

What this book contains?

This book is volume 1 of Math Courseware for grade 1. The most critical elements of mathematics education are understanding the logic and being able to relate with life at this early age. This interactive curriculum book offers multiple opportunities to students to engage with both. Activities in the form of doing things, engaging with concrete, visuals and then symbols support learning of mathematics throughout the year.

NUMBERS

Numbers and Number Names

Children know numbers till 99 and can write number names till ten from previous grades. Session begins with the revision of numbers and introduction of the concept of ones and tens along with number names till 99. Thus, children get the time to settle in a new routine and build a base for understanding the magnitude of numbers. While teaching number names, an equal focus is given to the concept of ones and tens as well as quantification to revise the numbers thoroughly.

Experiences (counting objects, pictures and representing numbers in different forms) help children see numbers in groups of ones, tens and hundreds, and develop an ability to visualise them. In this term, they extend numbers till 199 using the pattern in counting. They keep strengthening the ability to count and write numbers beyond 100 and learn numbers till 500 in the following terms.

Order in Numbers

Order in numbers not only helps children in comparing them, but is also essential to understand the basic principles of counting. Children explore the order in numbers and write the ones that come before, after and in between particular numbers. Initially, children begin using symbols of comparison with the numbers they had compared in the previous grade. Then they use the signs to compare two-digit numbers, while applying their understanding of ones and tens.

Odd and Even Numbers

In this grade, children are introduced to odd and even numbers through a story and various activities based on pairing. They learn to differentiate between odd and even numbers till 10. They begin using this understanding to identify patterns in numbers in higher grades.

SINGLE-DIGIT ADDITION

Children have learnt two-digit numbers in the previous grade. They learn to add single-digit numbers on number line using the strategy of counting on. They also explore some properties of addition. The emphasis in this grade is on understanding simple word problems (i.e., story sums). Different word problems are read to children so that they know that addition is useful in different contexts.

SINGLE-DIGIT SUBTRACTION

Children have learnt to subtract single-digit numbers in the previous grade. In this grade, they learn to subtract using number line and develop counting backwards as a strategy. They also explore some properties of subtraction. The emphasis in this grade is on understanding simple word problems.

NUMBER COMBINATIONS TILL 10

Children play with dot cards, dice and dominoes to build combinations of numbers till 10. They use the number line, blocks and Ten Frame to understand these combinations. This helps them learn addition and subtraction facts and develop mental arithmetic skills.


Content



Numbers
Revisiting Number Names till Ten

05

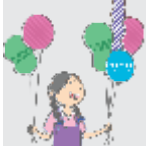
Revising number names



Numbers
Signs of Comparison

08


Comparing objects and pictures
Using various strategies to compare
Using signs of comparison
Solving story sums



Numbers
Even and Odd Numbers

17


Pairing and finding even and odd numbers till 10



Numbers
Ones and Tens

21


Revising numbers till 99
Quantifying and representing numbers as ones and tens
Reading and writing number names till 99



Numbers
Comparison of Two-Digit Numbers

52


Comparing numbers using ones and tens
Increasing and decreasing orders



Numbers
Numbers from 100 to 199

65

Introducing 100
Quantifying using concrete materials and pictures
Identifying a pattern and extending numbers
Ordering numbers
Writing number names




Content



Numbers 75

Single-Digit Addition


- Seeing addition as joining and building vocabulary
- Counting on from a number to add
- Using number line to add
- Adding a zero to a number
- Knowing mental maths strategies
- Exploring the commutative property
- Understanding and solving simple word problems



Numbers 92

Single-Digit Subtraction

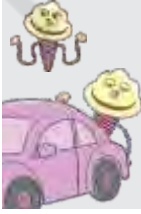
- Recalling the meaning and symbol of subtraction
- Using the number strip to subtract
- Knowing horizontal and vertical subtraction
- Subtracting 1 from a number
- Subtracting 0 from a number
- Subtracting a number from itself
- Solving story sums
- Exploring the relationship of addition and subtraction
- Revising numbers



Shapes 112

Shapes and Spatial Understanding

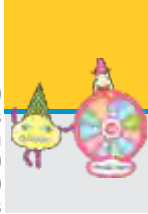
- Recapitulating spatial vocabulary
- Sorting three-dimensional shapes
- Naming three-dimensional objects
- Identifying three-dimensional objects in varied orientations
- Exploring the rolling and sliding properties of different shapes
- Playing with mazes
- Knowing two-dimensional (2D) shapes
- Drawing objects having 2D shapes



Numbers 128

Number Combinations Till 10

- Using dot cards to know number combinations till 10
- Creating number combinations
- Exploring the commutative property of addition
- Knowing addition facts till 10
- Knowing subtraction facts till 10
- Knowing mental maths strategies



Icons



I TALK

Children talk about a given situation. Such a conversation enables them to reflect on, articulate, share and listen to their thoughts, feelings and learning. In this way, they develop the skill to connect with other people through a meaningful conversation and exhibit their thinking process.



I PLAY

Play brings richness to children's experiences. These games engage children physically and help them learn various new concepts.



I WATCH

Children watch educational videos on the interactive board. These audio-visual experiences help them acquire knowledge about the world in an easy, joyful way.



I LISTEN

Children listen to various stories and poems. It develops sensitivity and enhances attention.



I EXPLORE

These tasks encourage children to explore new things and ideas. They build in them the ability to engage with new and unfamiliar situations, tasks or people.



I ACT

In these tasks, children actively apply the concepts they have learnt in a suitable context. These build their ability to apply knowledge meaningfully.



I OBSERVE

In these tasks, children look at the details of various things, people, animals, etc. This develops in them the skill of observation, which is one of the most powerful skills of learning.



I REFLECT

In these tasks, children reflect upon what they have studied. Reflecting on their experience and the activity brings a new understanding and fresh perspectives. This is the key to learn from any experience or activity they have done.



I MATHEMATIZE

These activities build children's ability to perform mathematical operations quickly, without an external aid.



I WRITE

Children write down their thoughts about a given situation. Writing helps them express their thoughts coherently. It also makes their thoughts visible to others.



I READ

Children engage with varieties of fiction and non-fiction texts. The texts allow the readers to see rich vocabulary and ease of use in the language. Through language students also derive or attain clarity of concepts.



I PRESENT

In these tasks, children present their learning in various forms. They help children organise and demonstrate their understanding of collected data/information.



PRACTICE AT HOME

These tasks include homework, which is mostly an extension, practice or application of what has been taught in the class. Sometimes, opportunities are given to explore a new concept.



I REVISE

Revision tasks help children recapitulate their learning. These also strengthen their learning for later access and use.



These notes help parents recognise the objectives of the tasks children are doing. They also enable the parents to know how the tasks help the child in his/her learning. In this way, they can contribute actively to their child's learning.



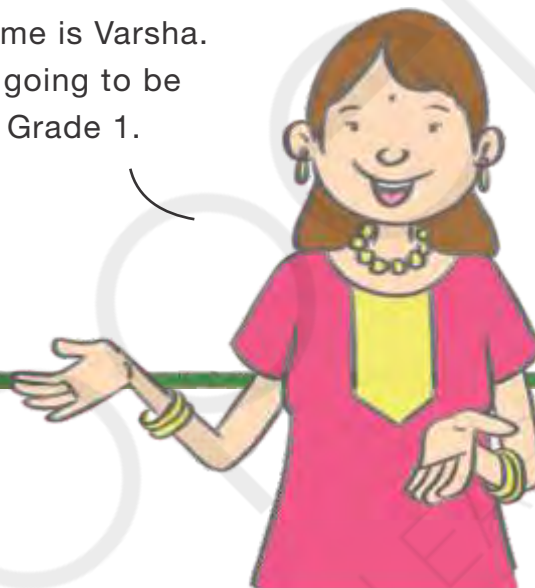
REVISITING NUMBER NAMES TILL TEN



I LISTEN

It is Hetal's first day in Grade 1. She finds everything different in her new class. Different desks, different boards and a different teacher ...

Welcome to your new class children. My name is Varsha. You and I are going to be together in Grade 1.



Hetal does not like it. She begins to miss her Prep teacher and class.

Why are you looking sad?



I am missing my Prep teacher.



You can meet her during assembly and lunch period. We will invite her to our class to say hello to you, whenever she has time.

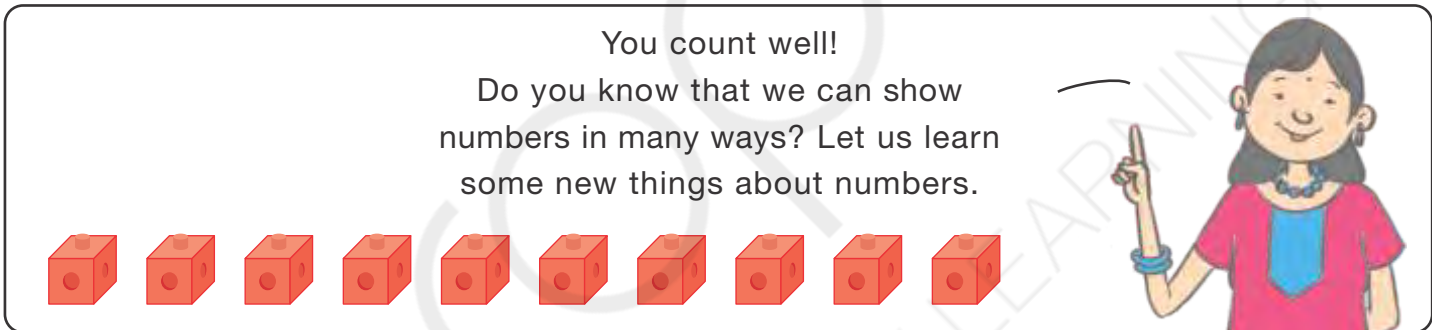
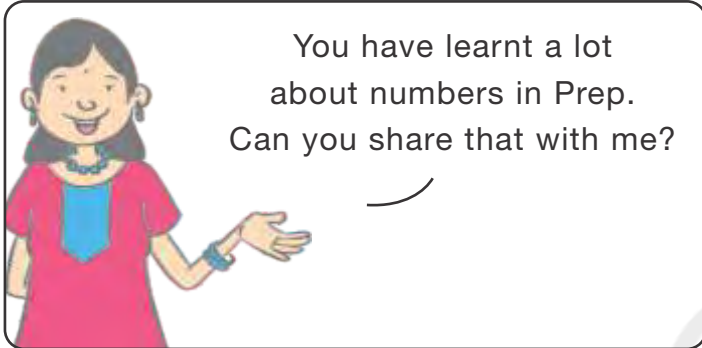


That is a good idea.
I can meet my Prep teacher
during the assembly.

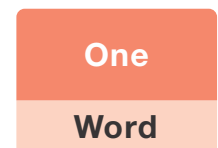
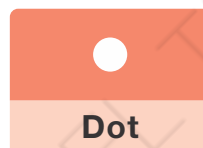


I EXPLORE

The next day Hetal reaches her class. She does not feel as bad as the first day. She is beginning to like her new class and the new teacher.



