NEP Compliant inside

Orient BlackSwan

Inspired Maths

For the New CISCE Curriculum

2

Inspired Maths

has been developed in accordance with

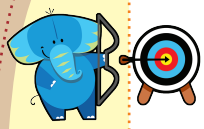
- the pioneering and exciting endeavours and initiatives for the effective teaching and learning of mathematics
- the need for students to develop the skills of problem solving and generating better algorithms, all directed towards developing the right attitude and approach to solving problems in a systematic manner
- sound pedagogical practices that enable students to learn effectively and apply their learning
- the needs of the teacher in the classroom

Students' Textbook

- complete syllabus coverage
- carefully graded text
- appropriate figures and images
- ample rigour to learn, understand and apply concepts and skills

Let's Learn

❖ Text and Exercises



Learning Outcomes

- encourage students to evaluate their progress and take responsibility for their learning

Warm Up

- **Activities** facilitate quick learning and easy understanding of new concepts
- **Recall exercises** help students recall concepts learnt and prepare for new learning

Guided Learning

- step-by-step approach consolidating each concept with solved and semi-solved exercises for guided learning

Activities

- extensively used to develop concepts, enhance skills and application

Variety of Exercises

- concept-based, calculation skill-based and application-based exercises

Common Mistakes

- students discover commonly committed mistakes on their own

Teachers' Resource Pack

- lesson plans for all lessons
- enrichment activities for teaching
- worksheets with answers for all lessons
- question bank with answers for all lessons
- assessment papers

Teachers' Smart Book

exciting and interactive with:

- embedded questions
- animations
- games
- presentations
- worksheets
- question paper generator

Students' App

- more practice for students of classes 3–8

Website

- a portal dedicated to the series with free access for teachers

www.inspiredmaths.com

Workouts

Let's Apply

WORKOUT 1 (Worksheet for concepts and calculation skills)

Concept-based and Calculation skill-based exercises

- to master concepts and calculation skills

Mental Maths

- to develop quick calculation skills

WORKOUT 2 (Worksheet for higher skills)

Multiple Choice Questions

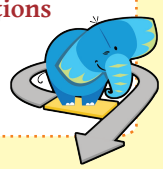
- provide feedback
- contribute to self-learning

Problem Solving

- improve students' analytical and problem-solving skills

Cross-curricular Questions

- help apply maths to various subjects



Life Skills

- help students gain self-management, communication, decision making and critical thinking skills

Projects and Fun activities

- help students apply what they have learnt to real life and also have some fun

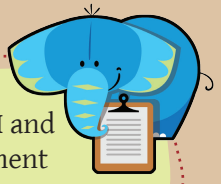
Our Heritage

- includes Vedic maths and yoga

Values

- students understand values like honesty, sharing, ethical behaviour and so on

Assessment



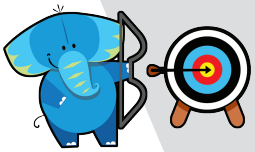
In addition to the **variety of exercises** in the lesson and in the **Workout I** and **Workout II** sections, there are four assessment papers for regular assessment

Contents

CHAPTER 1

2-Digit Numbers

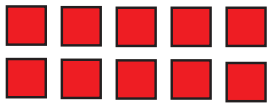
Learning Outcomes



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

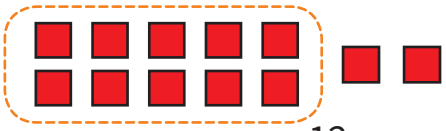
- express 2-digit numbers as sum of tens and ones.
- compare 2-digit numbers and arrange them in ascending and descending order.
- form the greatest and smallest 2-digit numbers from given digits.

❖ Recall—tens and ones

a) 

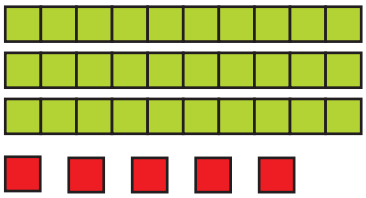
10 ones →  10 ones make 1 ten

1 ten

b) 

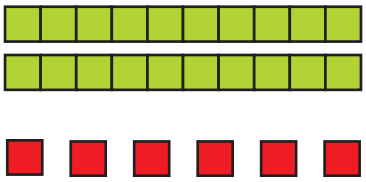
12 ones →  1 ten and 2 ones → 10 + 2 = 12

c) 3 tens and 5 ones



3 tens and 5 ones is
30 + 5 = 35

d) 2 tens and 6 ones



2 tens and 6 ones is
20 + 6 = 26

Activity 1

Patterns in number names

Look at the pattern in number names from 20 to 23. Fill in the blanks, using the same pattern.

20 Twenty
21 Twenty-one
22 Twenty-two
23 Twenty-three
24 Twenty-_____
25 Twenty-_____
26 Twenty-_____
27 _____-seven
28 _____-_____
29 _____-_____

Use the pattern to fill in the number names from 80 to 89

80 Eighty
81 Eighty-_____
82 Eighty-_____
83 _____-_____
84 _____-_____
85 _____-_____
86 _____-_____
87 _____-_____
88 _____-_____
89 _____-_____

❖ Grouping numbers

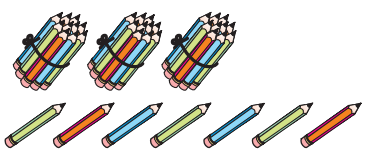
Exercise 1

Complete this using tens and ones to help.

a)  1 ten and 3 ones 10 + 3 13 thirteen

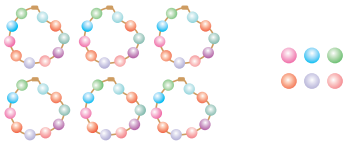
b)  1 ten and 8 ones _____ 18 _____

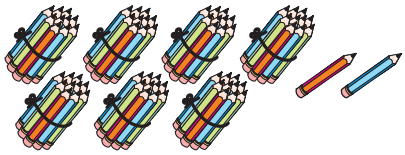
c)  2 tens and 5 ones 20 + 5 ☐ _____

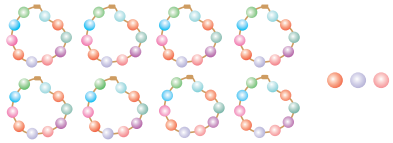
d)  3 tens and 7 ones 30 + 7 ☐ thirty-seven

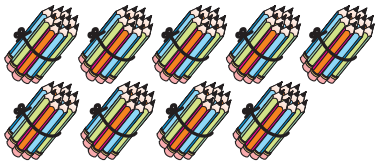
e)  4 tens and 1 one _____ ☐ _____

f)  5 tens and 0 ones _____ ☐ _____

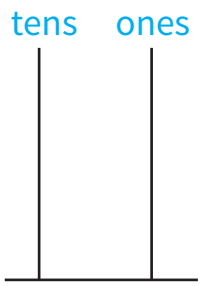
g)  6 tens and 6 ones _____ ☐ _____

h)  7 tens and 2 ones _____ ☐ _____

i)  8 tens and 3 ones _____ ☐ _____

j)  9 tens and 0 ones _____ ☐ _____

❖ The abacus

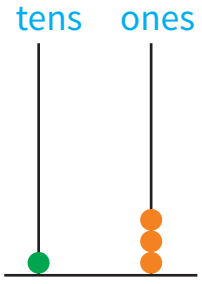


You can also show tens and ones on an abacus.

Here is an abacus.

It has a stick of tens and a stick of ones.

