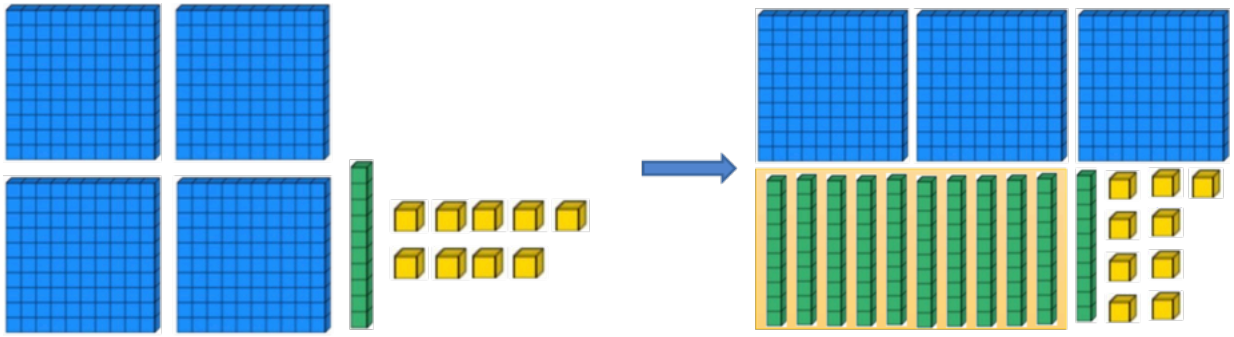
Subtract 132 from 419



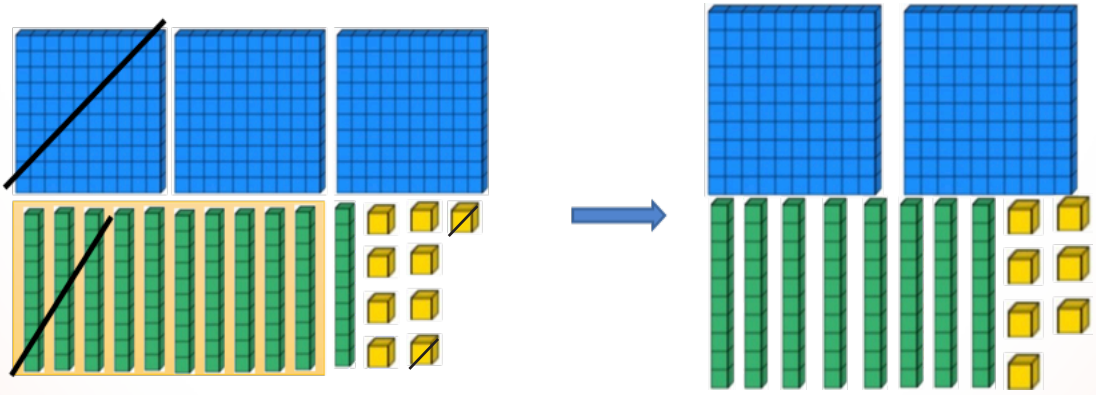
4 hundreds 1 tens 9 ones

1 hundreds 3 tens 2 ones

4 hundreds 1 tens 9 ones can be regrouped as 3 hundreds 11 tens 9 ones



Now, when we subtract 419 and 132, we are actually subtracting one hundreds 3 tens 2 ones from 3 hundreds 11 tens 9 ones.



3 hundreds 11 tens 9 ones – 1 hundred 3 tens 2 ones = 2 hundreds 8 tens 7 ones

EXERCISE 4.8

1. Fill in the blanks:

a) 3 hundreds 5 tens 7 ones = _____ hundreds 15 tens 7 ones

b) 8 hundreds 2 tens 1 ones = 7 hundreds _____ tens 1 ones

c) 9 hundreds 0 tens 5 ones = 8 hundreds 10 tens _____ ones

d) 6 hundreds 8 tens 8 ones = _____ hundreds 18 tens 8 ones

e) 4 hundreds 3 tens 2 ones = 4 hundreds _____ ones

2. Subtracting 3-digit numbers with regrouping of tens:

a)

	H	T	O
	2	7	4
–	1	4	5

b)

	H	T	O
	6	4	3
–		3	8

c)

	H	T	O
	4	5	0
–	3	3	3

d)

	H	T	O
	7	4	5
–			8

e)

	H	T	O
	8	6	7
–	2	4	9

f)

	H	T	O
	3	7	2
–		5	7

3. Subtract

a)

	H	T	O
	7	5	2
–	2	6	8

b)

	H	T	O
	5	5	5
–	2	9	9

c)

	H	T	O
	3	1	4
–	2	6	7

d)

	H	T	O
	4	8	1
–	1	9	5

e)

	H	T	O
	6	3	4
–	3	7	6

f)

	H	T	O
	9	3	9
–	4	8	7

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Subtraction with zeroes

Darshana and Darshan are twins. Darshana is good at creative arts. She eats 3 pistachios everyday by breaking the shell exactly into 2 pieces.

You have 700 pistachio shells, can you give me 225 shells?

If I give you 225 shells, how many would be left with me?

How many shells are left with Darshana?

H	T	O
	9	
6	~~10~~	10
~~7~~	0	~~0~~
-2	2	5
4	7	5

Now, I have 225 shells

I have 475 shells

EXERCISE 4.9

1. Subtract:

a)

	H	T	O
	6	0	0
–	4	6	9

b)

	H	T	O
	4	0	0
–		7	8

c)

	H	T	O
	5	0	0
–			7

d)

	H	T	O
	7	0	0
–	3	1	5

e)

	H	T	O
	9	0	0
–	4	0	6

f)

	H	T	O
	8	0	0
–	3	5	2

2. Subtract

a)

	H	T	O
	2	8	5
–		7	6

b)

	H	T	O
	9	8	5
–	2	9	5

c)

	H	T	O
	9	3	9
–	5	7	6

d)

	H	T	O
	6	2	2
–		8	8

e)

	H	T	O
	8	0	0
–	3	3	3

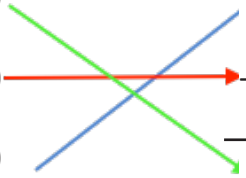
f)

	H	T	O
	6	3	5
–	2	7	9

Relation between addition and subtraction

Subtract 200 from 800 and check your answer by addition

	H	T	O		H	T	O	
	8	0	0		6	0	0	(difference)
–	2	0	0	+	2	0	0	(subtrahend)
	6	0	0		8	0	0	(minuend)



Subtract and Check your answer by addition

729 – 683

Step-1: Subtraction

	H	T	O
	6	12	
	7	2	9
–	6	8	3
	0	4	6

Step-2: Checking by addition

	H	T	O	
	+1	+1		
		4	6	(difference)
+	6	8	3	(subtrahend)
	7	2	9	(minuend)

EXERCISE 4.10

I. Subtract

Subtract and check your answer by addition

a) Subtraction:

	T	O
	8	5
–	2	6

Checking:

	T	O

b) Subtraction:

	T	O
	6	6
–	3	9

Checking:

	T	O

c) Subtraction:

	H	T	O
	6	7	1
–	4	5	3

Checking:

	H	T	O

d) Subtraction:

	H	T	O
	3	2	2
–	1	9	9

Checking:

	H	T	O

e) Subtraction:

	H	T	O
	7	0	0
–	2	7	4

Checking:

	H	T	O

Palindrome is a number that reads the same from left to right or right to left.

Examples: 55, 11, 707, 626

How to arrive at a Palindrome using addition

Step 1: Take a 2 digit number say 24

Step 2 : Reverse the digits → 42

Step 3 : Find their sum

$$\begin{array}{r} 24 \\ +\ 42 \\ \hline 66 \end{array}$$

Step 1: Take a 3 digit number say 152

Step 2 : Reverse the digits → 251

Step 3 : Find their sum

Step 4: Repeat the steps 2 and 3 till you get a Palindrome.

$$\begin{array}{r} 152 \\ +\ 251 \\ \hline 403 \\ +\ 304 \\ \hline 707 \end{array}$$

Try 19 and 426

Refer to the back (Outer) cover for another Palindrome

f) Subtraction:

	H	T	O
	4	0	5
–		6	8

Checking:

	H	T	O

Experiential Learning

Ramesh is the CEO of a company. There were 900 bulbs in his office building. One particular day, he saw that 129 of them were on during broad daylight.

How many lights were switched

off during the day? _____.

He immediately made arrangements to switch off the lights during the day to save electricity.

Do you also save electricity? How?

Find the number of lights and fans in your house. Which is more in number?____

By how many? _____

EXERCISE 4.11

1. Applications in real life:

a) Surya had 78 crayons with him. He gave 19 crayons to his brother. How many crayons are left with him?

_____ =

_____ =

_____ =

	T	O

Ans: _____

b) Rahul scored 80 runs in a cricket match. Virat scored 64 runs in the match. Who scored more and by how much?

	T	O

_____ =

_____ =

_____ =

Ans: _____

c) Priya has 82 toys. Shriya has 54 toys. How many less toys does Shriya have than Priya?

	T	O

_____ =

_____ =

_____ =

Ans: _____

d) There are 60 students in a class. 34 of them are girls. How many are boys?

_____ =

_____ =

_____ =

Ans: _____

e) From a pack of 24 biscuits, 15 biscuits were eaten by Sujit. How many biscuits are left in the packet

_____ =

_____ =

_____ =

Ans: _____

f) In a class of 60 students, 42 scored an A1 grade. How many students did not get an A1?

_____ =

_____ =

_____ =

Ans: _____

g) There were 360 seats in a flight. 180 of them were occupied. How many were not occupied?

_____ =

_____ =

_____ =

Ans: _____

h) A van carried 600 baskets of vegetables to be delivered. 246 of them were delivered in the morning. The rest would be elivered in the evening. How many baskets are to be delivered in the evening?

_____ =

_____ =

_____ =

Ans: _____

i) In a shop, 436 laptops were sold in the year 2020. 852 were sold in the year 2021. In which year was more laptops sold and by how much?

_____ =

_____ =

_____ =

Ans: _____

j) Shanthi purchased a dress worth ₹755 for Diwali. She paid the shopkeeper ₹900. How much money should the shopkeeper return?