See the cards shown below.



What do you see in the cards? In how many ways is 'one' thing shown?

We can show numbers using pictures, things and symbols. Using words to denote a number is one of these ways. We call them **number names**.



Children are given opportunities to make connections between their previous knowledge and the new concepts.



I REVISE



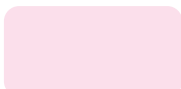
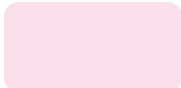
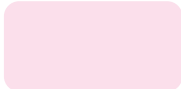
Oh yes!
I learnt the number names till 10 in Prep.

Let's revise them.



Write the number names from 1 to 10. Match them with their dot cards in the next column.

One



Ten



Through this task, children revise the number names till 10.



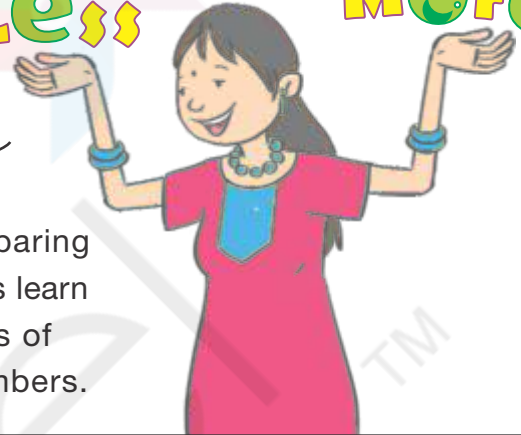
SIGNS OF COMPARISON

I learnt 'more or less' in numbers in Prep.



Less

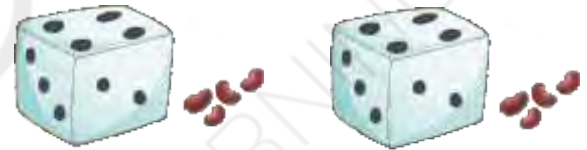
More



That is called comparing the numbers. Let us learn the different ways of comparing the numbers.

I PLAY

Take some kidney beans and a dice. Form pairs and take turns for throwing the dice. Pick up the number of beans shown on the dice. Compare your beans to see who gets more/less beans.



Listen to your teacher to know who wins each round.

I TALK

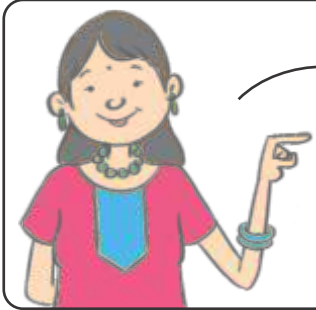
1. Look at the picture on the interactive board and discuss the following.
 - a. What is more in number?
 - b. What is less in number?
2. Talk to your partner and find out the following.
 - a. Who has more pencils?
 - b. Who has less crayons?



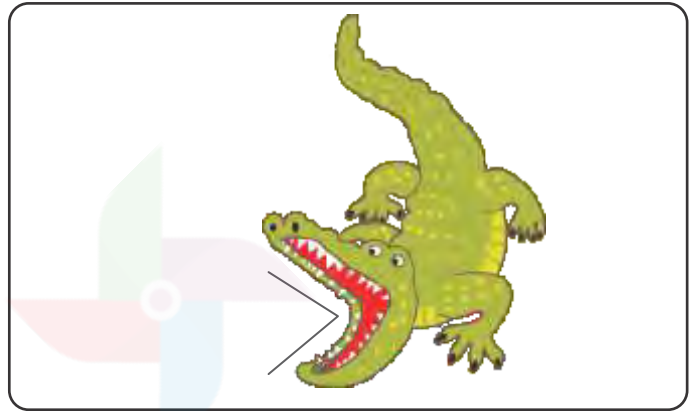
Every new concept should begin with a range of smaller numbers. It helps in keeping the focus on the new concept that is being learnt rather than dealing with the struggle of a higher number range. Gradually, children can apply this learning to bigger numbers.



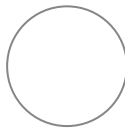
I ACT



There was a crocodile named Agar Magar. He used to eat the things that were more in number.



Let us mark what Agar Magar will eat. Help Agar Magar count and decide which set has more food. Draw Agar Magar's mouth towards more food.



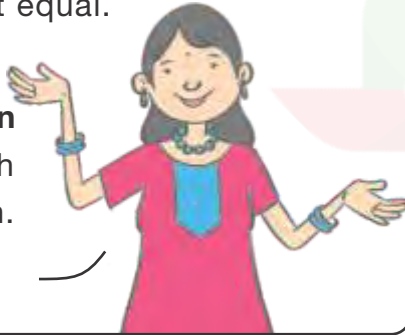
Let children draw the mouth of the crocodile in their own ways as long as they are using the sign correctly.



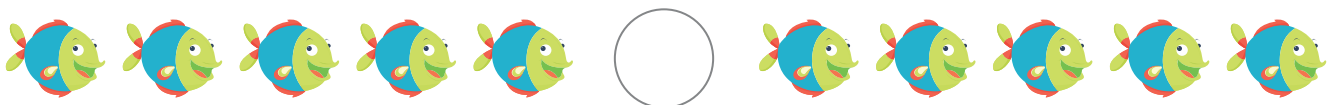
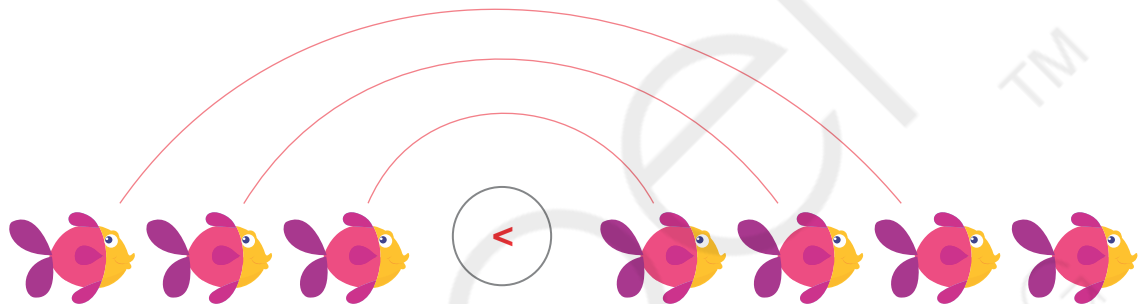
I ACT

Match the following sets one-to-one as shown below.
 If there are some unmatched items in the other set, the sets are not equal.

Use the signs of **greater than** ($>$) and **lesser than** ($<$), which look like Agar Magar's mouth.
 Use the sign of **equal to** ($=$) for equal sets.



There is one fish left in second set. That set has more fishes.



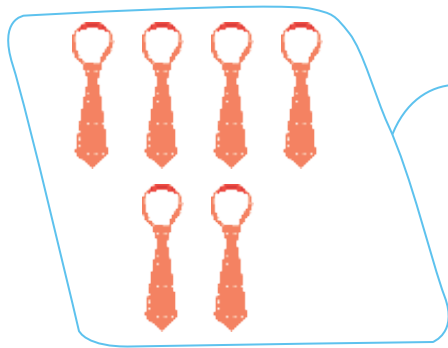


I ACT

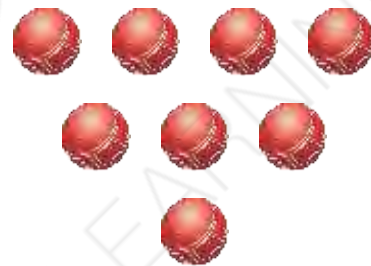
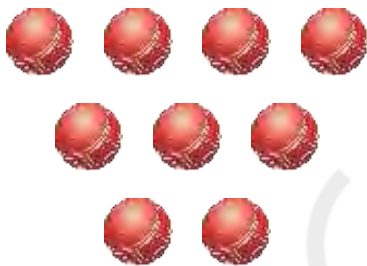
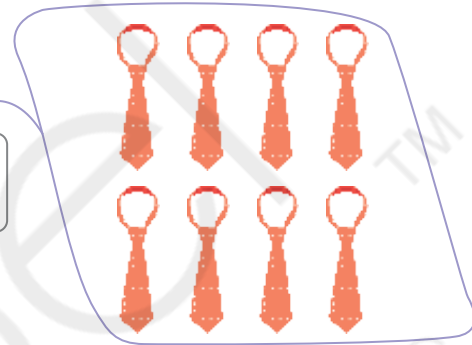
More or Less

Count the number of objects in the first group and mark the same number of objects in the other group. Now, see if any set has extra objects.

Let's use another way of comparing groups.




6 < 8






I ACT

Draw the missing items according to the given sign.

1.  $<$

2.  $=$

3. $>$ 

4.  $>$

Draw the missing items according to the given sign.

1.  $6 < \square$

2.  $7 < \square$

3.  $4 = \square$

4.  $10 > \square$



Story Sums

Hetal and her classmates go for a picnic to the zoo. She compares the number of animals she sees there.

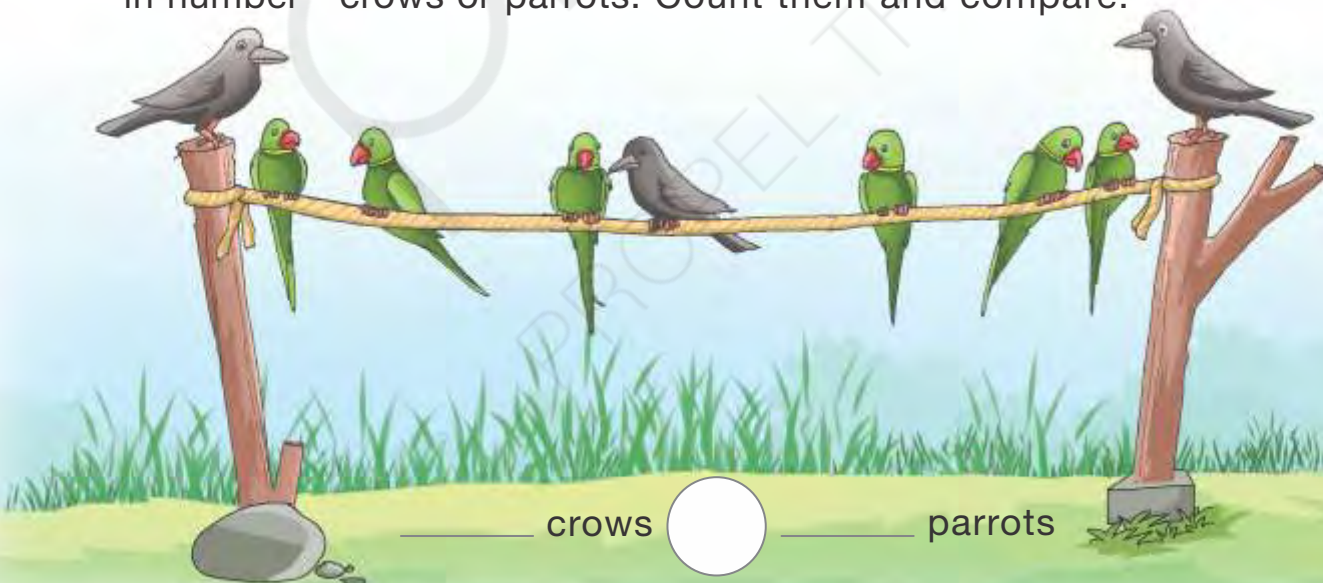
Count and fill in the blanks. Put the appropriate sign ($>$, $<$ or $=$) in the circle.