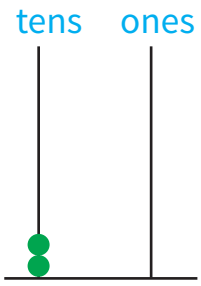
Look at the pictures.



1 bead in the stick of tens.

3 beads in the stick of ones.

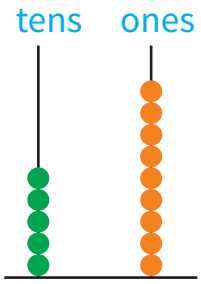
1 ten and 3 ones → 13



2 beads in the stick of tens.

0 beads in the stick of ones.

2 tens and 0 ones → 20



5 beads in the stick of tens.

9 beads in the stick of ones.

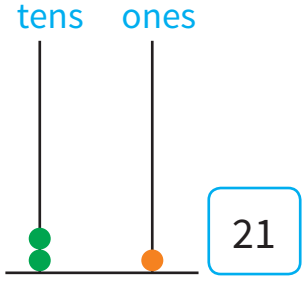
5 tens and 9 ones → 59

Activity 2

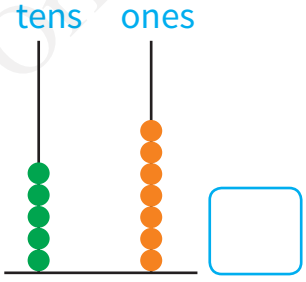
To the teacher: It is very important for children to work on an abacus.
Let them depict various numbers on the abacus, and read the numbers too.
This will help clarify their concept of tens and ones.

Exercise 2

1. Write the numbers shown in the abacus.

a) 

21

b) 

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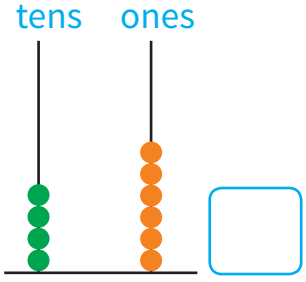
c) 

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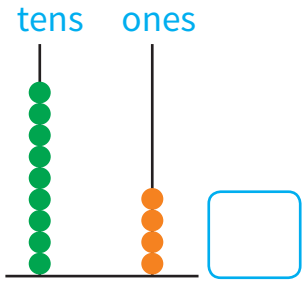
d) 

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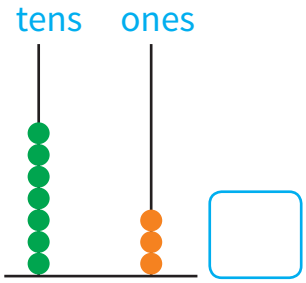
e) 

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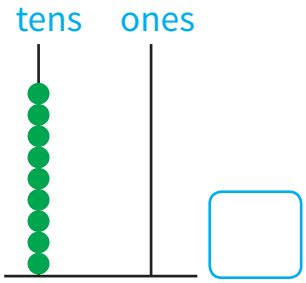
f) 

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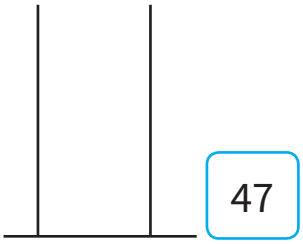
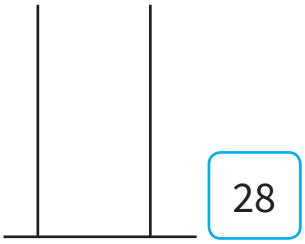
2. Draw beads on the abacus to show the number.

a) tens ones



47

b) tens ones

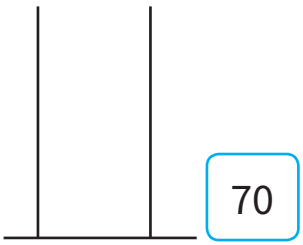


28

c) tens ones

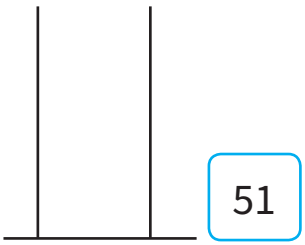
63

d) tens ones



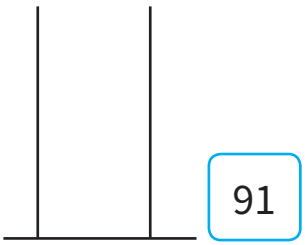
70

e) tens ones



51

f) tens ones



91

Exercise 3

1. How many tens are there in these numbers?

a) 

29 2 tens

b) 

18 _____

c) 

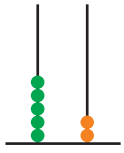
36 _____

d) 

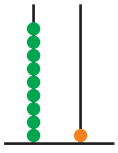
55 _____

e) 

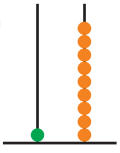
82 _____

f) 

52 _____

g) 

91 _____

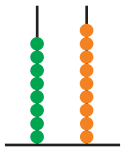
h) 

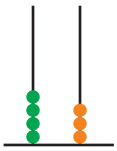
19 _____

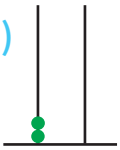
i) 

96 _____

j)  73 _____

k)  89 _____

l)  43 _____

m)  20 _____

2. Write these numbers as tens and ones.

a) 43 4 tens and 3 ones

b) 25 _____

c) 21 _____

d) 36 _____

e) 68 _____

f) 42 _____

g) 70 _____

h) 92 _____

i) 39 _____

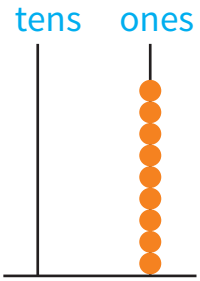
j) 88 _____

k) 52 _____

l) 66 _____

❖ Place value

Look at the numeral 9 on the abacus.
The place value of 9 in 9 is 9 ones or 9.



Now look at 35 on an abacus.

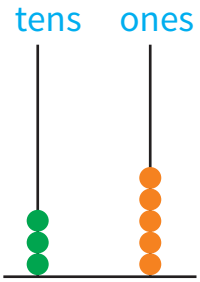
We know that 35 is 3 tens and 5 ones.

The 3 in 35 means 3 tens.

The 5 in 35 means 5 ones.

The place value of 3 in 35 is 3 tens or 30.

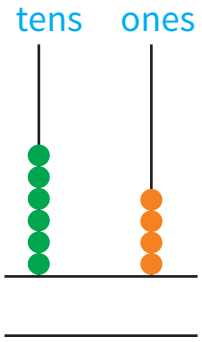
The place value of 5 in 35 is 5 ones or 5.



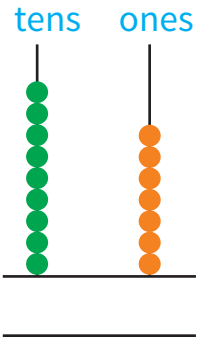
Exercise 4

1. Write the place value of:

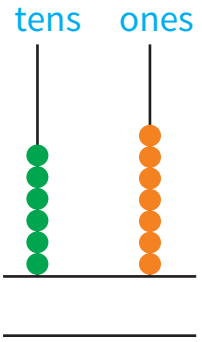
a) 4 in this abacus



b) 9 in this abacus



c) 7 in this abacus



2. Write the place value of these digits in the number.

a) 5 in 59 ☐

b) 8 in 18 ☐

c) 2 in 24 ☐

d) 3 in 63 ☐

e) 1 in 13 ☐

f) 4 in 49 ☐

g) 9 in 89 ☐

h) 9 in 96 ☐

i) 6 in 96 ☐

Activity 3

To the teacher: Let children work in groups to make numbers using place-value cards—ones and tens. Place-value cards can be made on cardboard.