_____ =

_____ =

_____ =

Ans: _____

Higher Order Thinking Skills:

1) Senthil has 64 stickers. Prashanth has 39 more than Senthil. Sundari has 25 less than Prashanth.

a) How many stickers did Prashanth have?_____

b) How may stickers did Sundari have? _____

c) Find the total number of stickers Prashanth and Senthil had? _____

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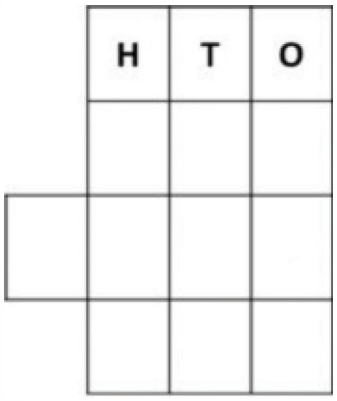
WORKSHEET A

1. Find the difference:

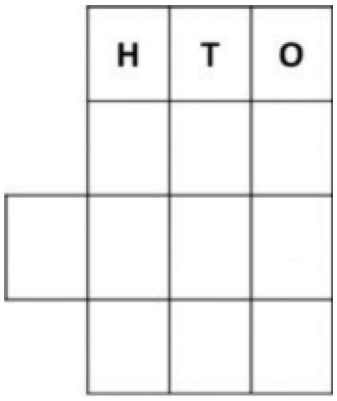
a. 70 – 40 =	b. 516 – 6 =	c. 300 – 100 =
d. 410 – 10 =	e. 28 – 18 =	f. 700 – 600 =
g. 655 – 55 =	h. 215 – 115 =	i. 800 – 700 =
j. 81 – 61 =	k. 999 – 999 =	l. 586 – 186 =

2. Arrange and subtract:

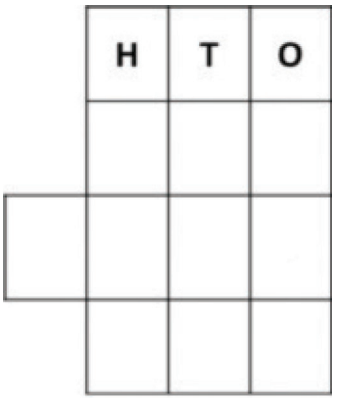
a) 785 – 52



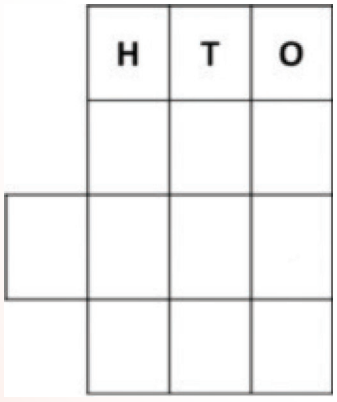
b) 349 – 8



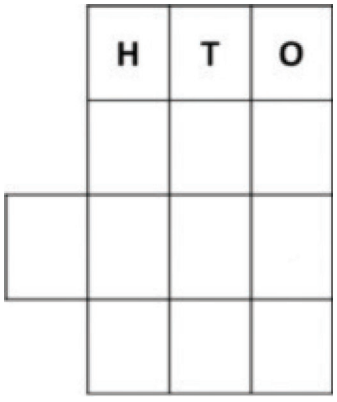
c) 550 – 340



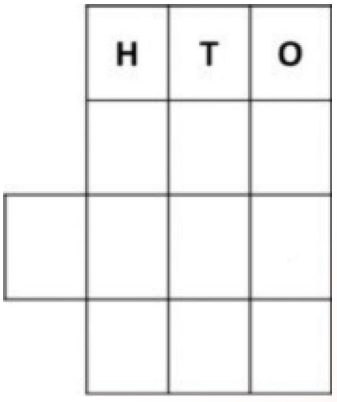
d) 887 – 134



e) 908 – 807

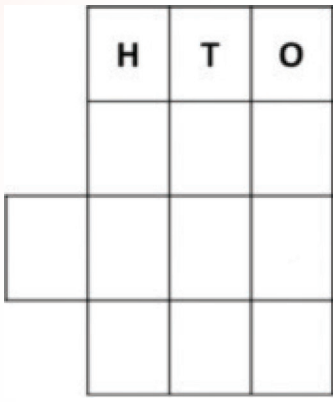


f) 673 – 21

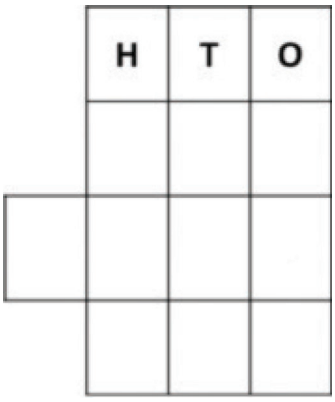


3. Find the difference between:

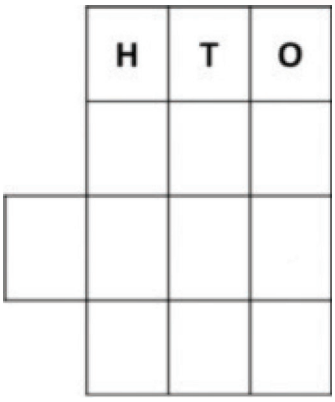
a) 699 and 89



b) 927 and 815

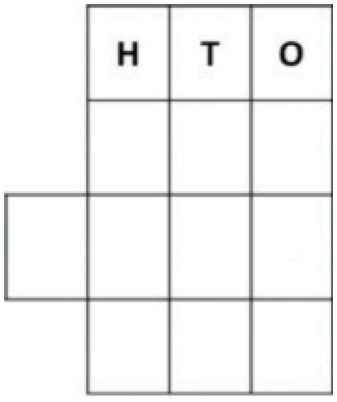


c) 784 and 563

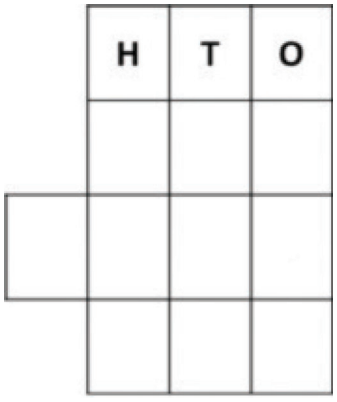


4. Subtract

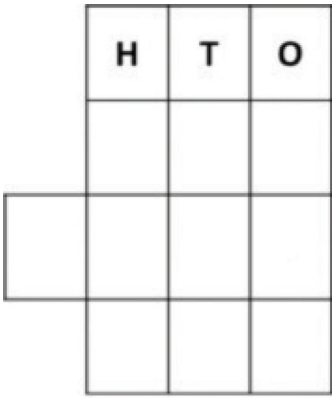
a) Subtract 743 from 987



b) Subtract 672 from 893



c) Subtract 57 from 189



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WORKSHEET B

1) Fill in the missing digits:

a)

	T	O
	3	2
–	3	☐
	☐	1

b)

	T	O
	6	6
–	4	☐
	2	2

c)

	T	O
	9	0
–	☐	☐
	1	5

d)

	T	O
	8	5
–	3	☐
	☐	3

e)

	T	O
	6	6
–	3	☐
	2	9

f)

	T	O
	2	7
–	☐	☐
	1	9

2) Find the difference between the place values of 3 in the number 383.

_____

_____

_____

3) Build the smallest and the greatest 3-digit numbers without repeating the digits 7,0,1. Find their difference.

_____

_____

_____

4) **Manoj bought 450g of potatoes, 150g of beetroot and some carrots. The total weight of vegetables bought was 900g. What is the weight of carrots bought by him?**

5. Fill in the blanks using properties of subtraction:

a) 7 - 0 = _____ b) 87 - _____ = 86 c) _____ - 0 = 976

d) 421 - 1 = _____ e) 815 - _____ = 815 f) 999 - 1 = _____

6. Subtract:

a) 1 less than 428 is _____ b) 10 less than 592 is _____

c) 100 less than 871 is _____ d) 1 less than 290 is _____

e) 10 less than 706 is _____ f) 100 less than 345 is _____

7. Fill in the blanks:

a) 7 tens + 6 ones = ____ tens + 16 ones

b) 6 tens + 8 ones = 5 tens + ____ ones

c) 9 tens + 4 tens = _____ tens + 14 ones

d) 8 hundreds + 3 tens + 3 ones = 7 hundreds + _____ tens + 3 ones

e) 1 hundred + 0 ten + 4 ones = ____ hundreds + 10 tens + 4 ones

8. Subtract:

a)

	H	T	O
	8	7	3
–	4	2	1

b)

	H	T	O
	4	2	4
–	1	1	1

c)

	H	T	O
	3	6	9
–	2	3	4

e)

H	T	O
5	8	1
– 3	2	9

e)

H	T	O
2	9	0
– 1	8	0

f)

H	T	O
5	6	9
–	9	7

g)

H	T	O
9	7	2
– 3	5	1

h)

H	T	O
6	0	0
– 4	6	1

i)

H	T	O
8	4	3
–	7	1

WORKSHEET C

1. Applications in real life:

a) A parking has 90 lots. 57 of them are occupied. How many lots are empty?

_____ =

_____ =

_____ =

	T	O

Ans: _____

b) Out of the 100 books in a library, 83 are story books. The rest are general knowledge books. How many books in the library are not story books?

_____ =

_____ =

_____ =

	H	T	O

Ans: _____

c) In a hotel, there were 58 chairs. 26 of them were broken and hence removed. How many chairs were not broken?

	T	O

_____ =

_____ =

_____ =

Ans: _____

d) There are 92 mango trees and 24 orange trees in an orchard. How many more mango trees are there than the orange trees?

	T	O

_____ =

_____ =

_____ =

Ans: _____

e) I have 558 stamps. How many more stamps should I collect to make it 900?

	H	T	O

_____ =

_____ =

_____ =

Ans: _____

f) There were 647 flowers in a flower shop.
286 of them were sold on a day.
How many were not sold?

	H	T	O

_____ =

_____ =

_____ =

Ans: _____

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5 SHAPES & PATTERNS

Learning Outcomes:

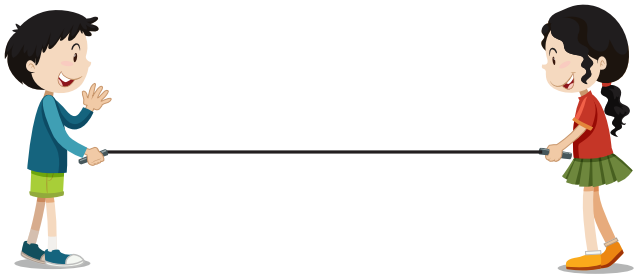
At the end of this lesson, children will be able to:

- Identify the types of lines.
- Identify the plane shapes and understand their properties.
- Identify the solid shapes and understand their properties.
- Identify patterns and appreciate them in real life.