1. Hetal sees ducks and frogs in a pond. Which are more in number—ducks or frogs? Count them and compare.



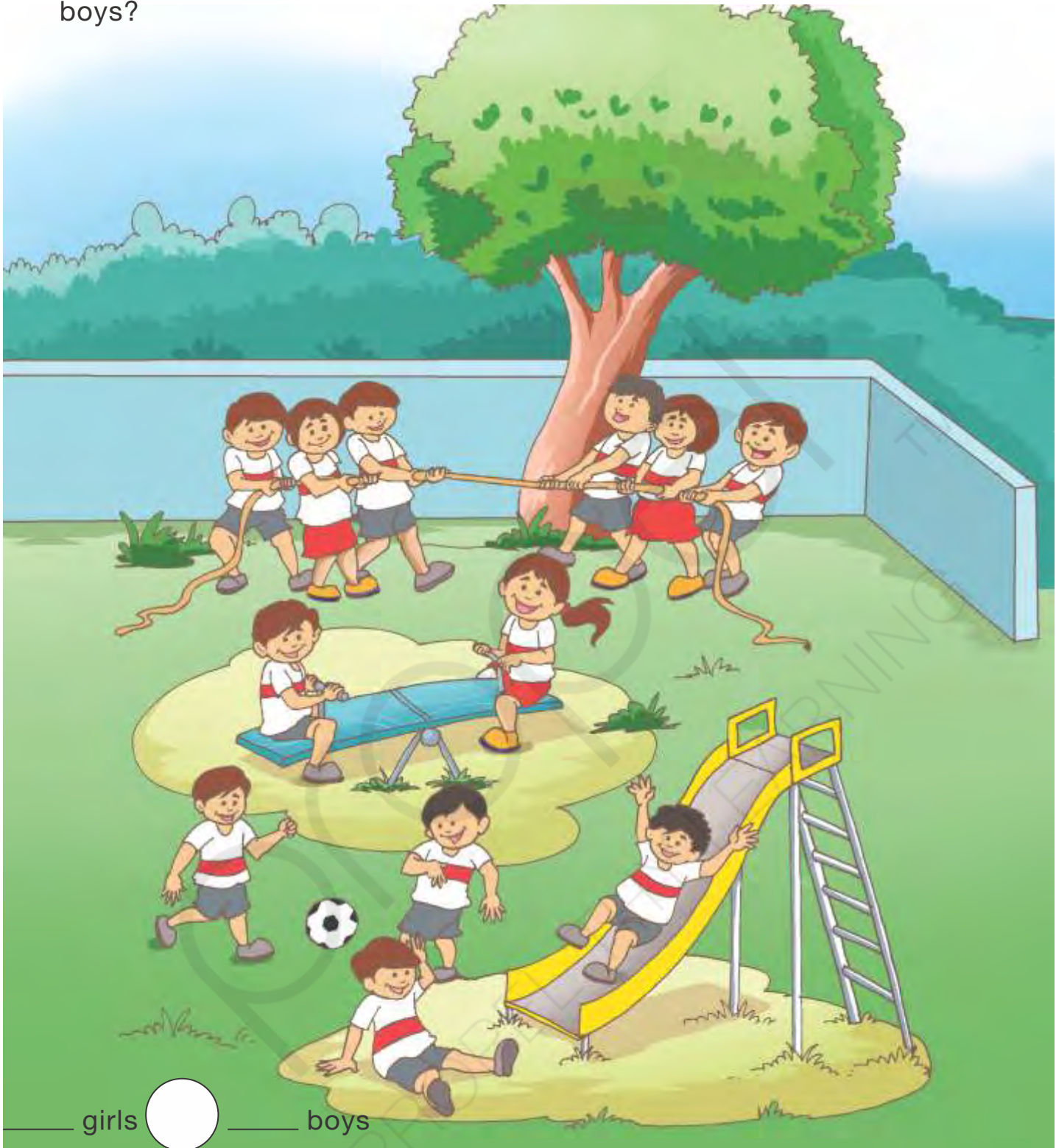
_____ frogs _____ ducks

2. Hetal sees some birds in the zoo. She wants to know which birds are more in number—crows or parrots. Count them and compare.



_____ crows _____ parrots

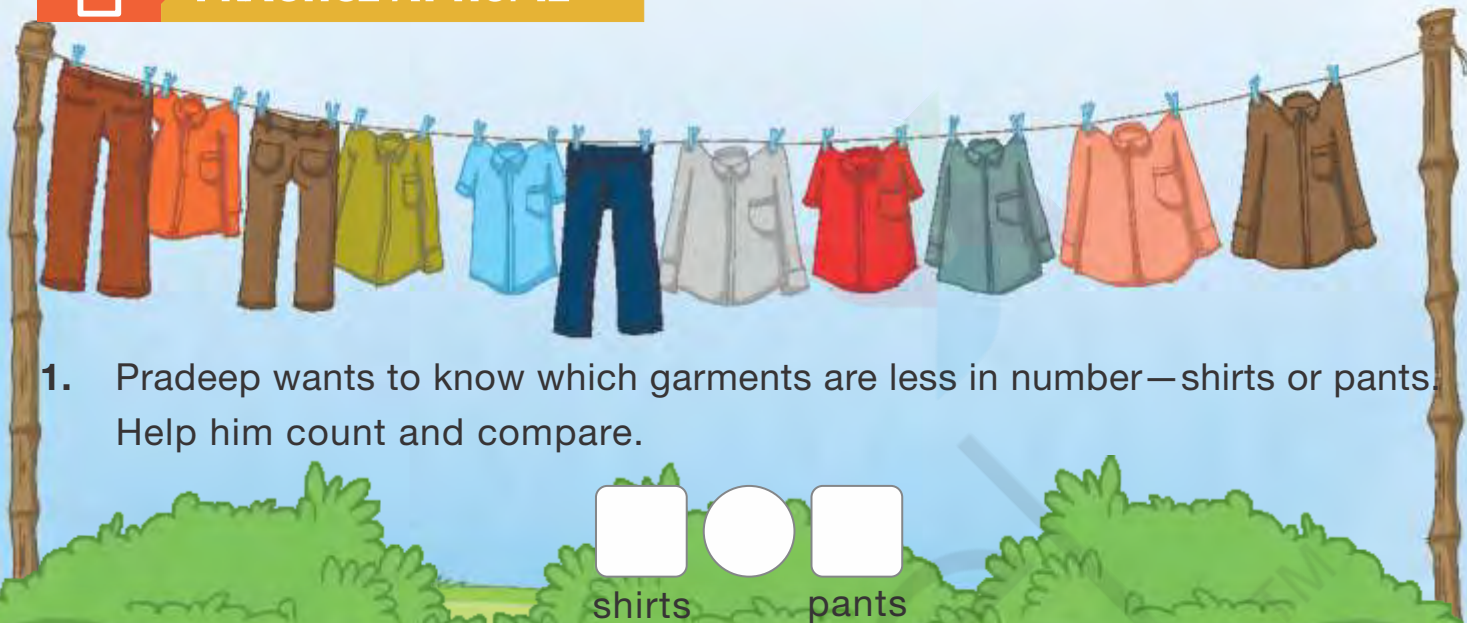
3. Hetal's classmates play in the park. Who are more in number—girls or boys?



This task provides an exposure to word problems. The range of numbers is kept low so that children can take help from pictures. This helps in overcoming the struggle while learning multiple concepts simultaneously. Gradually, they apply this learning to bigger numbers. Read the situations to children so that they can comprehend the problems.



PRACTICE AT HOME



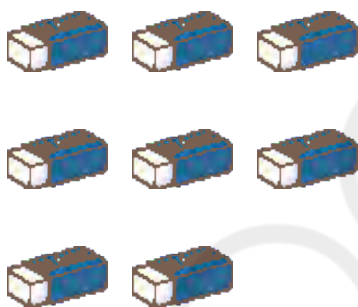
1. Pradeep wants to know which garments are less in number—shirts or pants. Help him count and compare.



shirts

pants

2. Radhika wants to know which item is more in number. Count and write the number of following items. Also, compare them by using the appropriate sign (<, > or =).

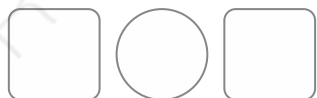


erasers

pencils



3. Aman wants to eat the item that is less in number. What will he eat?

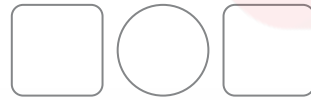


cookies

cupcakes



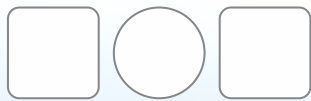
4. Reshma likes to eat chocolates and ice creams. She wants to buy the item which is more in number. Help her decide between the two.