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

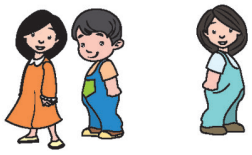
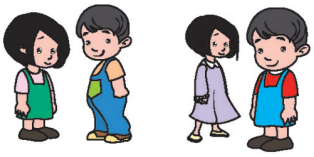
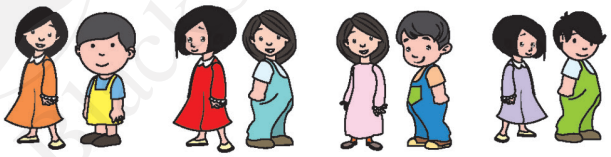
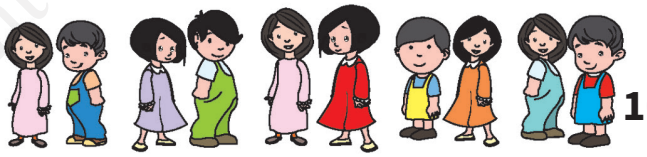
This will further strengthen the concept of tens and ones.

Use the place-value cards to make these numbers.

a) 46 b) 38 c) 50 d) 72 e) 99

❖ Odd and even numbers

Children are trying to stand in pairs.

These cannot be put into pairs.		These can be put into pairs.	
	1		2
	3		4
	5		6
	7		8
	9		10

Numbers that cannot be put into pairs are called **odd** numbers.

1, 3, 5, 7 and 9 are odd numbers.

13, 21, 45, 67 and 99 are also odd numbers.

A number is odd if it has 1, 3, 5, 7 or 9 in its ones place.

Numbers that can be put into pairs are called **even** numbers.

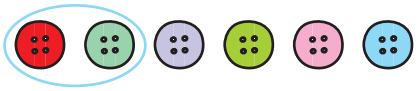
2, 4, 6, 8 and 10 are even numbers.

12, 26, 44, 50 and 78 are also even numbers.

A number is even if it has 0, 2, 4, 6 or 8 in its ones place.

Exercise 5

1. Ring the objects in pairs. Write if the number of objects is odd or even.

a)  _____

b)  _____

c)  _____

2. Here are the numbers from 1 to 30. Ring the odd numbers in blue. Ring the even numbers in red.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

3. Fill in the missing even numbers in order.

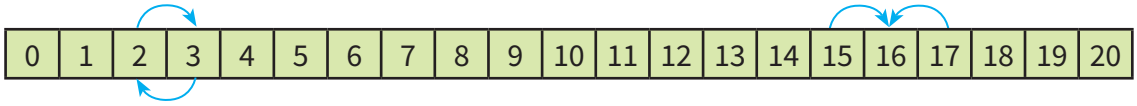
6	8				16		20		
		30	32	34					44

4. Fill in the missing odd numbers in order.

31	33				41				
51						63	65		

❖ Before, after, between

Look at the number strip.



3 comes **after** 2
2 comes **before** 3

16 comes after 15
16 comes before 17
16 is **between** 15 and 17

Exercise 6

Fill in the box.

1. After

a) 4 ☐
b) 14 ☐
c) 46 ☐
d) 76 ☐
e) 28 ☐
f) 48 ☐
g) 39 ☐
h) 50 ☐
i) 87 ☐

2. Before

a) ☐ 63
b) ☐ 53
c) ☐ 88
d) ☐ 18
e) ☐ 32
f) ☐ 12
g) ☐ 40
h) ☐ 70
i) ☐ 91

3. Between

a) 25 ☐ 27
b) 45 ☐ 47
c) 30 ☐ 32
d) 60 ☐ 62
e) 43 ☐ 45
f) 65 ☐ 67
g) 18 ☐ 20
h) 78 ☐ 80
i) 56 ☐ 58

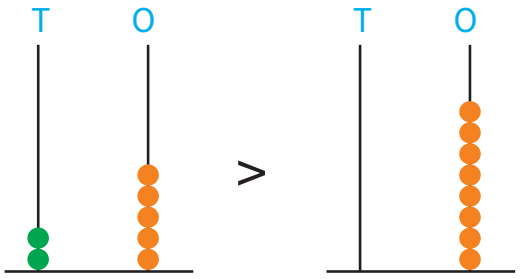
4. Salma has read 60 pages of a book. The page she has to read next is ☐.

5. Harjit's father is 52 years old. Last year he was ☐ year's old.

❖ Comparison of numbers

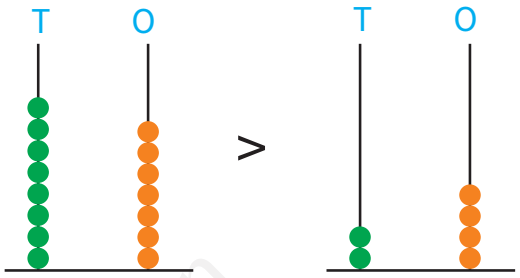
Rule 1: A 2-digit number is bigger than a 1-digit number.

- Compare 25 and 8.
  25 has two digits. 8 has one digit.
  So, 25 > 8
  or 8 < 25



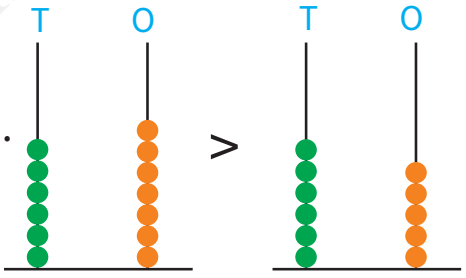
Rule 2: In 2-digit numbers, the number with the greater tens digit is greater.

- Compare 87 and 24.
  Both numbers have 2 digits.
  So, compare the tens digit.
  8 > 2, therefore 87 > 24
  or 24 < 87



Rule 3: In 2-digit numbers with the same tens digit, the number with greater ones digit is greater.

- Compare 67 and 65.
  Both number have two digits.
  Both numbers also have the same tens digit 6.
  Therefore, compare the ones digit.
  7 > 5, therefore 67 > 65
  or 65 < 67



Exercise 7

Fill in the correct symbol > or <.

a) 18 ☐ 31	b) 33 ☐ 44	c) 24 ☐ 64	d) 22 ☐ 68
e) 34 ☐ 72	f) 60 ☐ 70	g) 42 ☐ 16	h) 85 ☐ 40
i) 28 ☐ 82	j) 36 ☐ 63	k) 8 ☐ 81	l) 20 ☐ 29
m) 10 ☐ 11	n) 41 ☐ 14	o) 75 ☐ 65	p) 17 ☐ 71

❖ Ascending and descending order

1. Ring the biggest number in blue and the smallest number in red.

a)

13	17	51	86
9	23	35	44

b)

93	54	28
18	42	17

2. Rewrite the numbers. Start from the smallest and finish with the biggest.

a) 35 43 22 _____

b) 56 9 17 _____

c) 63 28 79 55 _____

This is called the **ascending order** of numbers.

3. Start from the biggest and finish with the smallest.

a) 73 42 55 _____

b) 45 51 12 _____

c) 18 62 77 33 _____

This is called the **descending order** of numbers.