Lines

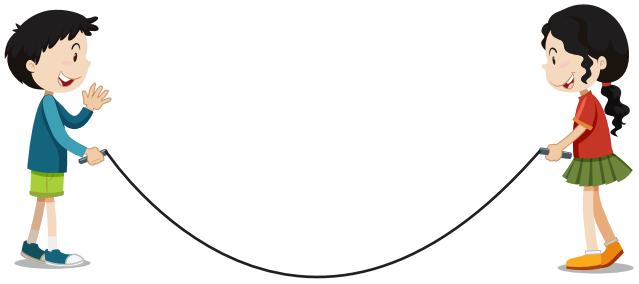
Lines can be straight or curved

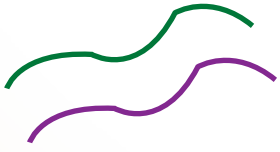
Pick up a skipping rope. Hold it from both ends and stretch it tightly.



This can be an example of a **straight line.**

Now, loosen the rope a little.



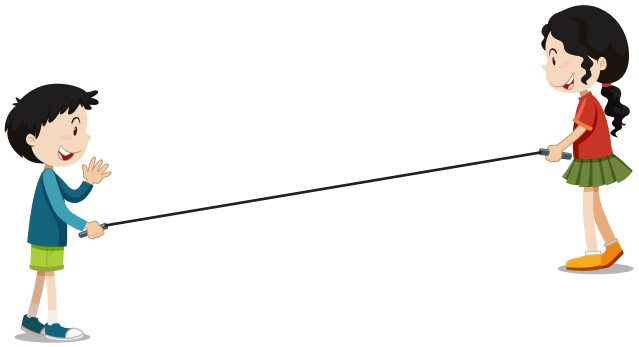


These are examples of **curved lines.**

Types of straight lines:

- Slanting line
- Vertical line
- Horizontal line

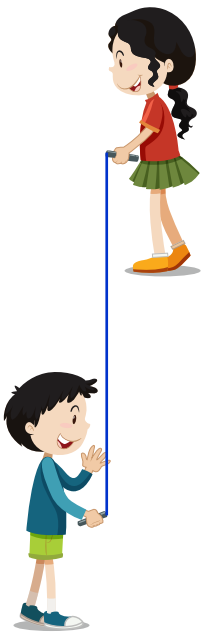
Raise one end of the rope and stretch it tightly.



This is a **slanting line**

A straight line from left to right or right to left is a **horizontal line**.

A straight line from top to bottom or bottom to top is a **vertical line**.



EXERCISE 5.1

Identify the type of line in each:

a. - _____

b.  - _____

c.  - _____

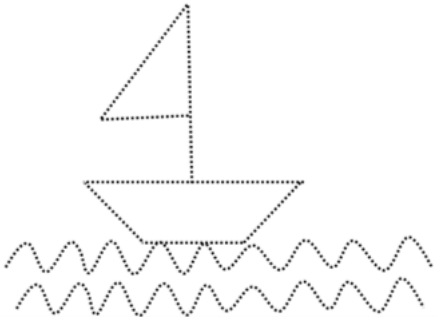
d. - _____

e.  - _____

Arts Integrated Activity

Trace the lines to complete the diagram and colour it.

Fill in the blanks with the number of



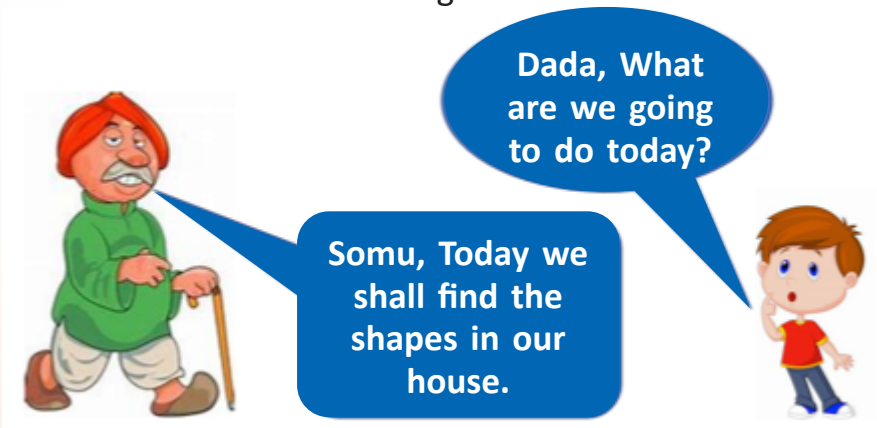
Horizontal lines = _____

Vertical lines = _____

Slanting lines = _____

Plane shapes

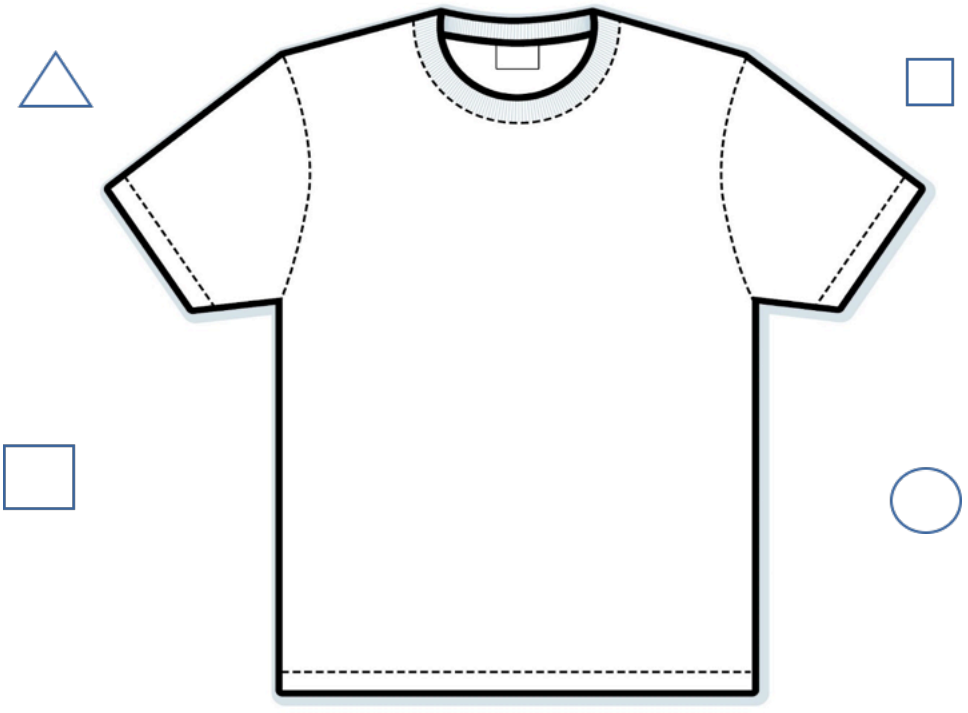
Somu visited his dada during his vacation.



Can you help Somu to find the shapes? Identify the shapes coloured in red and write the name of the shapes in the box provided.

Arts Integrated Activity

Use the plane shapes and create your own design on the T-shirt and colour it.



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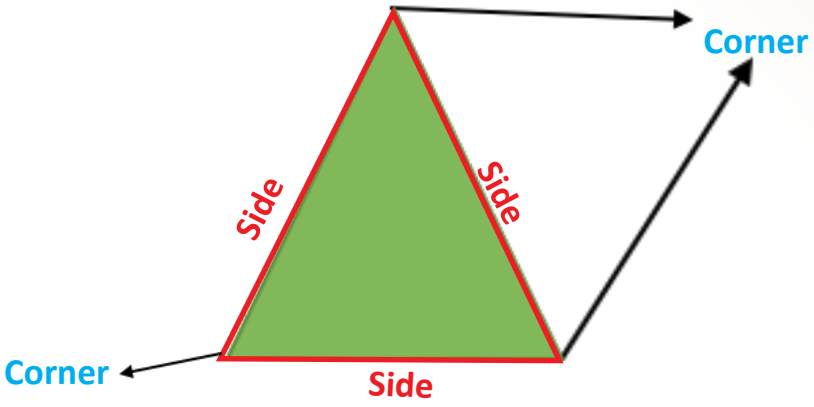
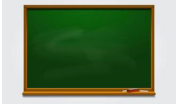


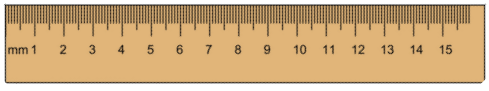
Shape	No. of Sides	No. of Corners	Shape	No. of Sides	No. of Corners
Square	_____	_____	Triangle	_____	_____
Rectangle	_____	_____	Circle	_____	_____

Examples of plane shapes are

Square

Rectangle





Triangle

Circle

FACTS The flags of all countries are rectangular except Nepal, Switzerland and the Vatican city.