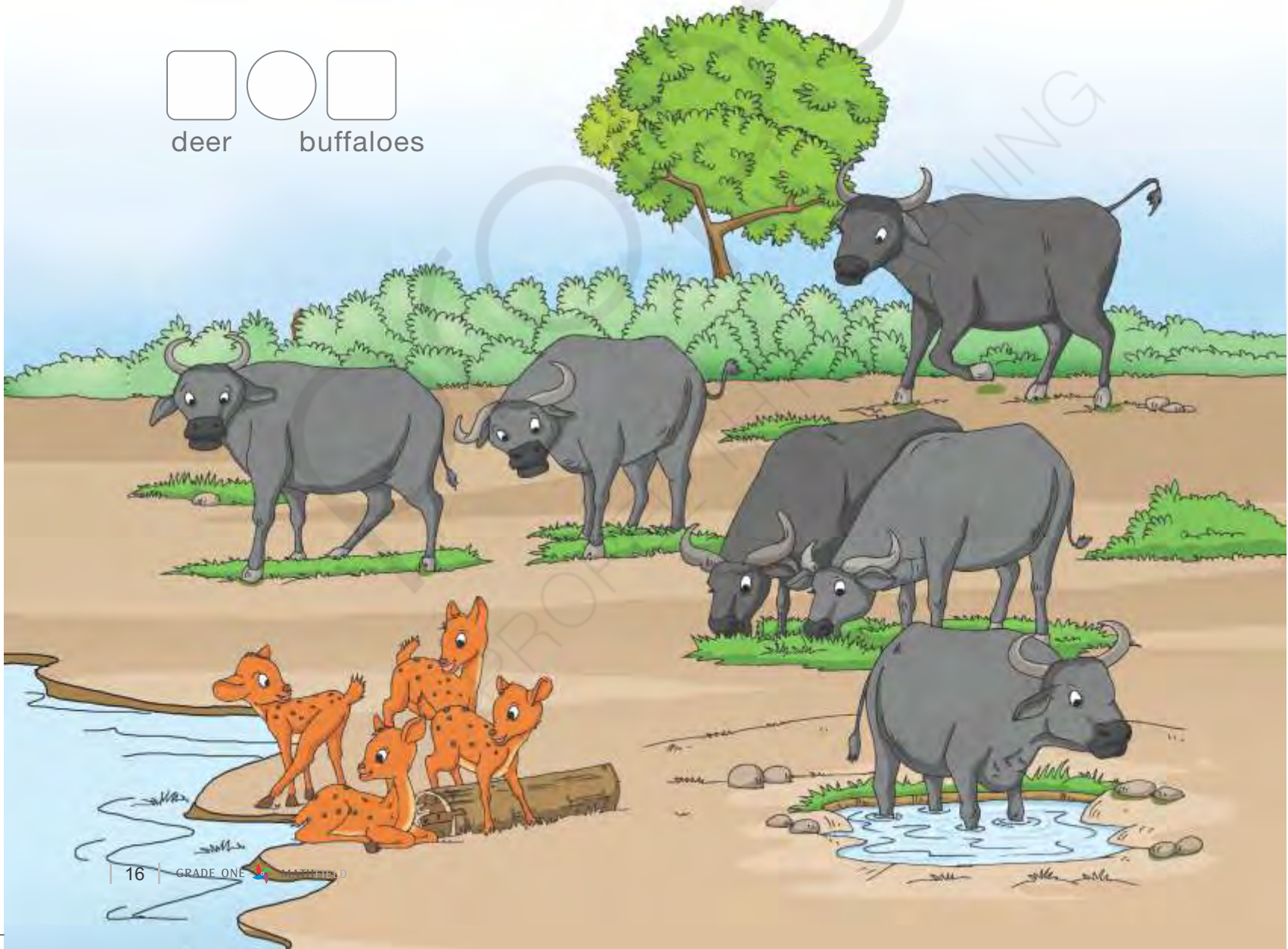
chocolates ice creams



5. A lion wants to eat animals which are more in number. Count and compare.



deer buffaloes



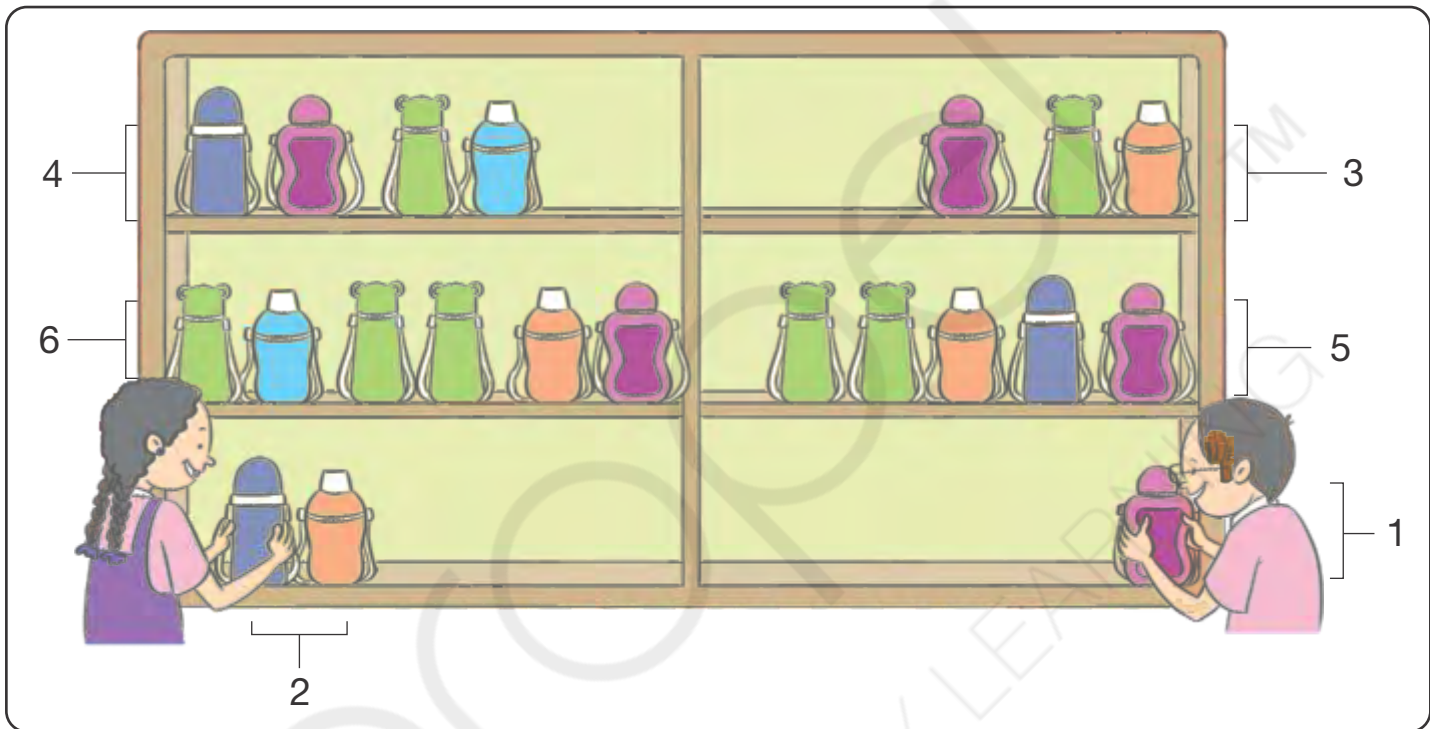


EVEN AND ODD NUMBERS



I OBSERVE

Hetal likes her new class more now. She makes new friends and Deepak is one of them. Hetal and Deepak arrange water bottles in the class cupboard. Their teacher looks at the way they have arranged the bottles.



You are arranging the water bottles in an interesting manner. This arrangement shows a hidden magic in the numbers. Let's listen to a story to know about that.



I LISTEN

Kiara and Ammu were siblings. Though they loved each other, they kept fighting all the time.

Why did they fight so much? No, no, it was not about who got a better school bag. No, no, it was also not about who got a better toy. It was about something very funny.

Funnily, Kiara liked things kept in pairs! Thus, she kept the things in her room like this.

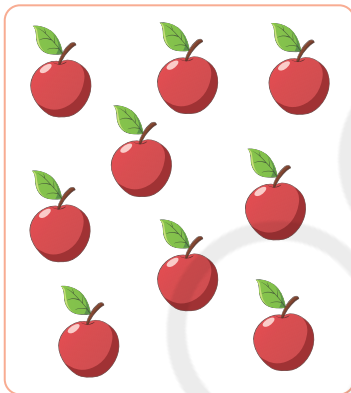


But Ammu did not like pairs at all! He always left one item at the end.

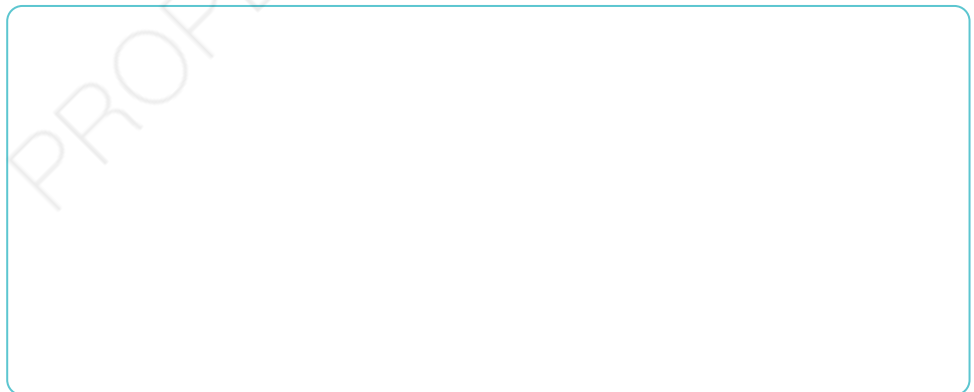
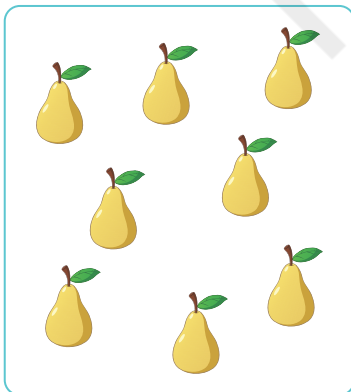


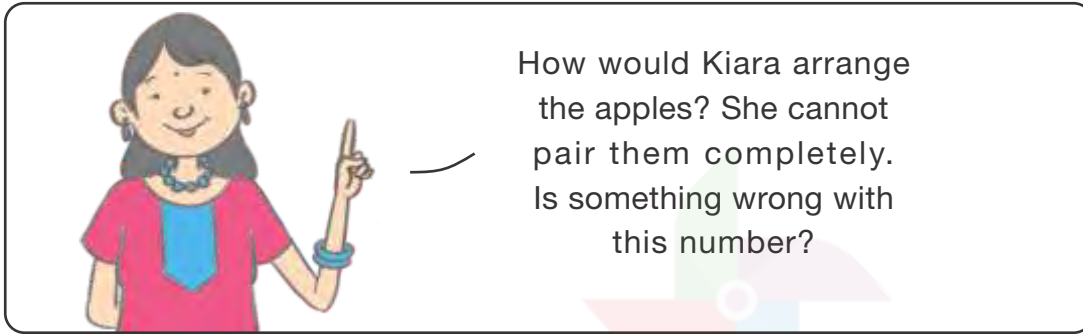
I TALK

1. Why did Kiara and Ammu fight?
2. How is the way in which Kiara arranged items different from the way Ammu arranged them?
3. How will Ammu arrange these fruits?