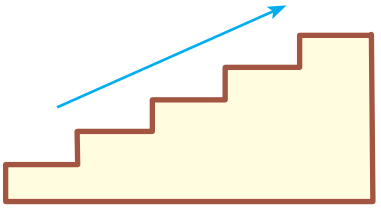
Exercise 8

1. Arrange in ascending order.

a) 13, 31, 43 ____, ____, ____

b) 40, 64, 34 ____, ____, ____

c) 56, 19, 48, 63 ____, ____, ____, ____

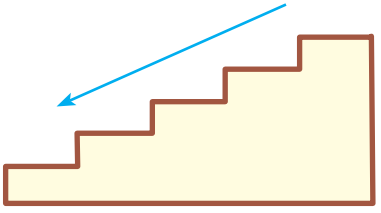


2. Arrange in descending order.

a) 18, 86, 80 ____, ____, ____

b) 34, 45, 9 ____, ____, ____

c) 93, 9, 48, 17 ____, ____, ____, ____



❖ Forming greatest and smallest numbers

Without repeating digits

How many 2-digit numbers can you form with 2 and 7, without repeating any digit?

You can form two 2-digit numbers: 27 and 72

Which is the greatest number? _____

Finding the greatest number is simple. Just arrange the digits in descending order.

Which is the smallest number? _____

In the smallest number, the digits are arranged in ascending order.

Example 1: Form the greatest and smallest 2-digit numbers using the digits 2 and 8, without repeating any digit.

You can form the greatest number by arranging the digits in descending order.

The greatest number is: _____

You can form the smallest number by arranging the digits in ascending order.

The smallest number is: _____

With repeating digits

You are given two digits 2 and 6. How many 2-digit numbers can you make with these, if you are allowed to repeat digits?

You can form four 2-digit numbers: 26 62 22 66

Which is the greatest number? _____

Which is the smallest number? _____

Example 2: Form the greatest and smallest 2-digit numbers using the digits 2 and 8. You can repeat digits.

Greatest number: _____ Smallest number: _____

Exercise 9

1. **Write the greatest and smallest 2-digit numbers using the following digits, without repeating any digit.**

	Greatest number	Smallest number
a) 6, 8	_____	_____
b) 6, 9	_____	_____
c) 9, 5	_____	_____
d) 4, 3	_____	_____
e) 3, 7	_____	_____

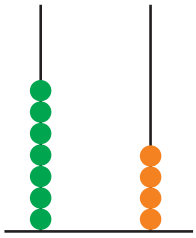
2. **Write the greatest and smallest 2-digit numbers using the following digits. You can repeat digits.**

	Greatest number	Smallest number
a) 6, 9	_____	_____
b) 1, 5	_____	_____
c) 2, 3	_____	_____
d) 4, 8	_____	_____
e) 7, 5	_____	_____

WORKOUT 1
understand and calculate

1. How many tens and ones in these numbers? Write the number and the number name.

a)  ___ tens ___ ones = ☐ = _____

b)  ___ tens ___ ones = ☐ = _____

c)  _____ tens _____ ones = ₹ _____

2. Write as tens and ones.

a) 75 _____ b) 80 _____

c) 9 _____ d) 18 _____

3. Write the place values of:

a) 3 in 23 _____ b) 9 in 19 _____

c) 1 in 91 _____ d) 5 in 65 _____

4. Fill in the correct symbol <, > or =.

a) 13 ☐ 16 b) 8 ☐ 78 c) 68 ☐ 68

d) 31 ☐ 41 e) 28 ☐ 82 f) 40 ☐ 50

5. Write the numbers that come before and after.

a) ___ 89 ___ b) ___ 47 ___ c) ___ 66 ___

d) ___ 50 ___ e) ___ 33 ___ f) ___ 10 ___

6. Write the number that comes between.

a) 81 ___ 83 b) 59 ___ 61 c) 70 ___ 72

d) 98 ___ 100 e) 56 ___ 58 f) 42 ___ 44

7. Arrange the numbers in ascending order.

a) 45, 54, 90, 66 _____

b) 70, 80, 78, 87 _____

c) 99, 19, 9, 39 _____

8. Arrange the numbers in descending order.

a) 63, 72, 8, 23 _____

b) 47, 40, 14, 41 _____

c) 28, 82, 80, 20 _____

9. Ring the even numbers. Put a ✓ on the odd numbers.

12 41 14 50 55 89 98 72 73 37

10. Mental maths

a) Which number has 7 tens and 6 ones? _____

b) Which number has 9 tens and 0 ones? _____

c) Is 63 greater than 65? _____

d) Which is the number just before 100? _____

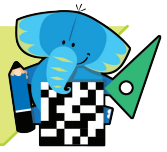
e) Which is the number between 58 and 60? _____

f) How many tens are there in 99? _____

g) Is 77 an even or an odd number? _____

h) What comes before 90? _____

WORKOUT 2
think and apply



Problem solving

1. Circle the correct number in each box.

a) 21 < (32, 12, 11)

b) 99 < (89, 100, 79)

c) 88 < (99, 77, 66)

2. Write > or < or = in the blank.

a) 1 + 3 ___ 2 + 1

b) 4 + 4 ___ 5 + 3

3. Sushma's teacher asked her to compare two 2-digit numbers. But she did not tell Sushma the numbers. She said: 'The first number has 6 tens and the second number has 5 tens'. Which number is greater—the first or the second? _____

Life skill

4. Sanju is 34 years old and Manju is 43 years old. Who is younger? _____

Cross-curricular

5. a) Is the number of fingers in one hand even or odd? _____

b) Is the total number of fingers in both your hands even or odd? _____

6. Fun activity

Four children got the following marks out of 100 in a Maths test:

Sam – 78 Sheila – 82 Krish – 69 Salma – 88

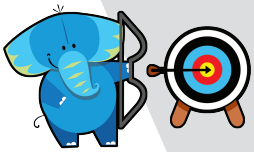
Fill in the names of the students and their marks according to their rank.

Rank	Name	Marks
1st		
2nd		
3rd		
4th		

CHAPTER 4

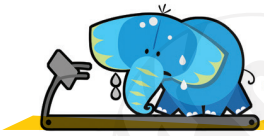
Multiplication

Learning Outcomes



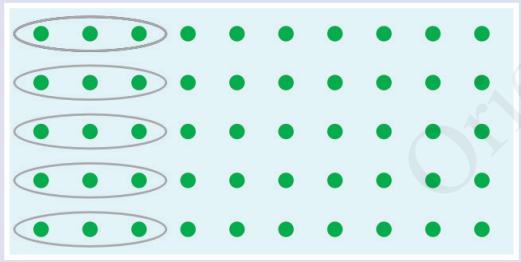
At the end of this lesson, students will be able to:

- construct multiplication tables of numbers 2 - 5 in different ways.
- recite multiplication tables of 2 – 5.
- multiply two 1-digit numbers using multiplication tables 2 – 5.



Activity 1

See the dot sheet given below. Some groups of dots have been made.



1. How many groups are there? _____
2. How many dots are there in each group? _____
3. The total number of dots is:
   3 + 3 + 3 + 3 + 3 = _____
   or 3 added to itself 5 times is _____ .

For the teacher: Ask children to make groups of 2, 3, 4, 5 and so on, on dot sheets. You can ask them to use different colours of crayons for making each group in order to avoid confusion.

❖ Repeated addition

Murad has 1 pair of shoes.

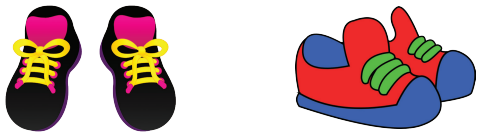
How many shoes does Murad have?