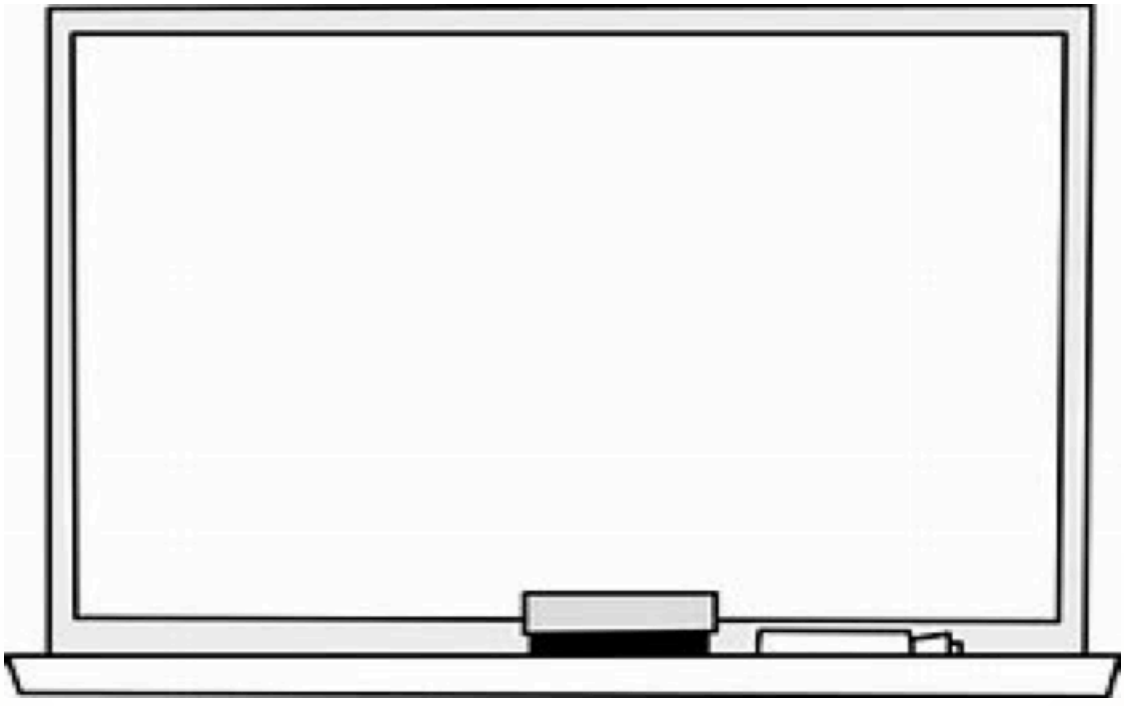
Find the shape of their flags

Nepal	Switzerland	Vatican City

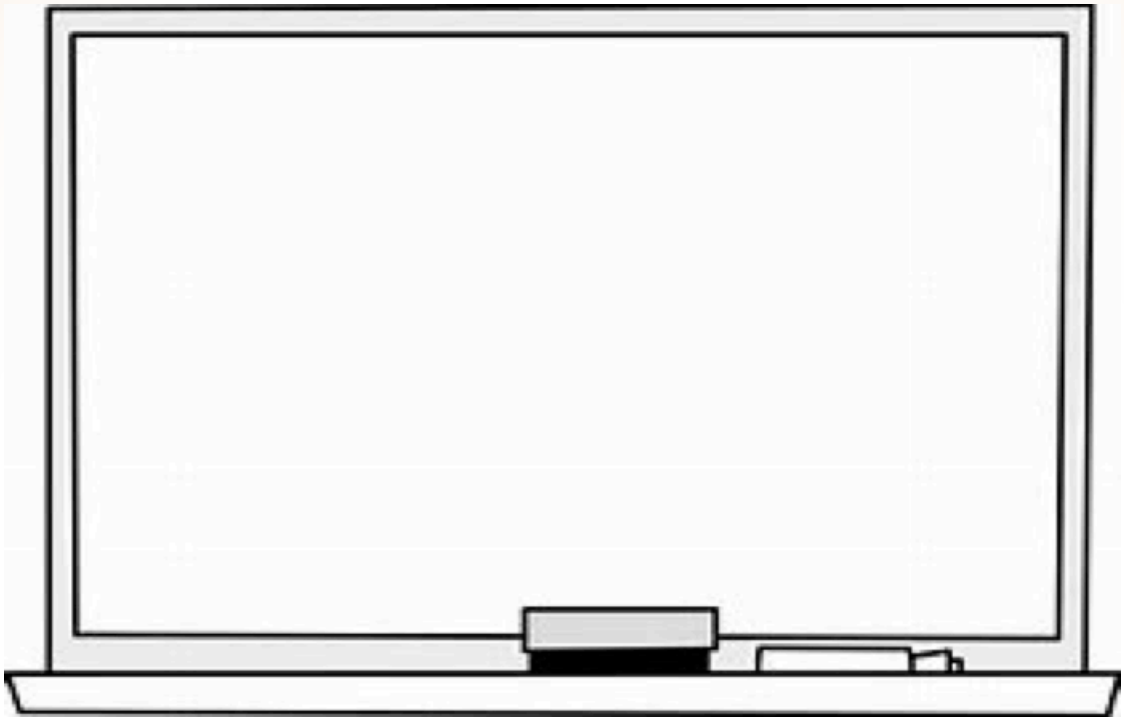
Higher Order Thinking skills:

Building shapes

1. Draw a square using triangles



2. Draw a rectangle using squares



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EXERCISE 5.2

Observe the picture and fill in the number of :

1)

Squares _____

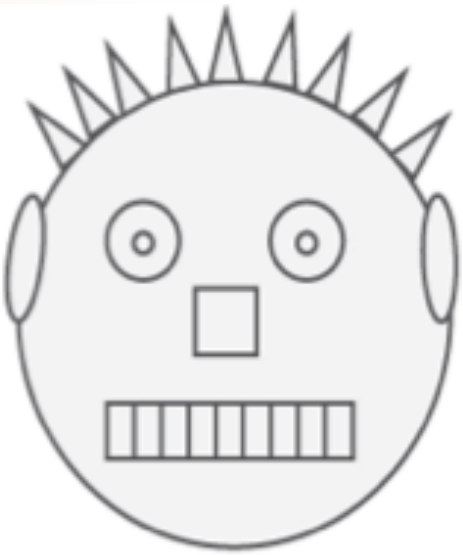
Rectangles _____

Triangles _____

Circles _____

Oval _____

2)



Squares _____

Rectangles _____

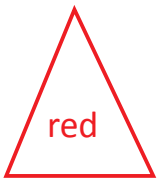
Triangles _____

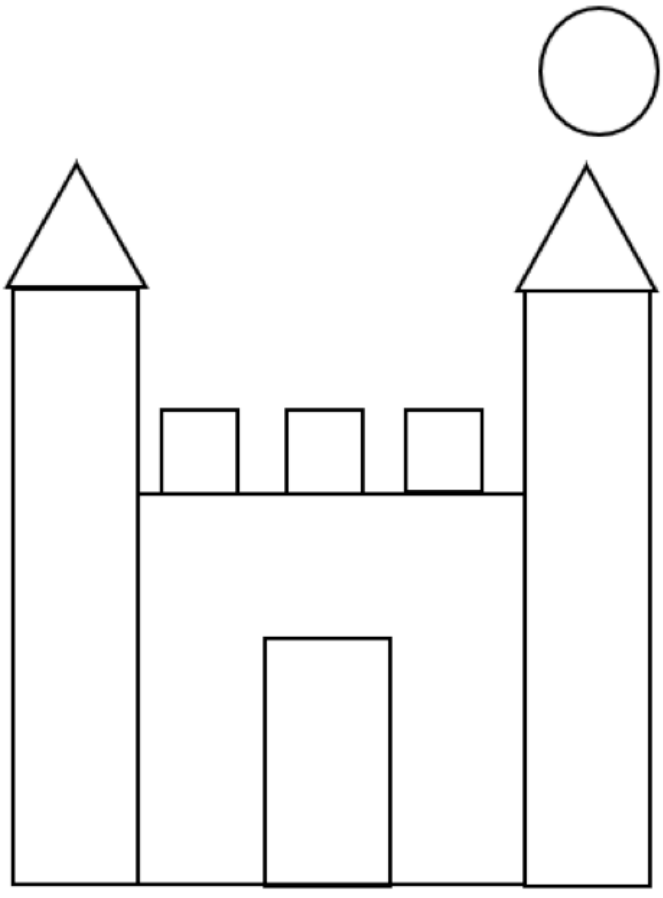
Circles _____

Oval _____

Arts Integrated Activity :

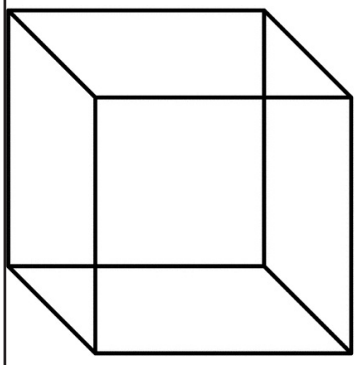
Colour the



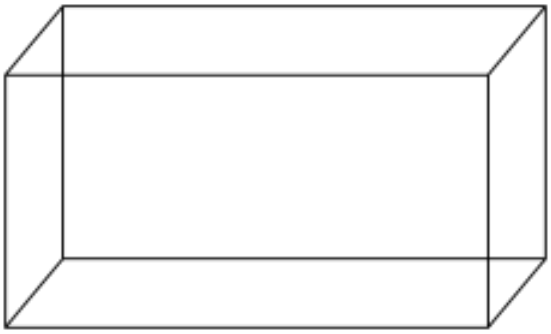


Solid Shapes

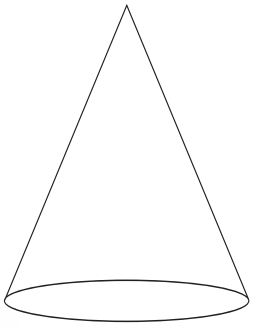
- Solid shapes have flat or curved faces
- Edge is where two faces meet
- Vertex (plural – Vertices) is where three or more edges meet. It is also called a corner.
- Some common solid shapes are cube, cuboid, cone, cylinder, sphere.

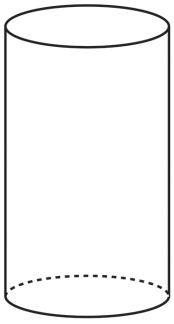


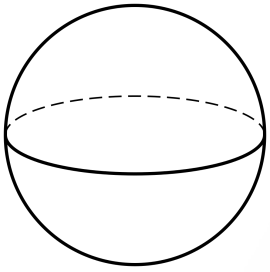
Cube



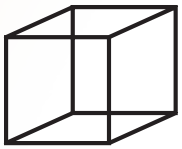
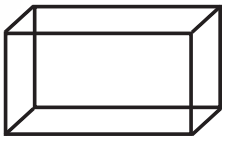
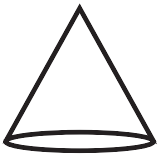
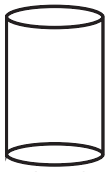
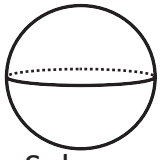
Cuboid





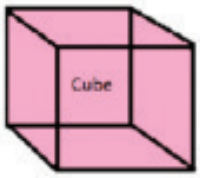


Friends, assist me in filling the table. Let us count by taking an example of the shape.

Solid shape	Example	Number of faces	Number of edges	Number of Vertices
 Cube	Rubik's cube 	_____	_____	_____
 Cuboid	Shoe box 	_____	_____	_____
 Cone	Birthday cap 	_____	_____	_____
 Cylinder	Drum 	_____	_____	_____
 Sphere	Marbles 	_____	_____	_____

Properties

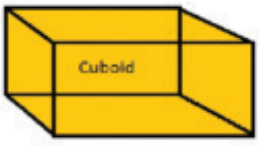
Cube:



A cube has 6 flat faces, 8 vertices and 12 straight edges. The face of a cube is a square.