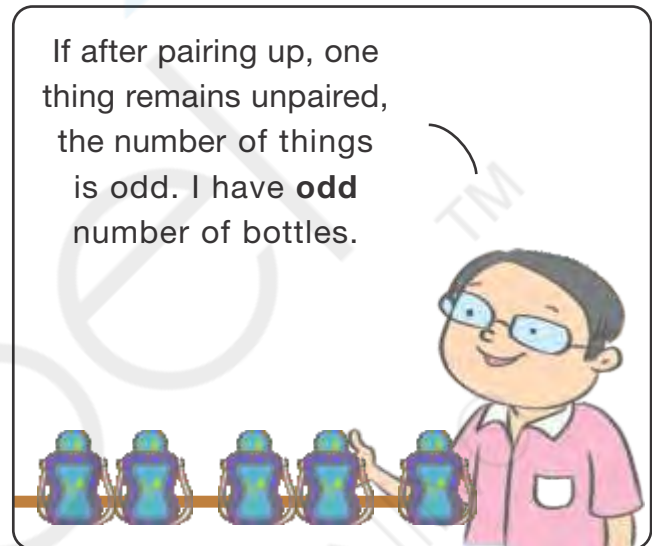
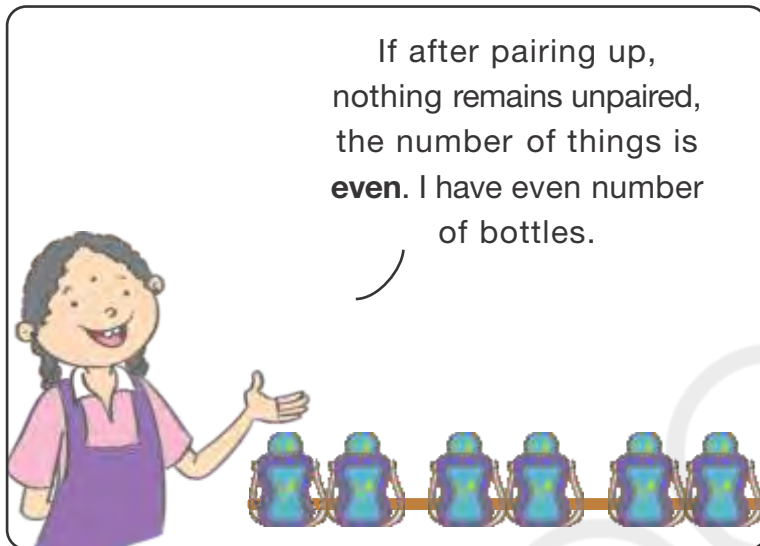


4. How will Kiara arrange these fruits?





Hetal and Deepak find out the magic in the numbers from the story.



I EXPLORE

Look at the number written on the cards. Pick as many blocks as shown on them. Pair them and find out the odd and even numbers. You can draw as well. Match the numbers on the basis of what you find out.

1

4

6

9

5

even

odd

2

3

8

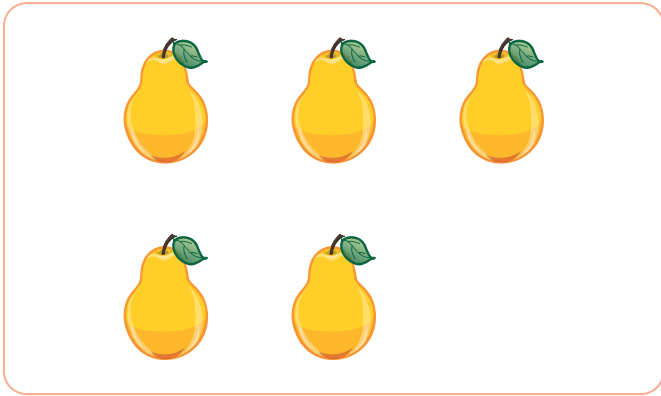
10

7

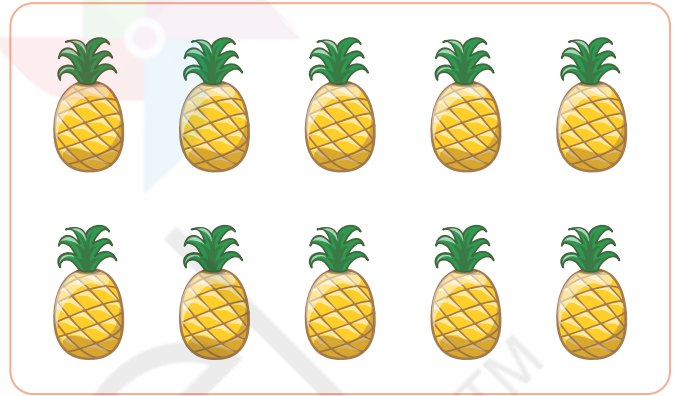


I PRACTISE

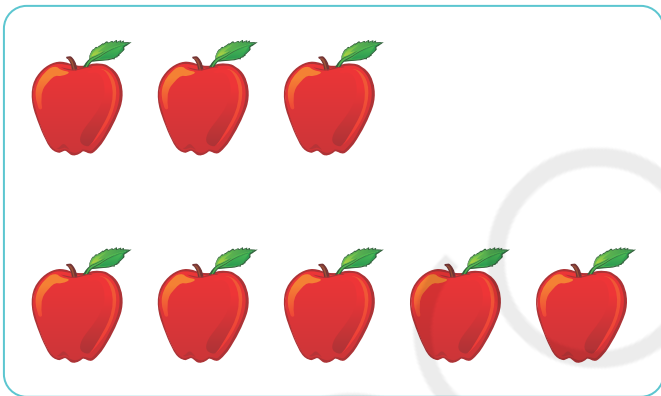
Find out which of the following groups of things can be paired. Complete the sentences by writing whether the number is odd or even.



5 is _____



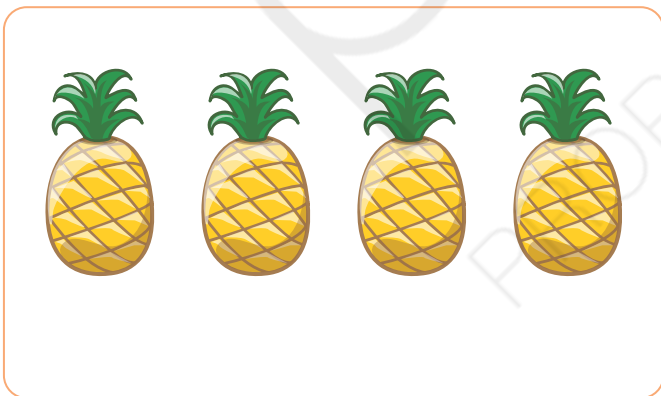
10 is _____



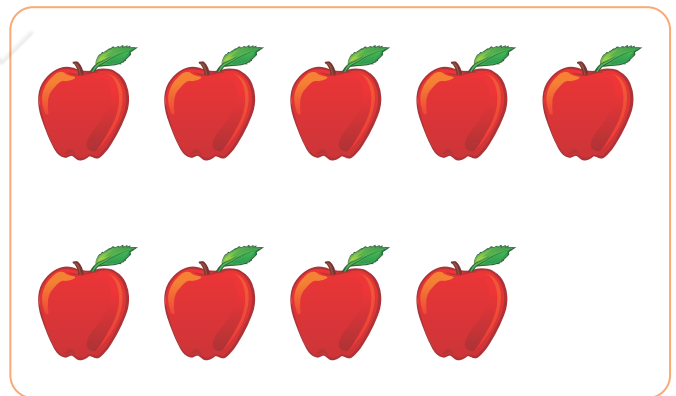
8 is _____



7 is _____



4 is _____



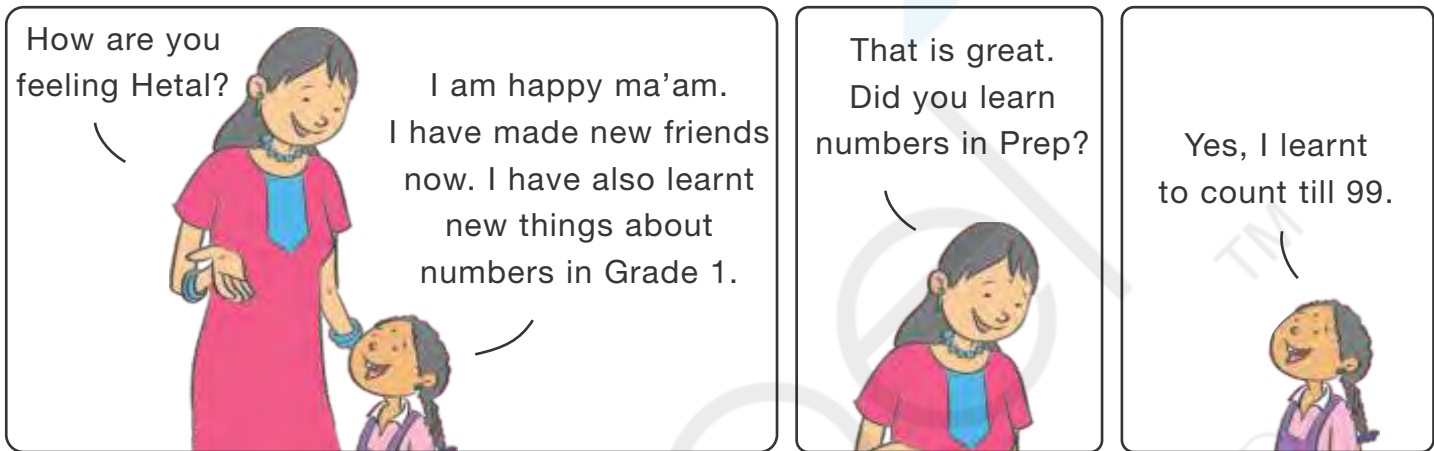
9 is _____



ONES AND TENS

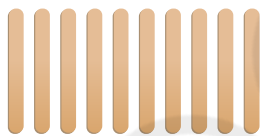
Ones, Tens and Names of Numbers from 11 to 20

After a few days, Hetal's teacher talks to her.

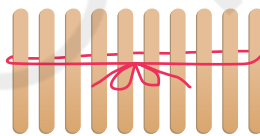


Now, let us know how numbers are made.

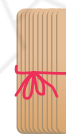
I OBSERVE



Each of the single sticks shows ones.



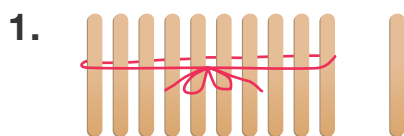
A bundle of ten sticks shows 10 ones or 1 tens.



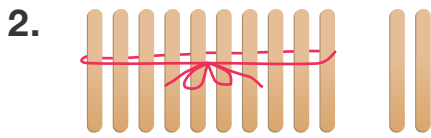
Take ice-cream sticks or beans to show numbers as ones and tens in class.

I ACT

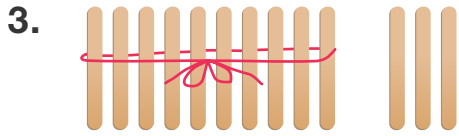
See the pictures and read the number name. Write ones and tens in the number shown with ice-cream sticks. One example is done for you.