Murad has **2** shoes.

Alka has 2 pairs of shoes.

How many shoes does Alka have?

Alka has 2 + 2 = **4** shoes.



Harjit has 3 pairs of shoes.

Harjit has 2 + 2 + 2 = _____ shoes.

Mira has 4 pairs of shoes.

She has 2 + 2 + 2 + 2 = _____ shoes.

Jose has 5 pairs of shoes.

He has 2 + 2 + 2 + 2 + 2 = _____ shoes.

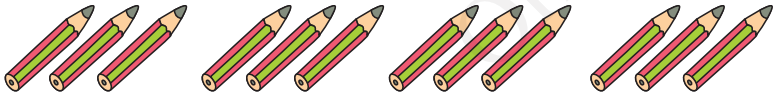
Exercise 1

Write the addition facts for each.

a)

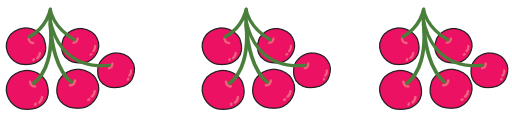
2 + 2 + 2 + 2 + 2 = ☐

b)



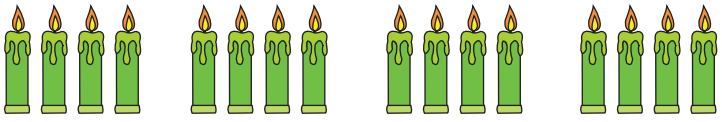
3 + 3 + 3 + 3 = ☐

c)



5 + 5 + 5 = ☐

d)



4 + 4 + 4 + 4 = ☐

❖ Multiplication

There are 4 groups of 2 umbrellas each.

2 + 2 + 2 + 2 = 8

There are: 4 groups of 2 = 8

We say that: 4 times 2 is 8

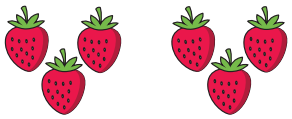
We write: 4 × 2 = 8

× means to multiply. Repeated addition is called **multiplication**.

Exercise 2

Write the addition and multiplication facts.

a)



3 + 3 = _____

2 groups of 3 is _____

2 times 3 is _____

2 × 3 = _____

b)

5 + 5 + 5 = _____

3 groups of 5 is _____

3 times 5 is _____

3 × 5 = _____

c)

2 + 2 + 2 = _____

___ groups of 2 is _____

___ times 2 is _____

___ × 2 = _____

d)

4 + 4 + 4 = ___

___ groups of ___ is ___

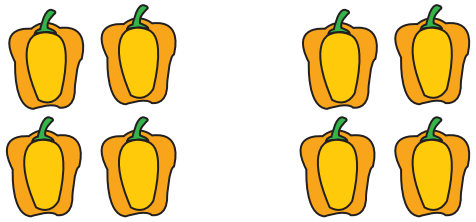
___ times ___ is ___

___ × ___ = ___

Exercise 3

Fill in the blanks.

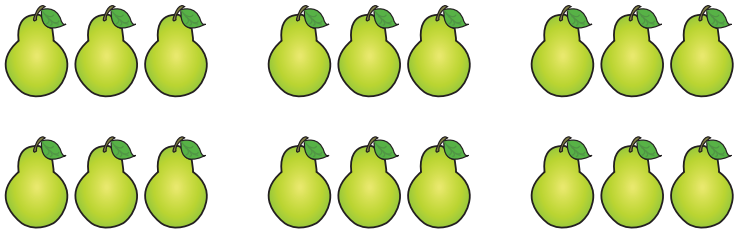
a)



2 groups of 4 = _____

2 × 4 = _____

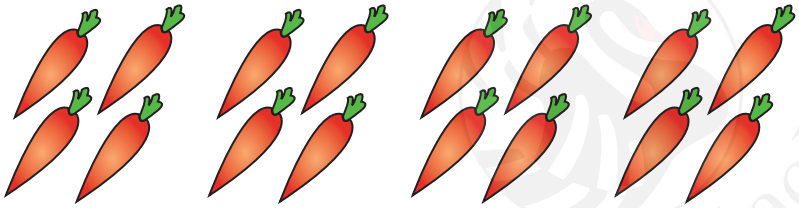
b)



6 groups of 3 = _____

6 × 3 = _____

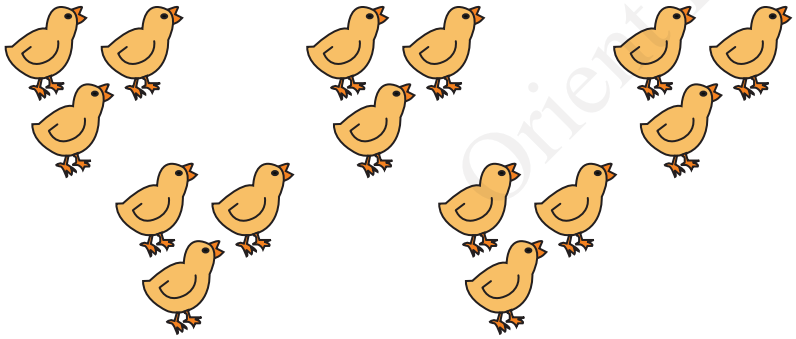
c)



4 groups of 4 = _____

4 × 4 = _____

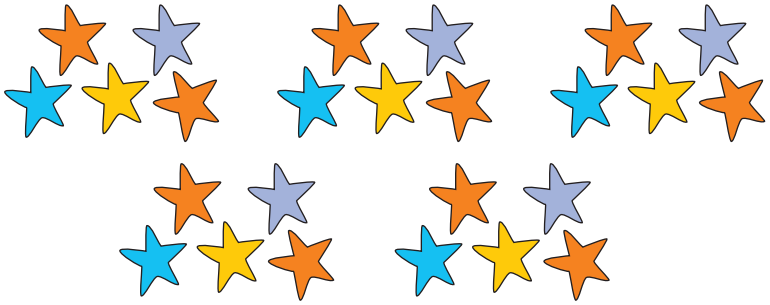
d)



5 groups of 3 = _____

5 × 3 = _____

e)

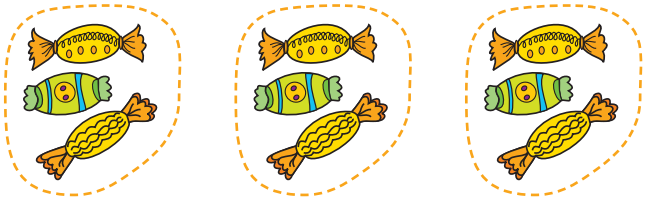


5 groups of 5 = _____

5 × 5 = _____

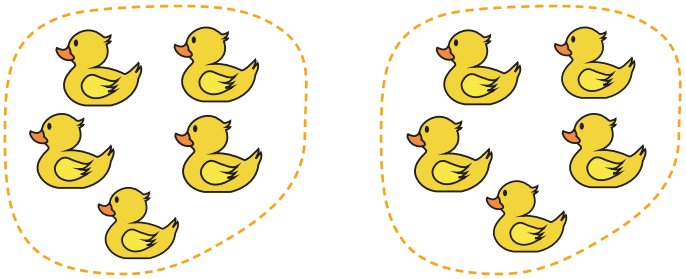
Exercise 4

Complete the multiplication fact for each.

a) 