E.g. Dice

Cuboid:



A cuboid has 6 flat faces, 8 vertices and 12 straight edges. It has atleast 2 rectangular faces.

E.g. Matchbox, brick

Cone:

A cone has 1 curved face, 1 flat face, 1 vertex and 1 curved edge.

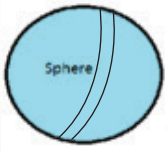
E.g. Ice-cream cone, Birthday cap

Cylinder:

A cylinder has 1 curved face, 2 flat faces and 2 curved edges.

E.g. Drum, unsharpened pencil

Sphere:



A sphere has one curved face.

Examples: Ball, Globe.

Lab activity

Use the dotted sheet for drawing the

a. Cube b. Cuboid c. Cylinder d. Cone e. Sphere

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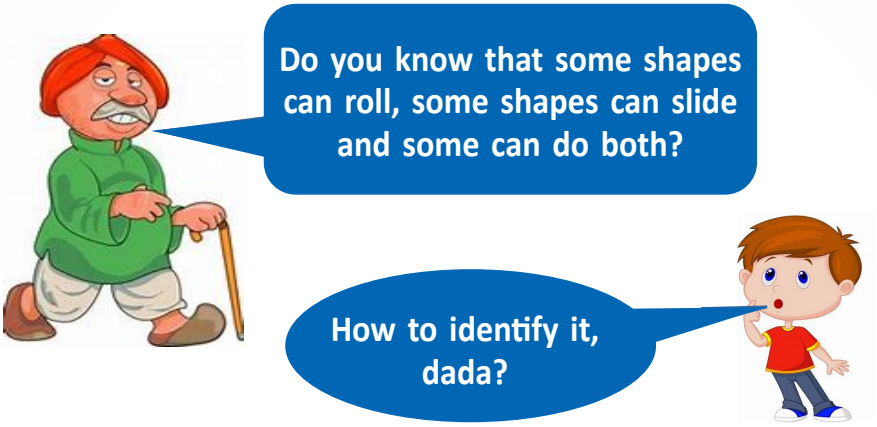
Slide & Roll



Solid shapes which have flat faces will slide.

Solid shapes which have curved faces will roll.

Solid shapes which have flat and curved faces will slide and roll.

EXERCISE 5.3

1) Guide Somu

List out solid shapes which can.

a) slide _____

b) roll _____

c) slide and roll _____

2) Identify the objects at home that can

Slide: _____

_____

Roll: _____

_____

Slide and roll: _____

_____

3) Write the name of solid shapes.

Assist Somu by writing the name of each solid shape.

_____

_____

_____

_____

_____

_____

_____

_____

_____

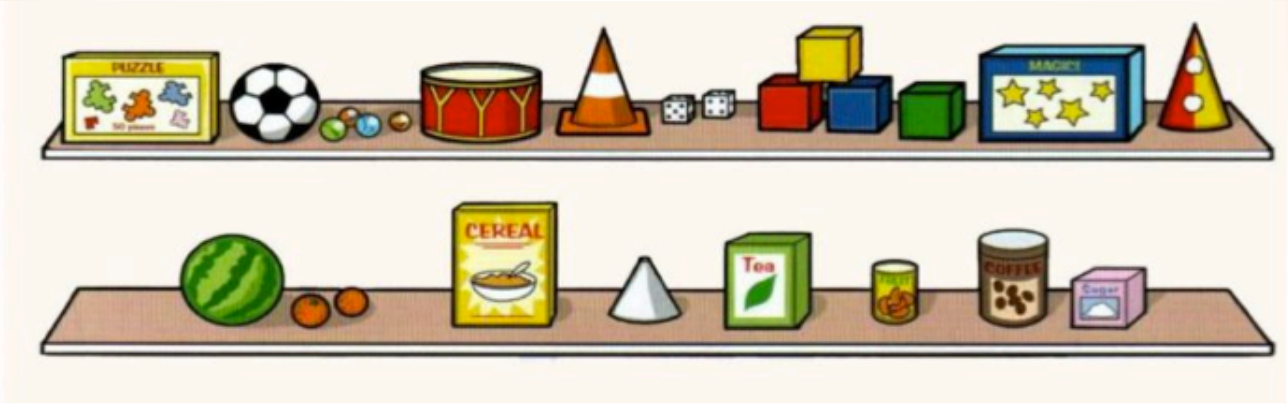
_____

_____

_____

_____

4) Count the number of solid shapes and fill in the blanks:



a) Cube ☐ b) Cone ☐ c) Cuboid ☐

d) Sphere ☐ e) Cylinder ☐

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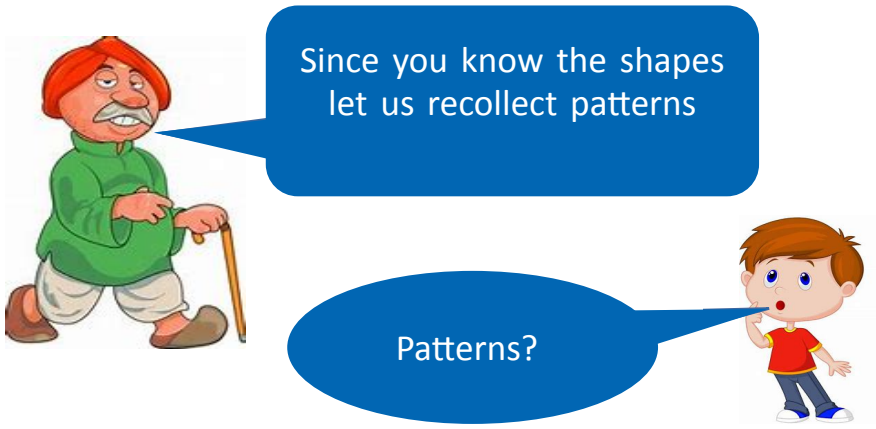
Patterns



Look at the curtain below.

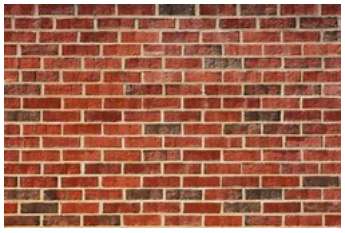
It has some shapes which are repeating. Repeating shapes make a pattern.

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

Observe the pattern everywhere (in your dress, bedsheet, walls etc.)

Here are some **patterns from nature.**

Man-made patterns



Patterns in rangoli

EXERCISE 5.4

1) Colour the shape to complete the pattern:

1. 

2. 

2) Observe the pattern and fill in:

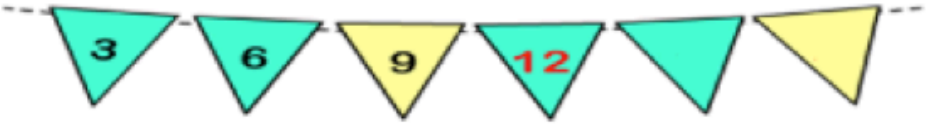
3. 

4. 

5. 

6. 

7. 

8. 

9. 

10. 

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Experiential Learning

Identify the solid shapes in Aparna's birthday party

Object	**Shape**
Cake	_____
Red colour gift box	_____
Birthday cap	_____
Ball	_____
Purple colour gift box	_____

Aparna shares her gifts with her friends. She also spends time in an orphanage that day.

How do you celebrate your birthday?

_____

_____

_____

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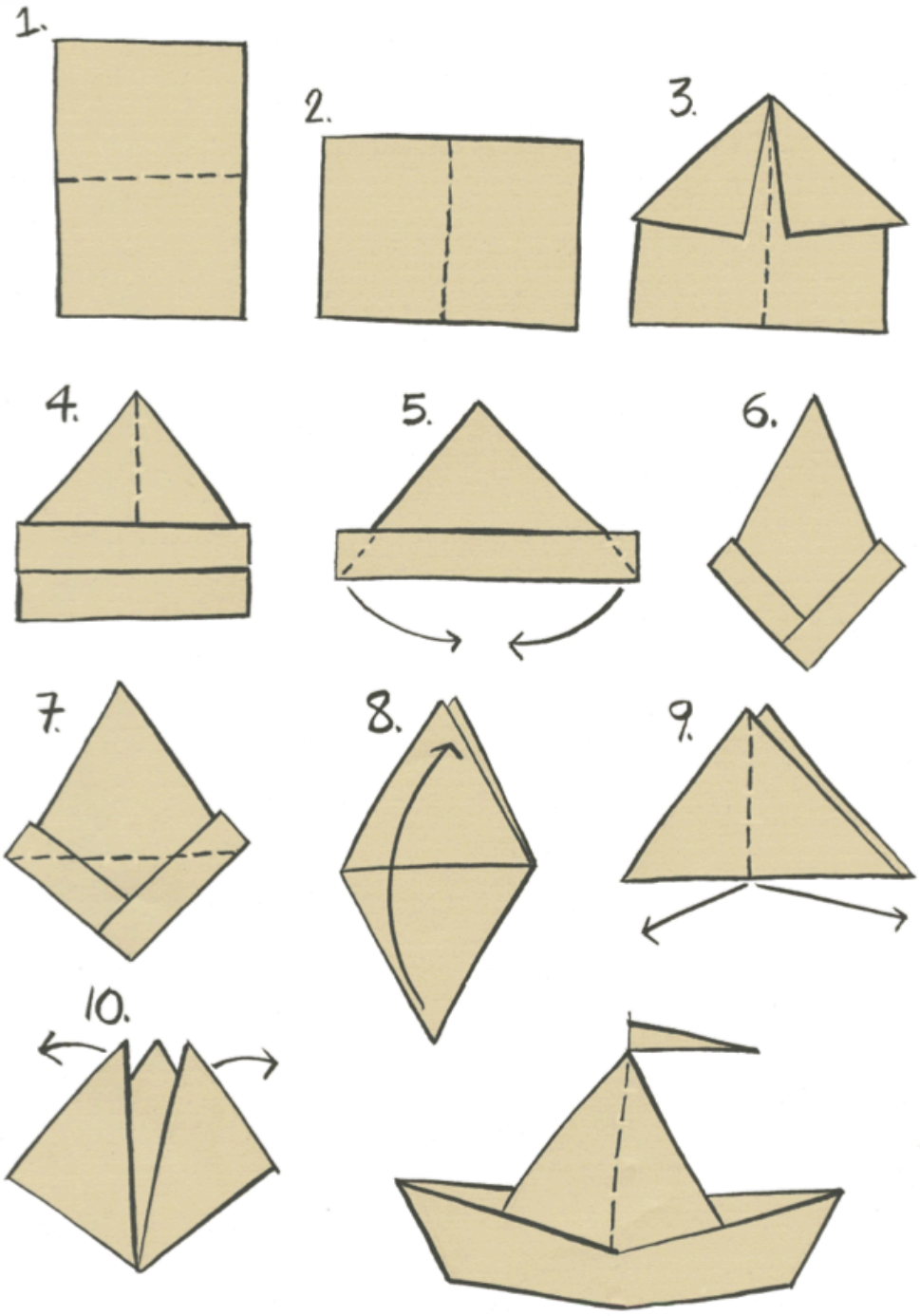
Arts Integrated Activity

Jaya is a craft teacher. She has given you the steps to make a paper boat. Try doing it.