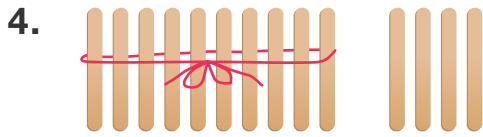
11 eleven 1 tens and 1 ones



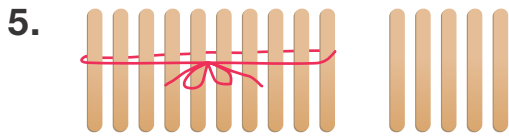
12 twelve _____ tens and _____ ones



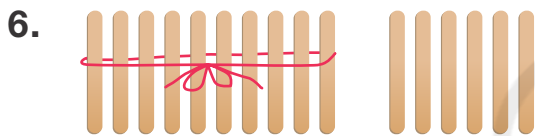
13 thirteen _____ tens and _____ ones



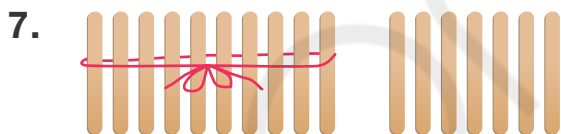
14 fourteen _____ tens and _____ ones



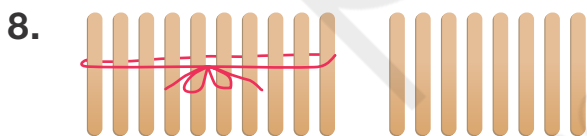
15 fifteen _____ tens and _____ ones



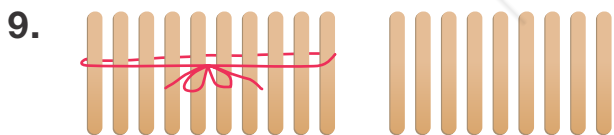
16 sixteen _____ tens and _____ ones



17 seventeen _____ tens and _____ ones



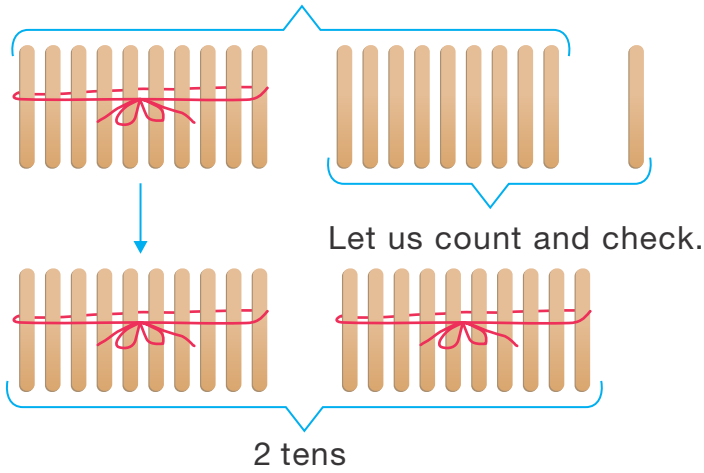
18 eighteen _____ tens and _____ ones



19 nineteen _____ tens and _____ ones

19 and 1 more ones is **twenty**.

It has two tens.



20 twenty 2 tens and 0 ones

Now I know, why there is a zero in 20. It means it has 2 tens and no ones. If I open these 2 tens bundles, I will get 20 ones!

I ACT

Match the following.

1 tens and 3 ones



1 tens and 2 ones

1 tens and 6 ones



2 tens

1 tens and 1 ones



1 tens and 9 ones

1 tens and 7 ones



1 tens and 5 ones

1 tens and 4 ones

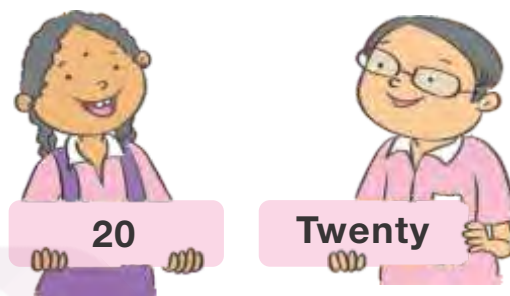


1 tens and 8 ones

I PLAY

Let us learn to write names of the numerals till 20. Form groups of six students each. Your teacher will give cards with numerals and number names from 11 to 20 written on them.

Take help from the chart of number names displayed in the classroom to pair them. First, observe the number names carefully and then trace their spellings on the cards. Shuffle the cards well. Now when the teacher calls out a number, match the numeral and number name cards quickly. On every successful match, clap for your group members.



I ACT

Match the numbers with their names.

Fourteen	11	Thirteen
Eighteen	12	Sixteen
Eleven	13	Nineteen
Seventeen	14	Twenty
Twelve	15	Fifteen
	16	
	17	
	18	
	19	
	20	

Write the number names in their correct order in your notebooks. Observe what gets repeated in most of these number names.



I PRACTISE

You know the sounds of different letters and the names of the following numbers. Fill in the missing letters to complete the number names and write the numerals in the blanks.

E e v e

T w e v e

T h i t e e

F u e e n

F i t e n

S i x t

S e e t e e n

E i g h e e

N i e e e n

T w e y



In this grade, children learn to represent numbers using ones and tens. This helps build the foundation of understanding place value in later grades. While doing these tasks, they also get opportunities to write number names.



PRACTICE AT HOME

1. Connect the following numerals with their names using different colour pencils.

a.

6 9

Three Five 3 8

Nine 5 Eight Six

b.

17 16 11 Thirteen 19

Eleven 17

Sixteen 13

Seventeen Nineteen

2. Fill in the blanks.

a. 11 ____ tens and ____ ones

b. 15 ____ tens and ____ ones

c. 19 ____ tens and ____ ones

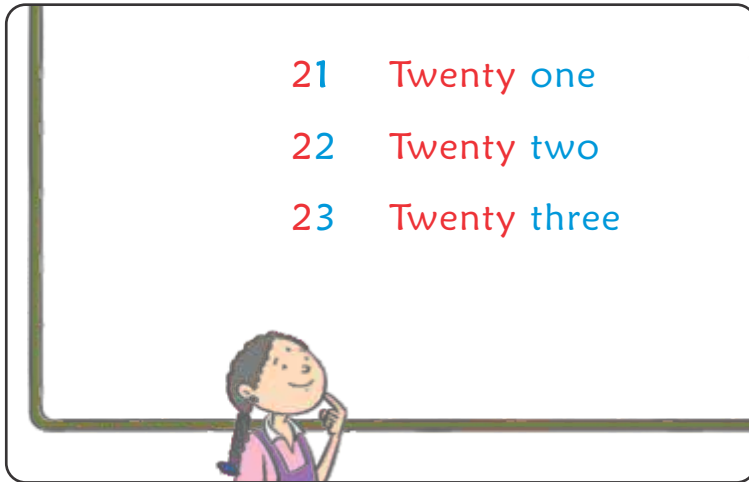
d. 20 ____ tens and ____ ones



I OBSERVE

Ones, Tens and Names of Numbers from 21 to 30

If 20 is written as twenty, can you write the number names for 21 and 22?

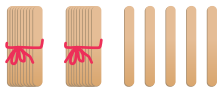


Based on this pattern, count the objects shown on the interactive board and say aloud their number names.



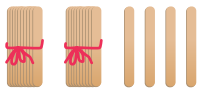
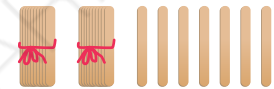
I ACT

Match the following numbers with their names.



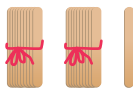
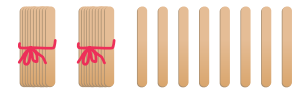
Twenty one

Twenty nine



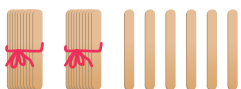
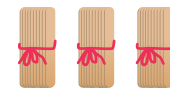
Twenty six

Twenty seven



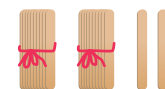
Twenty five

Twenty two



Twenty three

Twenty eight



Twenty four

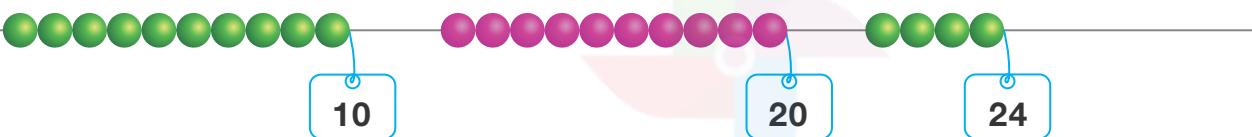
Thirty






PRACTICE AT HOME


1. Count the following beads and write their numbers on the tags of ganit mala. Write the number names too. One example has been done for you.

a. 

_____ tens and _____ ones → _____

b. 

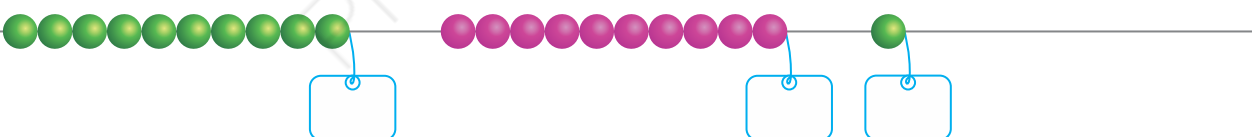
_____ tens and _____ ones → _____

c. 

_____ tens and _____ ones → _____

d. 

_____ tens and _____ ones → _____

e. 

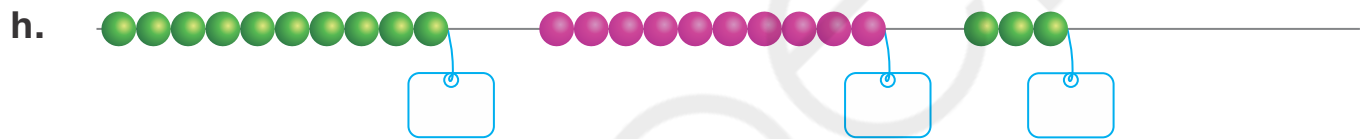
2 tens and **1** ones → **Twenty one**



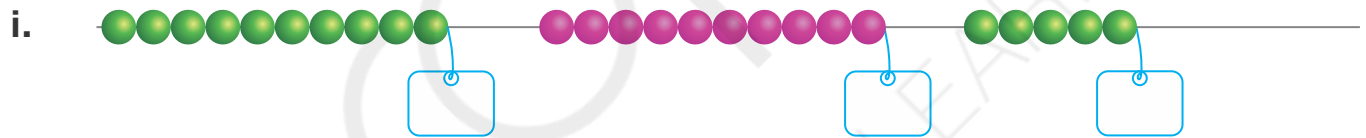
_____ tens and _____ ones \longrightarrow _____



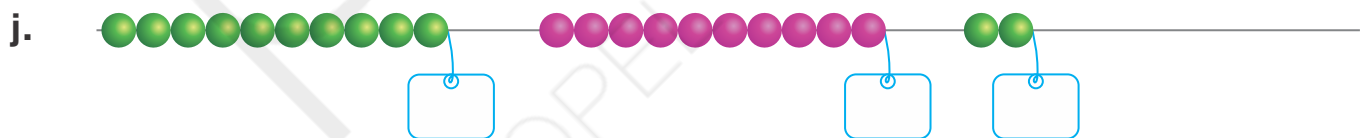
_____ tens and _____ ones \longrightarrow _____