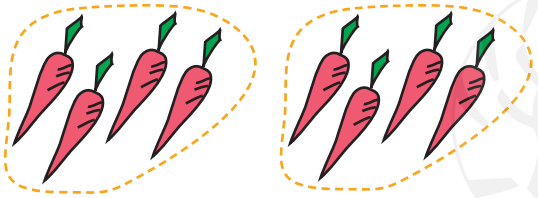
☐ times ☐ is ☐

☐ × ☐ = ☐

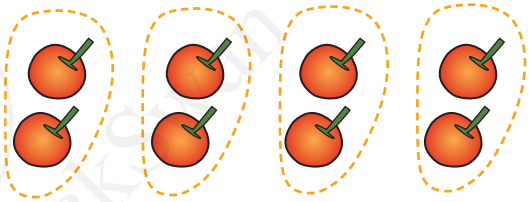
b) 

☐ times ☐ is ☐

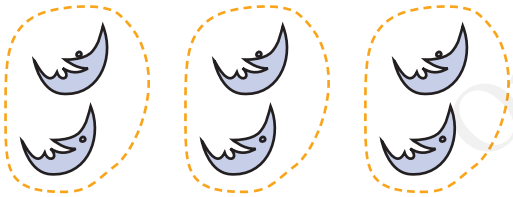
☐ × ☐ = ☐

c) 

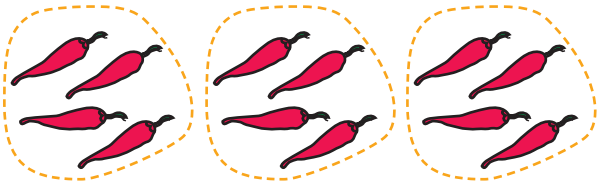
☐ × ☐ = ☐

d) 

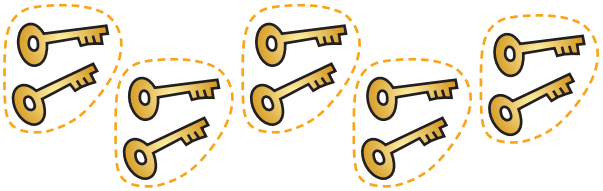
☐ × ☐ = ☐

e) 

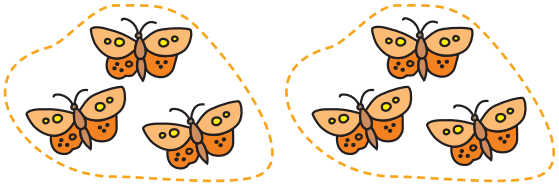
☐ × ☐ = ☐

f) 

☐ × ☐ = ☐

g) 

☐ × ☐ = ☐

h) 

☐ × ☐ = ☐

❖ Multiplication tables

You can multiply quickly if you know the multiplication tables.

Multiplication table for 2


2 leaves — **1** group of 2 — **1** × 2 = 2


2 groups of 2 — **2** × 2 = 4


3 groups of 2 — **3** × 2 = 6


4 groups of 2 — **4** × 2 = 8


5 groups of 2 — **5** × 2 = 10


6 groups of 2 — **6** × 2 = 12


7 groups of 2 — **7** × 2 = 14

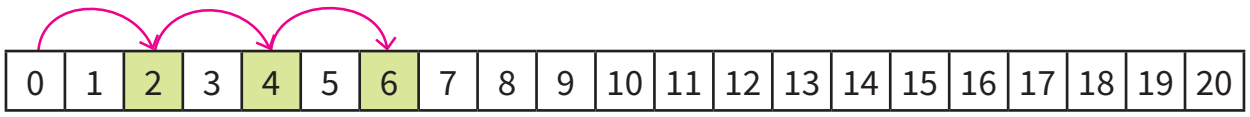

8 groups of 2 — **8** × 2 = 16


9 groups of 2 — **9** × 2 = 18


10 groups of 2 — **10** × 2 = 20

Multiplication table of 2 by skip counting in 2s

Look at the number strip.



Start from 0 and skip one number each time. You land on every second number. This is skip counting in 2s. List the numbers you land on.

2	4	6							

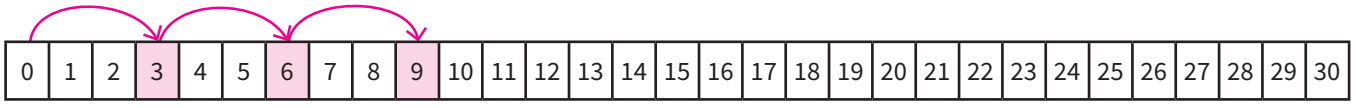
Did you get the table of 2?

Multiplication table for 3

	3 cherries	**1** group of 3	**1** × 3 = 3
		**2** groups of 3	**2** × 3 = 6
		**3** groups of 3	**3** × 3 = 9
		**4** groups of 3	**4** × 3 = 12
		**5** groups of 3	**5** × 3 = 15
		**6** groups of 3	**6** × 3 = 18
		**7** groups of 3	**7** × 3 = 21
		**8** groups of 3	**8** × 3 = 24
		**9** groups of 3	**9** × 3 = 27
		**10** groups of 3	**10** × 3 = 30

Multiplication table of 3 by skip counting in 3s

Look at the number strip.



Skip count in 3s on the number line. Start from 0 and skip to every third number. Write the numbers you land on.

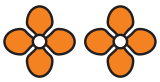
3									

Did you get the table of 3?

Multiplication table for 4

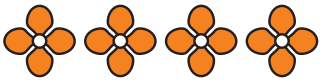
4 petals

1 group of 4 **1** × 4 = 4



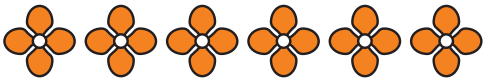
2 groups of 4 **2** × 4 = 8

3 groups of 4 **3** × 4 = 12



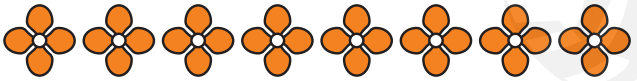
4 groups of 4 **4** × 4 = 16

5 groups of 4 **5** × 4 = 20



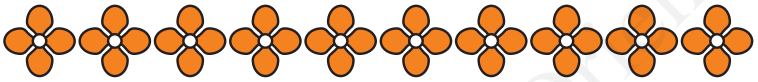
6 groups of 4 **6** × 4 = 24

7 groups of 4 **7** × 4 = 28



8 groups of 4 **8** × 4 = 32

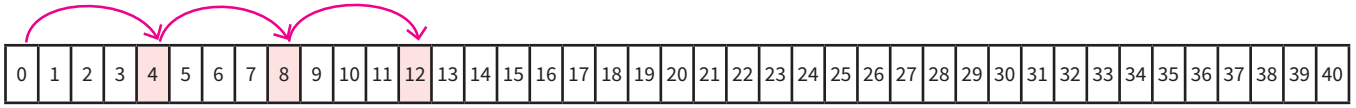
9 groups of 4 **9** × 4 = 36



10 groups of 4 **10** × 4 = 40

Multiplication table of 4 by skip counting in 4s

Look at the number strip.