Folding paper into decorative shapes and figures is called **Origami.**



Make more shapes and stick in your activity notebook.

Arts integrated Activity

Darshana made a beautiful peacock with her pistachio shell collection.

Collect shells and make your own creative art.

6 MULTIPLICATION

Learning Outcomes:

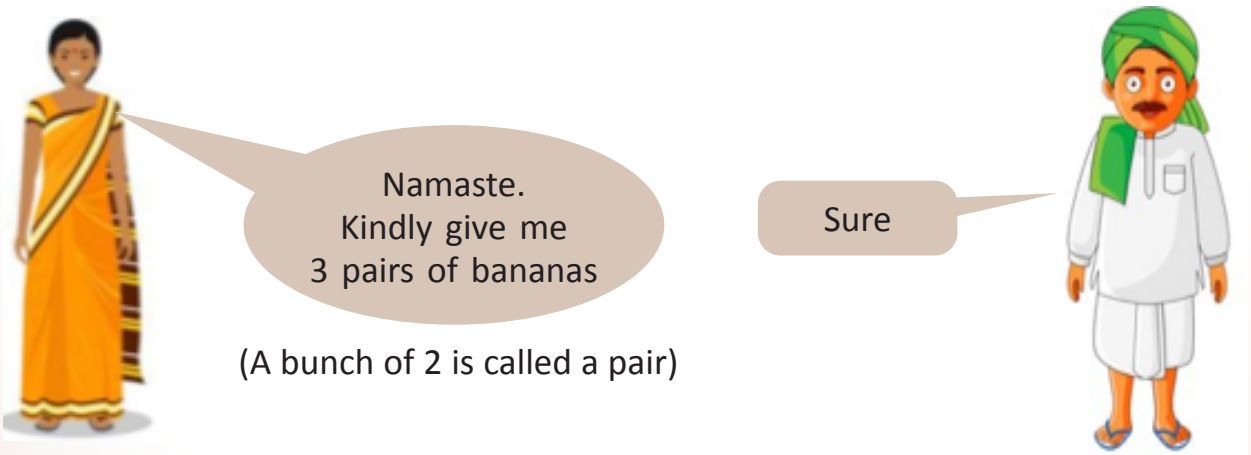
At the end of this lesson, children will be able to:

- Understand the relation between repeated addition and multiplication
- Build and recite multiplication tables of 2, 5 and 10
- Multiply a 1 digit number by 2, 5 and 10
- Understand the properties of multiplication
- Apply the concept of multiplication in real life situations

Purandara a kind-hearted person lives in Hampi. He sells organic fruits, vegetables, dry fruits, and flowers in his shop "Aksaya patra" every day.

The uniqueness of the shop is that the items are sold by numbers not by weight.

Rama went into his shop to see what he was selling.

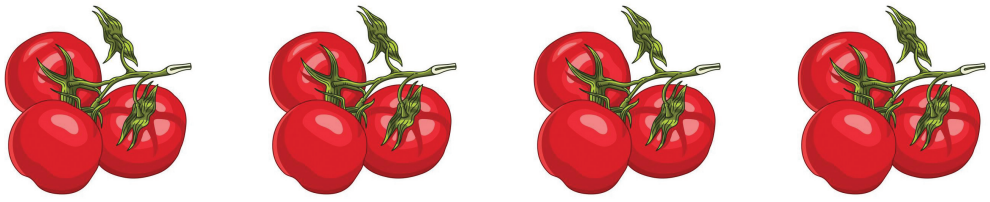


How many bananas does each pair have? _____

Total number of bananas is 3 pairs = 2 + 2 + 2 = _____

There was another customer, Tejas who wanted to buy tomatoes.

He asked for 12 tomatoes. Purandara gave 4 packets of 3 tomatoes each.



3 + 3 + 3 + 3 = _____

He also bought 2 groups of ivy gourd. Each group had 11 ivy gourds.

11 + 11

When we add the same number again and again, it is called **repeated addition**

Total number of ivy gourds bought _____

Let us learn to make groups

Example 1:

One tender coconut in one group.

Number of groups = 7

Number of tender coconuts in each group = 1

Seven groups of one coconut each = 7 coconuts

Example 2:

Make these watermelons into two groups equally

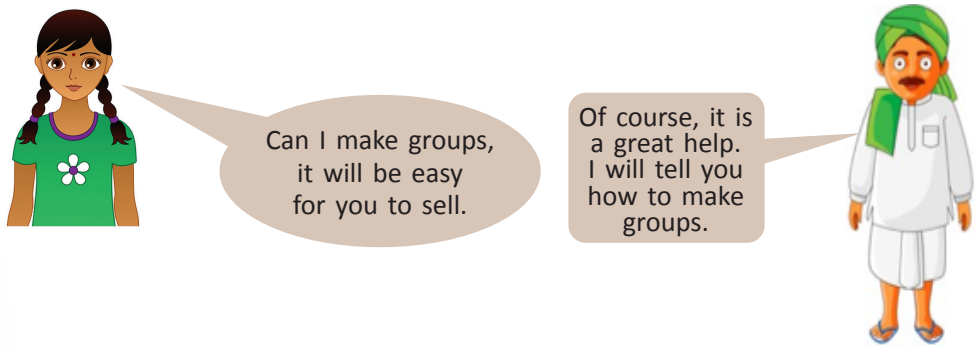
Number of groups **2**

Number of watermelons in each group **3**

2 groups of **3** watermelons each = **6** watermelons

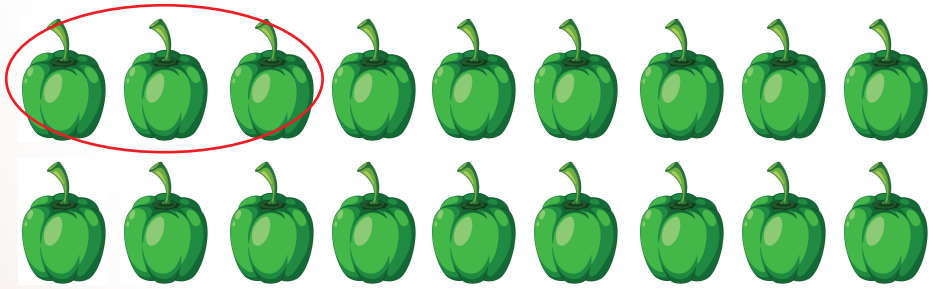
Let us draw groups

Tara, granddaughter of Purandara, came to the shop to help her Ajja (grandfather in Kannada) after completing her schoolwork.



EXERCISE 6.1

1) Capsicum groups



Put three capsicums in each group.

Number of groups _____

_____ groups of 3 capsicums each

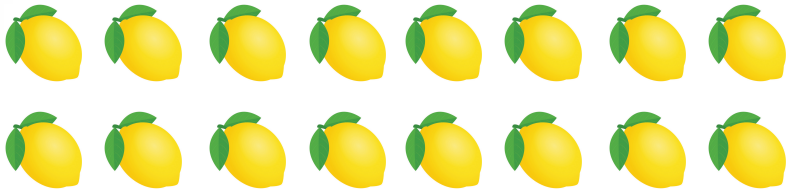
2) Custard apple groups

Put 5 custard apples in each group.

Number of groups _____

_____ groups of 5 custard apples each

3) Lemon groups

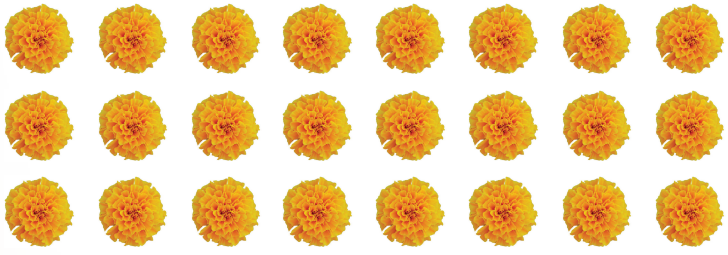


Put 4 lemons in each group

Number of groups _____

_____ groups of 4 lemons each

4) Marigold groups



Put 6 marigolds in each group

Number of groups _____

_____ groups of 6 marigolds each

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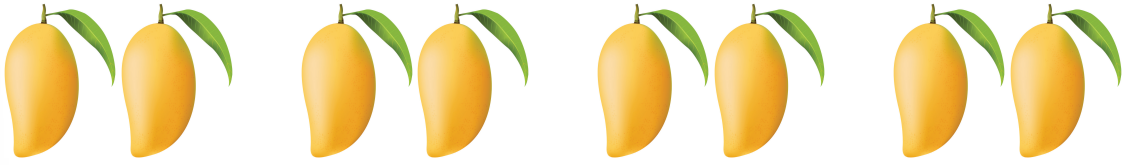
Representing groups in repeated addition

5 groups of 4 each	4 + 4 + 4 + 4 + 4
6 groups of 2 each	2 + 2 + 2 + 2 + 2 + 2
3 groups of 10 each	10 + 10 + 10

Multiplication is also called **repeated addition.** The sign of multiplication is X.