_____ tens and _____ ones \longrightarrow _____



_____ tens and _____ ones \longrightarrow _____



_____ tens and _____ ones \longrightarrow _____



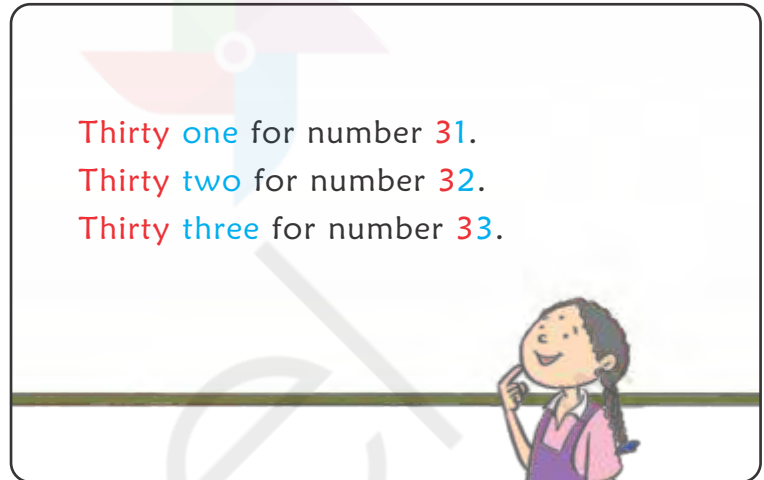
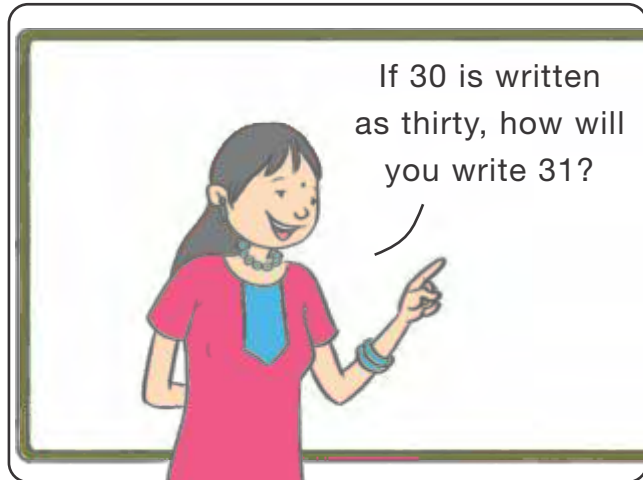
Children have done these numbers in previous grade. Here, they begin seeing them in groups of ones and tens through materials such as ganit mala. These activities help them learn to read and write number names as well.



I OBSERVE

Ones, Tens and Names of Numbers from 31 to 40

Observe what is written on the board.



I ACT

Write the names of the following numbers. Use the pattern that you have observed in the number names.

31

33

35

37

39

32

34

36

38

40

Forty



Through this activity, children focus on recognising the number names by identifying the pattern while learning new spellings. When they see the same words written several times, they gradually learn their spellings.



PRACTICE AT HOME

Write the numerals for the given number names.

Twenty one

--	--

Twenty two

--	--

Twenty three

--	--

Twenty four

--	--

Twenty five

--	--

Twenty six

--	--

Twenty seven

--	--

Twenty eight

--	--

Twenty nine

--	--

Thirty

--	--

Thirty one

--	--

Thirty two

--	--

Thirty three

--	--

Thirty four

--	--

Thirty five

--	--

Thirty six

--	--

Thirty seven

--	--

Thirty eight

--	--

Thirty nine

--	--

Forty

--	--

Help Your
Child

Through these tasks, children revisit the numbers and learn number names through patterning.













I ACT

One day, Hetal and her classmates plan a jungle party in class. They wear tiaras with leaves, which they collect from a garden. Each tiara has 10 leaves. Count the tiaras and leaves they have.



Fill in the blanks. One example is given for you.

	_____ 3 _____ tens and _____ 1 _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones
	_____ tens and _____ ones



I ACT

Ones, Tens and Names of Numbers from 41 to 50

How many tiaras and leaves do you see here?
Let's count them and write their number names.



4 tens and 0 ones = 40

Forty

If we add one more leaf here, what would be the name of that number? Is your guess different from other classmates? Find it out.



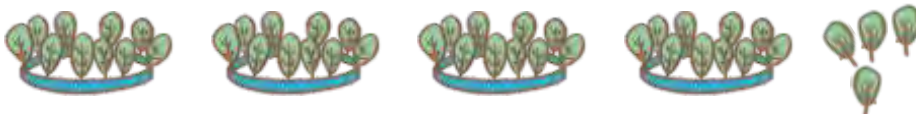
_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



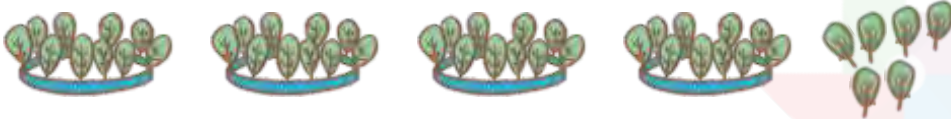
_____ tens and _____ ones = _____



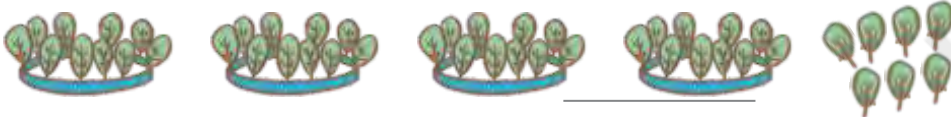
_____ tens and _____ ones = _____



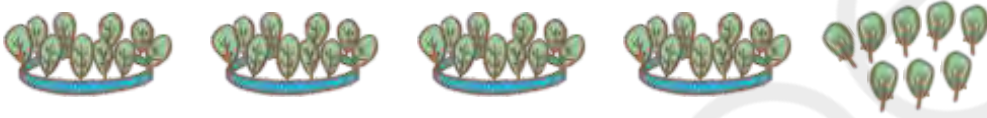
_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



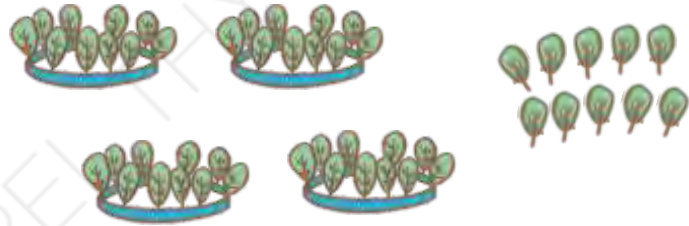
_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



Let's add one more leaf to 49 leaves.



These are 10 leaves.
We can make a tiara
with them.



Yes we can!
How many tiaras
do we have now?





These are 5 tiaras or 5 tens. They have fifty leaves altogether.

_____ tens and _____ ones = _____



PRACTICE AT HOME

Match the following numbers with their names using different colour pencils.

43

50

47

42

Forty seven

Forty three

Forty two

Fifty

Forty nine

44

Forty six

Forty eight

49

Forty four

Forty five

Forty one

41

46

48

45



I ACT

1. Complete the number wall and colour the given numbers according to the given key.

- Four tens and five ones - **Green**
- Four tens and seven ones - **Red**
- Three tens and nine ones - **Blue**
- Two tens and six ones - **Yellow**
- Five tens - **Orange**



1				5		
8				12		
15			18			
22			25			29
		32				36
			40			
	45					50

2. Write what comes after?

a. 23

--	--

c. 26

--	--

e. 31

--	--

b. 35

--	--

d. 39

--	--

f. 49

--	--

3. What comes before?

a.

--	--

 32

b.

--	--

 26

c.

--	--

 30

d.

--	--

 35

e.

--	--

 39

f.

--	--

 49

g.

--	--

 44

h.

--	--

 46

4. What comes in between?

a. 27

--	--

 29

b. 33

--	--

 35

c. 36

--	--

 38

d. 38

--	--

 40

e. 45

--	--

 47

f. 48

--	--

 50

g. 11

--	--

 13

h. 19

--	--

 21



PRACTICE AT HOME

Ask your parents to call out numbers from 1 to 50 randomly. Write their names in your notebook. For every correct answer, you will get a point. For scoring ten points, you will get a hug.

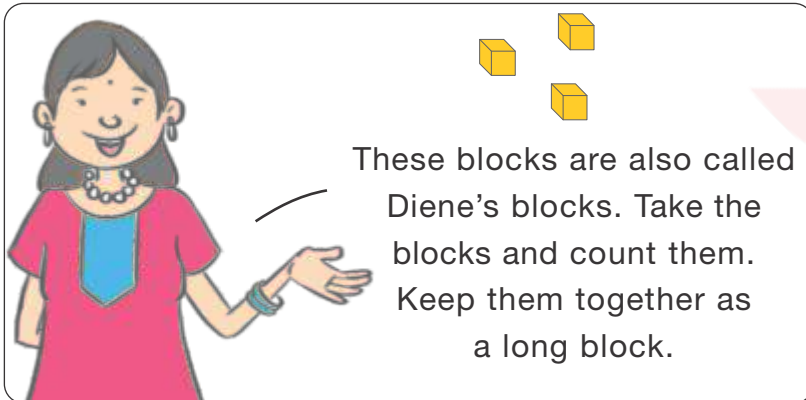


Calling out instructions one by one helps children recognise the numbers. Make sure that the child gets enough time to write the numbers.