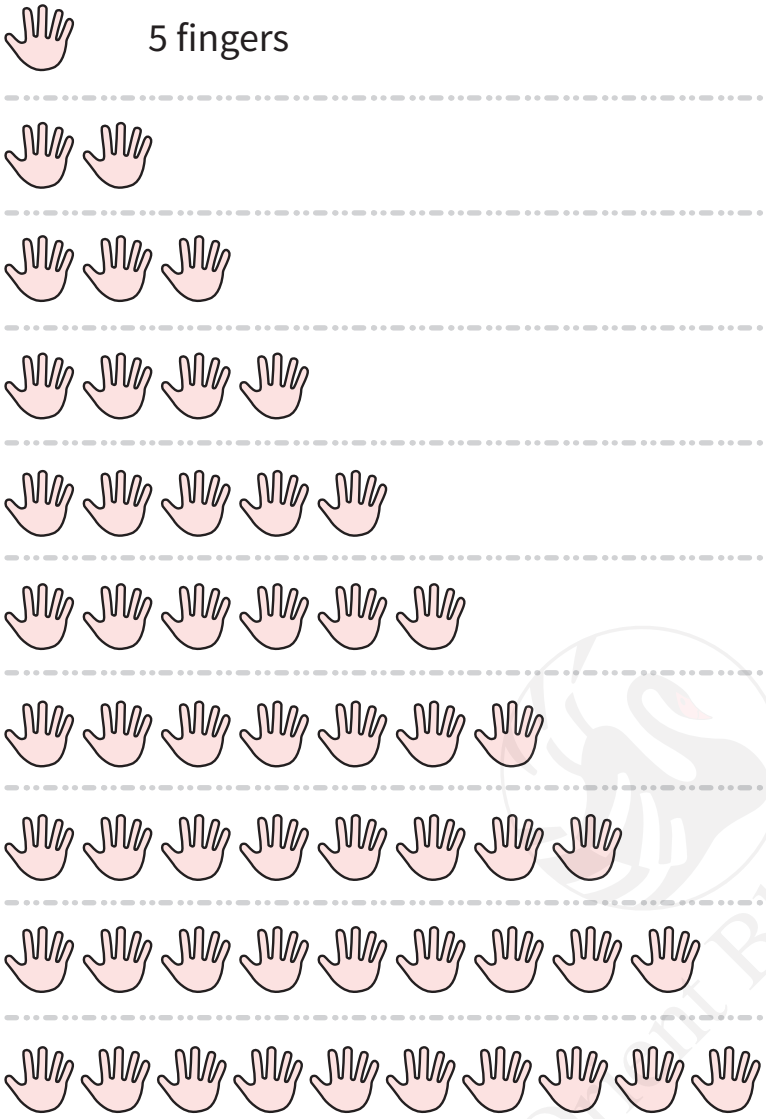


Skip count in 4s on the number line. Start from 0 and skip to every fourth number. Write the numbers you land on.

4									

Did you get the table of 4?

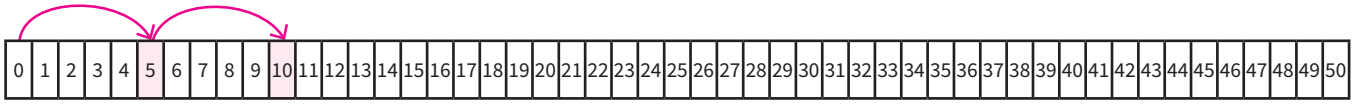
Multiplication table for 5



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

Multiplication table of 5 by skip counting in 5s

Look at the number strip.



Skip count in 5s. Fill in the gaps in the table.

5						35			50

Did you get the table of 5?

Activity 2

Multiplication tables using straws

You can use straws or broomsticks to make multiplication tables.

For the table of 2, put 2 straws on your desk as shown.

For 1 × 2 put one straw across. Count the number of points at which the two straws meet each other. They meet at 2 points.

For 2 × 2 put 2 straws across.

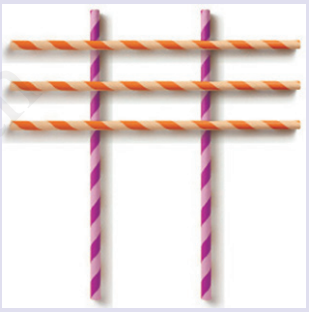
The straws meet at 4 points.

For 3 × 2 put 3 straws across.

They meet at 6 points.

So, 1 × 2 = 2

So, 2 × 2 = 4



So, 3 × 2 = 6

In the same way go on to 10 × 2. You will get the complete table of 2.

For the table of 3, lay 3 straws on the table.

1 × 3 = 3

2 × 3 = 6

3 × 3 = 9 and so on

Exercise 5

Complete the tables.

2

1	×	2	=	
2	×	2	=	
3	×	2	=	
4	×	2	=	
5	×	2	=	
6	×	2	=	
7	×	2	=	
8	×	2	=	
9	×	2	=	
10	×	2	=	

3

1	×	3	=	
2	×	3	=	
3	×	3	=	
4	×	3	=	
5	×	3	=	
6	×	3	=	
7	×	3	=	
8	×	3	=	
9	×	3	=	
10	×	3	=	

4

1	×	4	=	
2	×	4	=	
3	×	4	=	
4	×	4	=	
5	×	4	=	
6	×	4	=	
7	×	4	=	
8	×	4	=	
9	×	4	=	
10	×	4	=	

5

1	×	5	=	
2	×	5	=	
3	×	5	=	
4	×	5	=	
5	×	5	=	
6	×	5	=	
7	×	5	=	
8	×	5	=	
9	×	5	=	
10	×	5	=	

Exercise 6

Mark if these are right (✓) or wrong (✗).
If they are wrong, write the correct answer.

a) 2 × 2 = 4 ✓

b) 3 × 3 = 6 ✗ 3 × 3 = 9

c) 4 × 4 = 16

d) 5 × 3 = 15

e) 2 × 5 = 11

f) 4 × 3 = 12

g) 10 × 4 = 40

h) 9 × 5 = 44

i) 6 × 3 = 18

j) 2 × 4 = 8

k) 7 × 5 = 35

l) 8 × 4 = 34

m) 9 × 3 = 27

n) 9 × 4 = 36

Exercise 7

Do you know your tables? Fill in the boxes.

a) 5 × 2 = ☐ b) 3 × 2 = ☐ c) 10 × 3 = ☐

d) 3 × 3 = ☐ e) 4 × 4 = ☐ f) 1 × 2 = ☐

g) 2 × 5 = ☐ h) 2 × 2 = ☐ i) 10 × 5 = ☐

j) 7 × 2 = ☐ k) 7 × 4 = ☐ l) 8 × 1 = ☐

m) 3 × 5 = ☐ n) 4 × 3 = ☐ o) 5 × 3 = ☐

p) 5 × 4 = ☐ q) 1 × 5 = ☐ r) 8 × 3 = ☐

s) 6 × 3 = ☐ t) 2 × 4 = ☐ u) 6 × 5 = ☐

v) 4 × 5 = ☐ w) 4 × 2 = ☐ x) 1 × 3 = ☐

Exercise 8

Multiply

a) 4 × 3 = ☐

b) 10 × 2 = ☐

c) 1 × 4 = ☐

d) 6 × 2 = ☐

e) 2 × 3 = ☐

f) 9 × 2 = ☐

g) 3 × 3 = ☐

h) 8 × 5 = ☐

i) 2 × 4 = ☐

j) 3 × 4 = ☐

k) 9 × 3 = ☐

l) 7 × 3 = ☐

m) 7 × 4 = ☐

n) 9 × 5 = ☐

o) 8 × 2 = ☐

p) 5 × 3 = ☐

q) 8 × 4 = ☐

r) 10 × 4 = ☐

s) 10 × 3 = ☐

t) 9 × 4 = ☐

u) 7 × 5 = ☐

v) 6 × 4 = ☐

w) 5 × 5 = ☐

x) 6 × 3 = ☐

WORKOUT 1

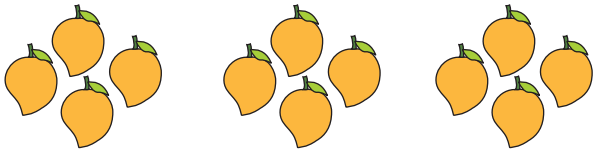
understand and calculate

1. Write the multiplication fact for each picture.

a) 

_____ × _____ = _____

There are _____ ice-creams in all.

b) 

_____ × _____ = _____

There are _____ mangoes in all.