When each group has the same number of objects, we **multiply** to get the answer. The answer is called the **product.**

Example 1



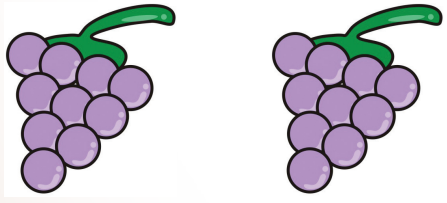
4 groups of 2 mangoes each

4 times 2

4 X 2 = 8

Example 2

There are 10 grapes in each bunch



2 groups of 10 grapes each

2 times 10

2 X 10 = 20

EXERCISE 6.2

1) Write the following using multiplication sign:

a.	2 groups of 7	2 X 7
b.	3 groups of 9	
c.	1 group of 6	
d.	4 groups of 8	
e.	5 groups of 5	
f.	6 groups of 10	

2) Learn to use multiplication sign:

		Addition fact	Multiplication fact
a.	2 groups of 5 each	5 + 5 = 10	2 x 5 = 10
b.	3 groups of 7 each	7 + 7 + 7 = 21	3 x 7 = ___
c.	4 groups of 2 each	2 + 2 + 2 + 2 =	4 x 2 = ____
d.	2 groups of 4 each	4 + 4 =	2 x 4 = ____
e.	5 groups of 6 each	6 + 6 + 6 + 6 + 6 =30	5 x 6 = ____
f.	3 groups of 3 each	_____ =	3 x 3 = ____
g.	4 groups of 8 each	_____ =	4 x 8 = ___
h.	2 groups of 10 each	10 + 10 =	___ x ___ = ____

3) Tick the correct answer:

a. 2 times 4

2 x 5 　 2 x 4 　 4 x 4 　 2 + 4

b. 3 times 1

3 x 1 　 3 x 3 　 1 x 5 　 1 + 3

c. 6 times 7

7 x 7 | 7 x 6 | 6 x 7 | 7 + 6

d. 5 groups of 8

8 x 4 | 5 x 8 | 5 x 5 | 8 + 5

e. 4 + 4 + 4

4 times 4 | 4 times 5 | 3 times 4 | 4 times 2

f. 8 + 8 + 8 + 8 + 8 + 8

6 x 8 | 8 x 3 | 6 x 6 | 6 + 8

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Properties of Multiplication

Multiplication by "0"

Priya's mom got some new vases to decorate their house. She bought 4 new vases without flowers in them. She put the four vases as a group.

There are no flowers in these vases.

0 + 0 + 0 + 0 = 0

4 groups of 0 = 0

4 x 0 = 0

When we multiply any number by 0, the product is always 0.

Multiplication by “1”

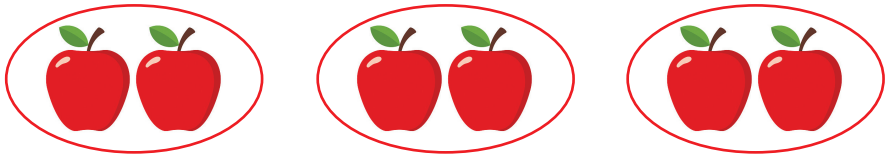
1 + 1 + 1 + 1 = 4

4 groups of 1 = 4

4 x 1 = 4

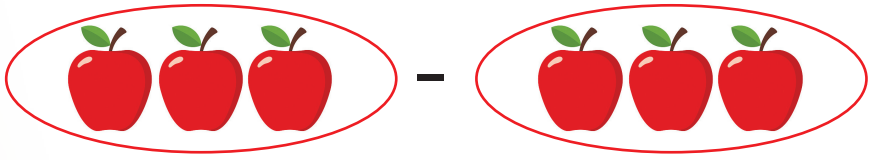
When we multiply any number by 1, the product is the number itself.

Order of Multiplication



3 groups of 2 = 6

3 x 2 = 6



2 groups of 3 = 6

2 x 3 = 6

Hence, 3 x 2 = 2 x 3 = 6

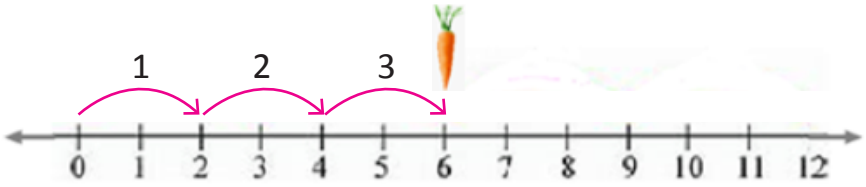
Even if the order of numbers is changed, the product remains the same.

EXERCISE 6.3

Multiplication using number line:

Bunny jumps along the number line to reach the 

a) 



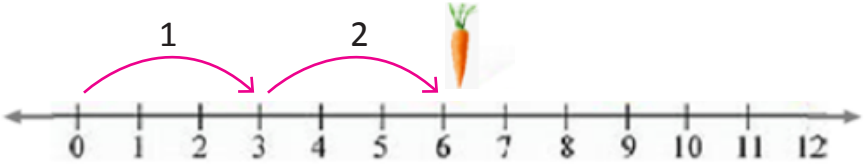
How many jumps did bunny make to reach the carrot? _____

How many numbers did he jump? _____.

What number did it reach? _____

_____ x _____ = 

b) 



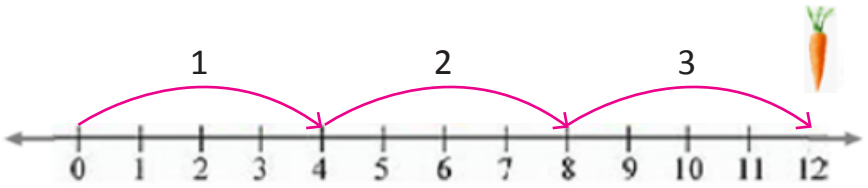
How many jumps did bunny make to reach the carrot? _____

How many numbers did he jump? _____.

What number did it reach? _____

_____ x _____ = 

c) 



How many jumps did bunny make to reach the carrot? _____

How many numbers did he jump? _____.

What number did it reach? _____

_____ x _____ = 

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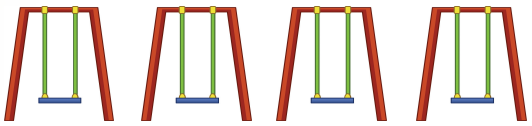
EXERCISE 6.4

a)  5 plates 1 x 5 = _____

b)  No of children in 4 swings =

4 x 0 = _____

c) 1 + 1 + 1 = _____ x _____ = _____

d) _____ x 25 = 0

e) 7 x 1 = _____ x 7 = _____

f) 8 x _____ = 8

g) How many coins of ten rupees  will you pay the shop keeper if you have to give him  ? ____ x 10 = 10

h) 7 tens x _____ = 70

i) Which is greater 5 times 1 or 2 times 3? _____

j) 4 times 5 is _____

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EXERCISE 6.5

Doubles Fun!

★ Adding to itself ➔ 3 + 3 = 6

★ Multiply by 2 ➔ 3 x 2 = 6

a) Double of 5 = _____

b) Double of 7 = _____

c) Indu's hibiscus plant had 4 flowers.

Her friend Vani's plant had double the number.

How many flowers did Vani's plant have? _____

d) Frame questions to have double fun.

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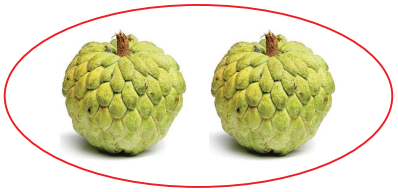
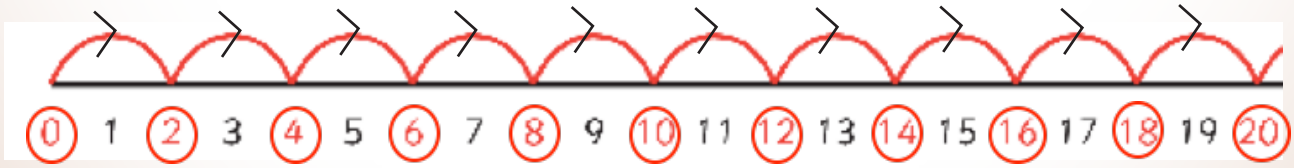
Counting by 2s

Building the multiplication table of 2

Count by twos on the number line

Dhanya puts 2 custard apples in one group. Help her to build more groups.





EXERCISE 6.6

1) Write the multiplication table of 2:

1 group of 2 custard apples	1 X 2 = 2	
2 groups of 2 custard apples	2 X 2 = 4	
3 groups of 2 custard apples	3 X 2 = 6	
4 groups of 2 custard apples	4 X 2 = 8	
5 groups of 2 custard apples	5 X 2 = 10	
6 groups of 2 custard apples	6 X 2 = 12	
7 groups of 2 custard apples	7 X 2 = 14	
8 groups of 2 custard apples	8 X 2 = 16	
9 groups of 2 custard apples	9 X 2 = 18	
10 groups of 2 custard apples	10 X 2 = 20	

Skip counting by 2 s

2	4	6		10	12			18	

Counting by 5s

Building the multiplication table of 5

Dinesh puts 5 guavas in one group. Help him to build more groups.

2) Write the multiplication table of 5:

1 group of 5 guavas	1 X 5 = 5	
2 groups of 5 guavas	2 X 5 = 10	
3 groups of 5 guavas	3 X 5 = 15	
4 groups of 5 guavas	4 X 5 = 20	
5 groups of 5 guavas	5 X 5 = 25	
6 groups of 5 guavas	6 X 5 = 30	
7 groups of 5 guavas	7 X 5 = 35	
8 groups of 5 guavas	8 X 5 = 40	
9 groups of 5 guavas	9 X 5 = 45	
10 groups of 5 guavas	10 X 5 = 50	

Skip counting by 5s

5		15	20		30				50

Observe the ones place in the product.

Counting by 10s

Building the multiplication table of 10

Dhanam puts 10 plums in one group. Help her to build more groups.

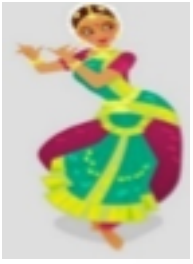
3) Write the multiplication table of 10

1 group of 10 plums	1 X 10 = 10	
2 groups of 10 plums	2 X 10 = 20	
3 groups of 10 plums	3 X 10 = 30	
4 groups of 10 plums	4 X 10 = 40	
5 groups of 10 plums	5 X 10 = 50	
6 groups of 10 plums	6 X 10 = 60	
7 groups of 10 plums	7 X 10 = 70	
8 groups of 10 plums	8 X 10 = 80	
9 groups of 10 plums	9 X 10 = 90	
10 groups of 10 plums	10 X 10 = 100	

Skip counting by 10s

10									100

Experiential Learning



Shobana is in Class 10. In spite of her busy study schedule, she attends her dance class twice a week to keep herself fit and healthy.

How many dance classes does she attend in 4 weeks?

___ x ___ = _____

Surya performs 8 yogasanas every morning.
How many yogasanas will he perform in 5 days?