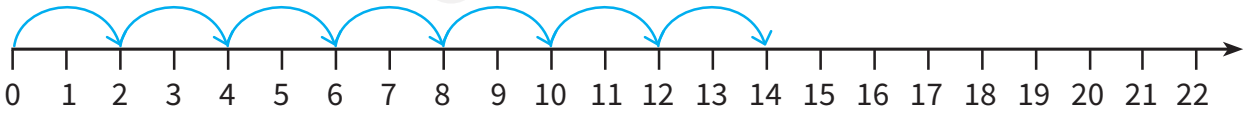
c) 

_____ × _____ = _____

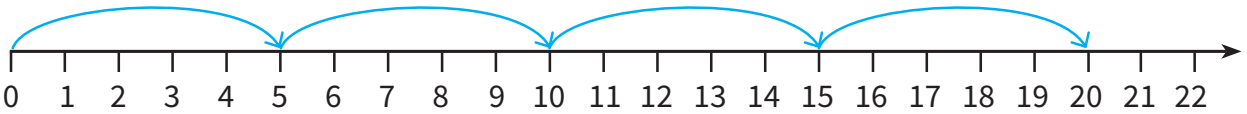
There are _____ candles in all.

d) 

_____ × _____ = _____

e) 

_____ × _____ = _____

f) 

_____ × _____ = _____

2. Match the columns.

a)	4 + 4 + 4	i)	5 + 5
b)	5 groups of 3	ii)	3 × 4
c)	2 multiplied by 4	iii)	10 + 10 + 10
d)	3 × 10	iv)	5 × 3
e)	2 times 5	v)	2 × 4

3. Use tables to multiply.

a) 7 × 5 = ☐	b) 2 × 4 = ☐	c) 4 × 5 = ☐	d) 9 × 3 = ☐
e) 7 × 3 = ☐	f) 4 × 4 = ☐	g) 9 × 5 = ☐	h) 8 × 2 = ☐
i) 10 × 5 = ☐	j) 5 × 2 = ☐	k) 4 × 3 = ☐	l) 6 × 2 = ☐
m) 10 × 3 = ☐	n) 3 × 5 = ☐	o) 5 × 5 = ☐	p) 3 × 1 = ☐
q) 2 × 3 = ☐	r) 4 × 2 = ☐	s) 5 × 4 = ☐	t) 2 × 5 = ☐

4. Mental maths

Learn the tables of 2, 3, 4 and 5. Recite them in class.

5. Group project—Napier's strips for multiplication

(To the teacher: Let children make the simplified Napier's strips shown here for tables 1-5, on a strip of card paper. Let them use it for learning tables and as a tool for working out 1-digit multiplication sums. To make it even more simple, you may ask them to write the numbers in the squares without the diagonal line. This will not work as the original Napier's bones for carrying out long multiplications, but only as a multiplication chart.)

1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45

WORKOUT 2
think and apply

Cross-curricular

1. One child has 2 eyes.

How many eyes do 5 children have?

By repeated addition: ___ + ___ + ___ + ___ + ___ = ____

By multiplication: ____ × 2 = ____

2. One hand has 5 fingers. How many fingers do 4 hands have?

By repeated addition:

By multiplication:

Value

3. Naina collected money for charity. She collected 10 coins of ₹5 each.

How much money did she collect? _____

Project

4. Is 5 × 4 equal to 4 × 5? Find out by doing.

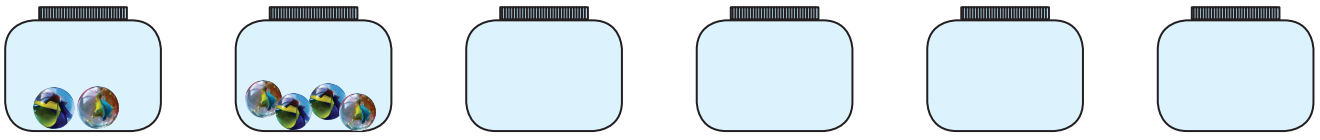
Make 5 groups of 4 marbles each. How many marbles? _____

Make 4 groups of 5 marbles each. How many marbles? _____

What do you find? _____

5. Fun activity: **Amit's marble collection**

Amit collects two marbles every day. How many will he have each day?



2	Monday	4	Tuesday		Wednesday		Thursday		Friday		Saturday

Inspired Maths

Orient BlackSwan

For the CISCE curriculum
CLASS 2

The National Education Policy (NEP) 2020 emphasises certain crucial parameters based on content and pedagogy. The Inspired Maths series provides a rich range of exercises and activities for each of the parameters. Here is a quick reference guide to some of the examples in this book.

The Inspired Maths series is mapped perfectly to the National Education Policy 2020.

21st Century Skills

A broad set of skills, knowledge, work habits and character traits that are important for success in the 21st century

The NEP parameters	Features	Page nos.
The 4Cs		
Creativity	Make your own story sums	65
Critical Thinking	Workout-2 Problem Solving	75
Critical Thinking	Workout-2 Problem Solving	104
Critical Thinking	Workout-2 Problem Solving	131
Critical Thinking	Workout-2 Problem Solving	142
Collaboration	Activity 1–2	144, 145

Experiential/ Constructivist Approach

Learners construct their knowledge, based on what they already know, through experience or by doing and reflection

The NEP parameters	Features	Page nos.
Experiential/Constructivist Approach	Activity 1–4	18, 20, 22, 25
	Activity 1–2, Group Project	77, 86, 92
	Activity 1–6	116, 117, 120, 126, 128
	Activity 1–2	153, 154

Integrated Approach

An approach to teaching and learning that works by connecting knowledge and skills across the curriculum, by bringing real life examples to the classroom

The NEP parameters	Features	Page nos.
Subject Integration	Workout-2 Cross-curricular (Science)	17
	Workout-2 Cross-curricular (Science)	75
	Workout-2 Cross-curricular (Science)	93
	Workout-2 Cross-curricular (Science)	142
Values	Workout-2 Values	93
Life Skills	Workout-2 Life Skills and Fun Activity	17
	Numbers and Money	38
	Workout-2 Life Skills	45
	Workout-2 Life Skills	75

Sustainable Development Goals

A framework of 17 global goals designed to be a blueprint to achieve a better and more sustainable future for all

The NEP parameters	Features	Page nos.
Sustainable Development Goals	Workout-Values	151

Digital Integration

The use of digital tools to enhance and support the teaching–learning process

ICT/Digital resources

Teachers' Smart Book - Embedded Questions, Interactive Tasks, Animations, Games, Presentations, Worksheets, Teachers' Resources, Question Paper Generator

Teacher Empowerment

Teachers' Resource Pack - Lesson Plans with Extension Activities, Worksheets with Answers, Question Bank with Answers, Assessment Papers

Teachers' Portal - E-chapters, Lesson Plans, Worksheets with Answers, Question Bank with Answers, Assessment Papers

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