5 X 8 = _____

Are you practising Yoga? _____ (Yes/No)

Do you like to Dance? _____ (Yes/No)

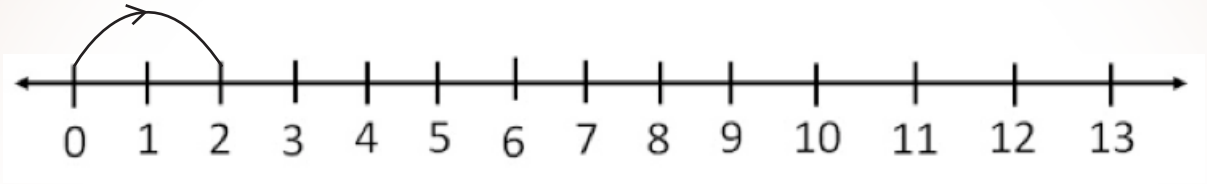
How do you keep yourself fit and healthy?

_____

EXERCISE 6.7

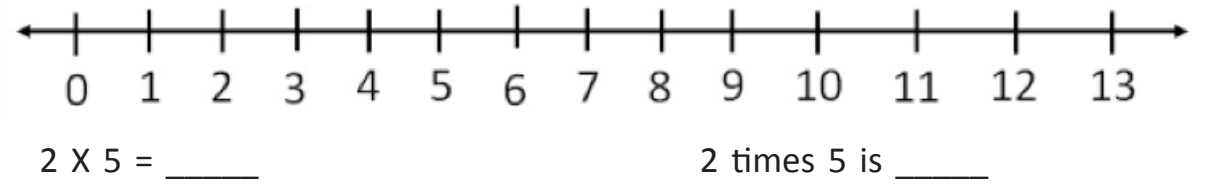
1. Multiply using number line:

a.



5 X 2 = _____ 5 times 2 is _____

b.



2 X 5 = _____ 2 times 5 is _____

c. What do you observe? Are both answers the same?

5 times 2 is the same as _____

2. Complete the addition facts:

a) 7 X 2 = ____ + ____ + ____ + ____ + ____ + ____ + ____ = 14

b) 2 X 7 = ____ +____ = _____

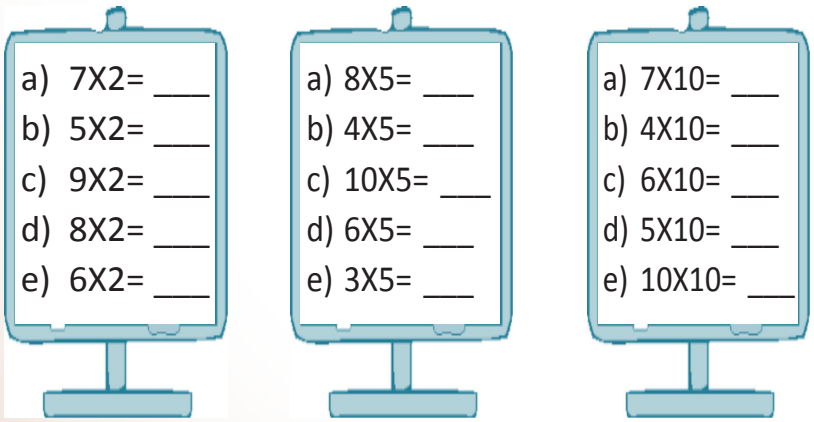
c) 6 X 2 = ____ + ____ + ____ + ____ + ____ + ____ = _____

d) 3 X 5 = ____ + ____ + ____ = _____

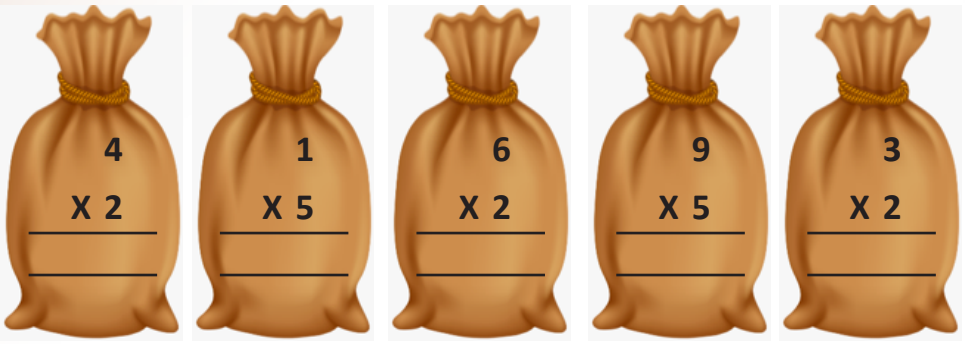
e) 2 X 10 = ____ + ____ = _____

f) 5 X 10 = ____ + ____ + ____ + ____ + ____ = 50

3. Complete the blanks on the board:



4. Multiplication:



Teacher's Sign & date_____

Arts Integrated Activity

Let us learn to sing

Jantai Varisai – [Carnatic music lesson – 2]

Jantai Varisai involves double of a single swaram.

Example

ss rr | gg |mm || pp dd | nn | ss ||

ss nn | dd | pp || mm gg | rr | ss ||

Enjoy singing jantai varisai in your music class and identify the pattern.

Sing along

Try singing the multiplication table of 2, 5 and 10. Also find the pattern.

Pallanguzhi is an ancient board game.

★ It consists of 2 rows, with 7 cups in each row.

★ 2 X 7 = 14 cups.

★ Seeds, coins, shells, stones etc. are used to play this game.

Benefits

- It helps children to learn counting.
- It improves eye-hand coordination.
- It enhances memory, observation skills and motor skills of children.

Play pallanguzhi with your parents, grandparents and friends.

EXERCISE 6.8

Applications in real life:

1) Agastya reads 8 pages of a story book in the morning and 8 pages in the evening. How many pages of the book does she read every day?

_____ = _____

_____ = x _____

_____

Ans: _____

2) A guitar has 6 strings. How many strings will 5 such guitars have?

_____ = _____

_____ = x _____

_____

Ans: _____

3) I bought 5 boxes of ping pong balls. Each box had 8 balls. How many balls did I buy in all?

_____ = _____

_____ = x _____

_____

Ans: _____

4) In a school for a PT display, 10 students were made to stand in a row. How many students were there in 4 such rows?

_____ = _____

_____ = x _____

_____

Ans: _____

5) How many pieces of socks would there be in 9 pairs?

_____ = _____

_____ = x _____

_____

Ans: _____

6) Manu distributes sweets to the needy people every year on Pongal. They packed 10 sweets in one packet. They pack 8 such packets in a carton. Find the number of sweets in the carton.

_____ = _____

_____ = x _____

_____

Ans: _____

7) A firework explodes into 5 stars.

How many stars can you see if 9 such fireworks explode?

_____ = _____

_____ = x _____

_____

Ans: _____

8) A bottle contains 2 litres of milk. What is the quantity of milk in 10 such milk bottles?

_____ = _____

_____ = x _____

_____

Ans: _____

9) An athlete is able to run 2 km in one day. If he covers the same distance every day, what distance would he cover in a week?

_____ = _____

_____ = x _____

_____

Ans: _____

10) How many days are there in 2 weeks?

_____ = _____

_____ = x _____

_____

Ans: _____

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Higher Order Thinking Skills:

a. Suja, a flower designer, taught Nithin and his cousin Vidya to make paper roses to decorate their house.

Nithin made 3 roses, Vidya made double the number of roses and made a wall hanging with it.

How many roses did Vidhya make? _____

What is the total number of roses made by them?

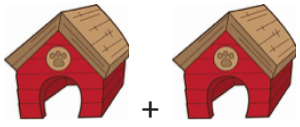
_____

b. Krish wanted to make a night-sky theme card for his best friend Sunil, who was fascinated by stars. He coloured it black and punched 8 holes on the card such that when Sunil opens it, it can look like stars!!

How many stars will Sunil find when opening the card?

_____

c. Fill in the blanks

 = 20

___ + ___ = 20 = _____ x _____ = 20

d.  = 35

___ + ___ + ___ + ___ + ___ = 35 = _____ x _____ = 35

e.  = 12

_____ +___ +___+____+____+___= 12 = _____ x _____ = 12

f. Fill in the empty boxes with the same digit to make the statement true.

3 x ☐ = 1 ☐

16 x ☐ = 9 ☐

WORKSHEET

1. Fill in the blanks

a) 4 x 5 = _____ b) 7 x 2 = _____ c) 3 x 10 = _____

d) 7 x 1 = _____ e) 6 x 0 = _____ f) 4 x 9 = _____

2. Answer the following

a) There are 6 boxes of diyas. Each box has 4 diyas. How many diyas are there in all? _____.

b) The product of the greatest 1 digit number and 10 _____.

c) How many wheels would 10 bicycles have? _____.

d) If there are 6 mangoes in a bag, how many mangoes would there be in 9 such bags? _____.

e) 5 x 10 = 45 + _____

f) What is twice of 2 times 2? _____

g) How many earrings are there in 6 pairs? _____

h) Hari needs 2 packets of cat food for his pets every day. How many food packets will he require for a week? _____

i) 8 ones x 10 = _____

j) I am an even number. When I am added to myself or multiplied by myself, you will get the same number. I am _____.

k) Find the products and do as directed.

3 x 2	8 x 10	8 x 2	6 x 2	4 x 2
2 x 7	4 x 5	5 x 5	6 x 5	1 x 0
4 x 10	1 x 10	9 x 2	5 x 9	3 x 1

i) Circle the products that are more than 20 in red

ii) Circle the products that are less than 10 in green

l) Viji is 5 years old. Her mother is 6 times her age. How old is her mother?

_____

Teacher's Sign & date_____

Vedic Mathematics

Sutra : **एकन्यूनेन पूर्वेण**
(Ekanyunena Purvena)

Meaning: "One less than the previous one"
This sutra can be used to multiply if a number(multiplier/multiplicand) has all digits as 9. (9, 99, 999, 9999....)

Example 1 :

	7
x	9
6	3

The Nikhilam of 7 is 3 (10-7=3)
The ones place of the product is 3.
One less 7 is 6. The tens place of the product is 6.

Hence, the product of 7 and 9 is 63.

		8	2
	x	9	9
8	1	1	8

The Nikhilam of 82 is 18 (100-82).
The ones and tens place of the product is 18.
One less than 82 is 81. The hundreds and thousands place of the product is 81.

Hence, the product of 82 and 99 is 8118.

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.

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