I OBSERVE

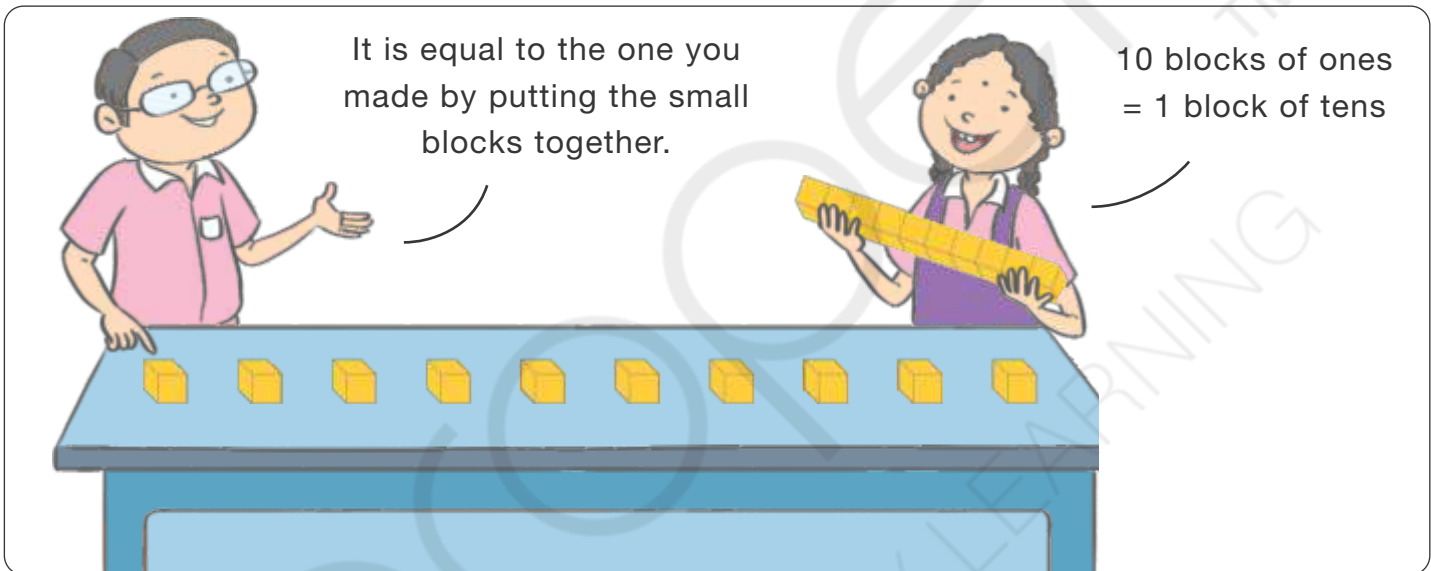
Ones, Tens and Names of Numbers from 51 to 70



These blocks are also called Diene's blocks. Take the blocks and count them. Keep them together as a long block.



Look at the long block.



It is equal to the one you made by putting the small blocks together.

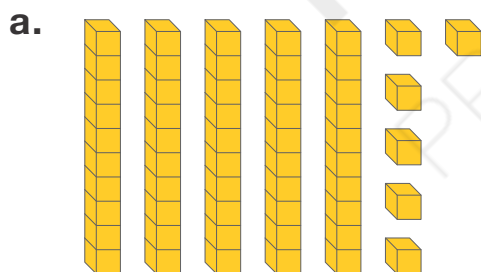
10 blocks of ones = 1 block of tens

Now, show numbers using them in groups.

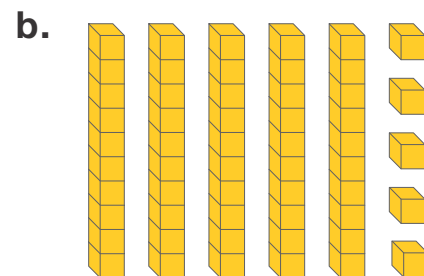


I ACT

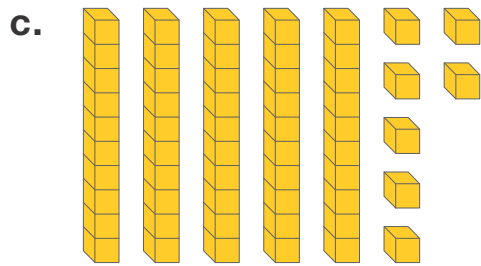
1. Write down the number of blocks shown here.



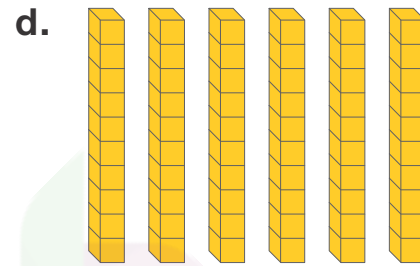
_____ tens and _____ ones



_____ tens and _____ ones

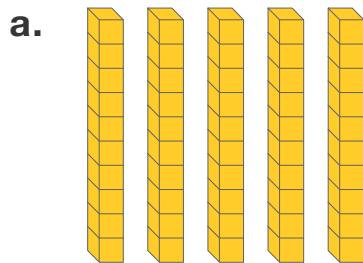


_____ tens and _____ ones

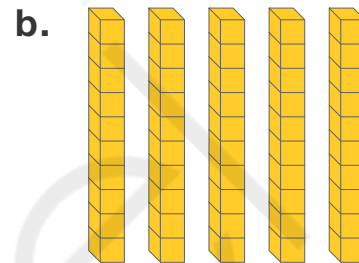


_____ tens and _____ ones

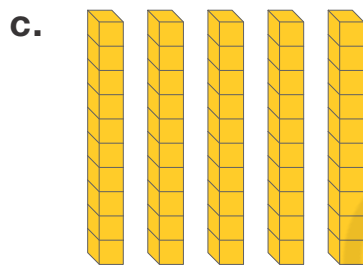
2. Draw the missing blocks to complete the following numbers.



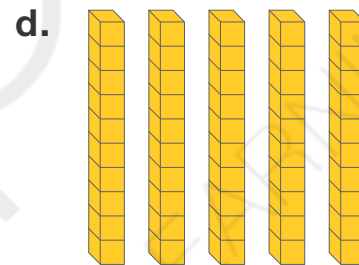
5 tens and 9 ones



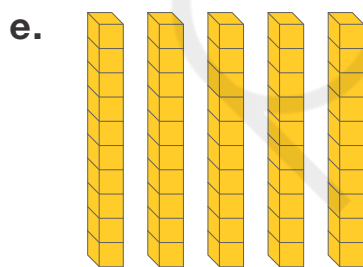
5 tens and 3 ones



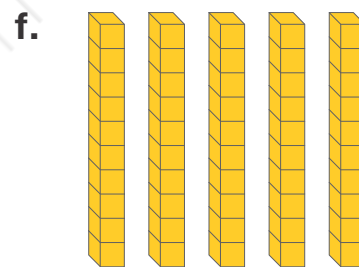
5 tens and 1 ones



5 tens and 2 ones



5 tens and 7 ones



5 tens and 5 ones



When children learn numbers, showing them how to solve a problem with the help of an object enables them to visualise. This also helps in comparing the given numbers easily.



I ACT

Match the number name kites with their number spools using different colour pencils.

52 51 58 59 57

Fifty one Fifty eight Fifty nine

Fifty six Fifty two Fifty three Fifty seven

Fifty four Fifty five Sixty

56 54 55 53 60



I REVISE

Deepak counts 60 beads on a ganit mala but he finds that there are more beads on it. How can he count them?

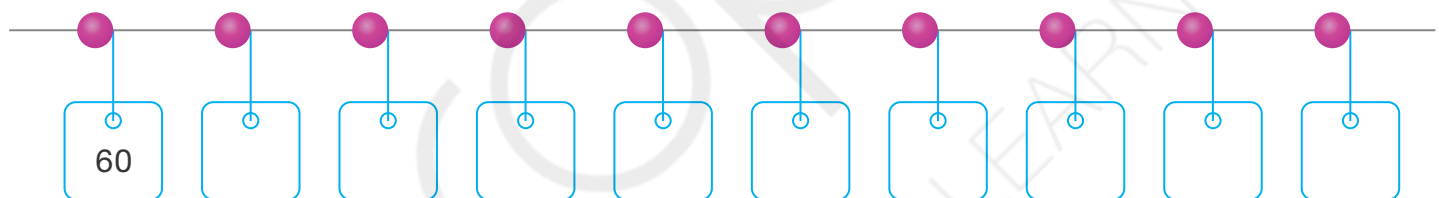


If we add one more bead to sixty beads, what number name can we give to that bead?

This is easy!
We call it sixty one.

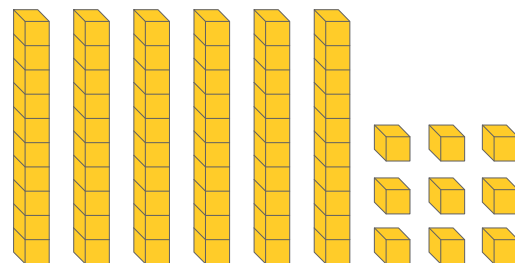
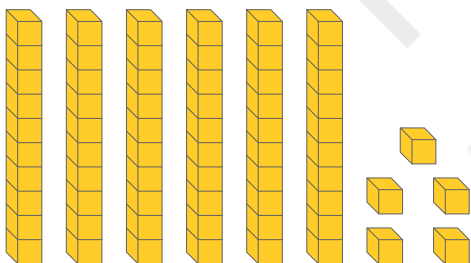


Begin with 60 and keep adding one bead to the next number. Write those numbers in the tags on the ganit mala.

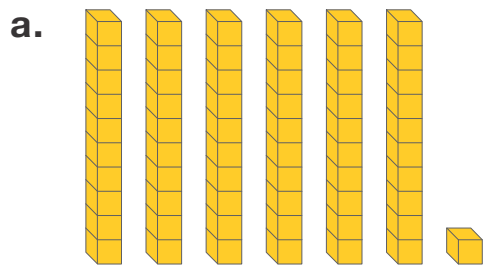


I ACT

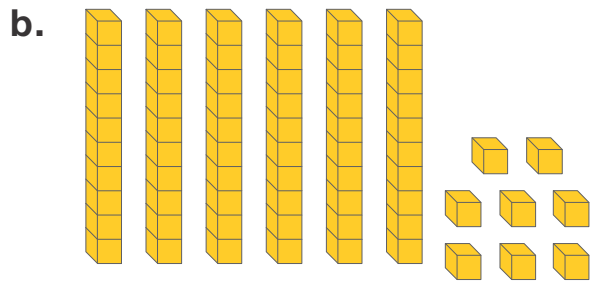
How can we show sixty nine with Diene's blocks? Tick (✓) the correct picture for 69.



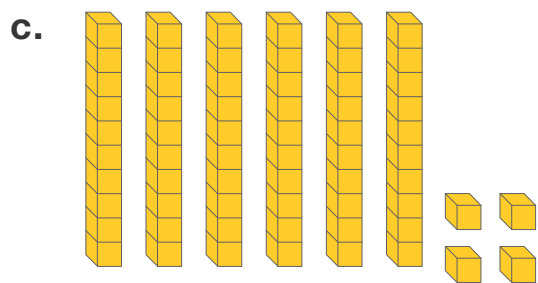
Now, count the following blocks and write the numbers.



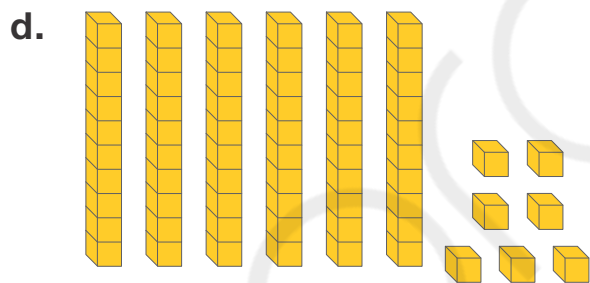
_____ tens and _____ ones



_____ tens and _____ ones



_____ tens and _____ ones



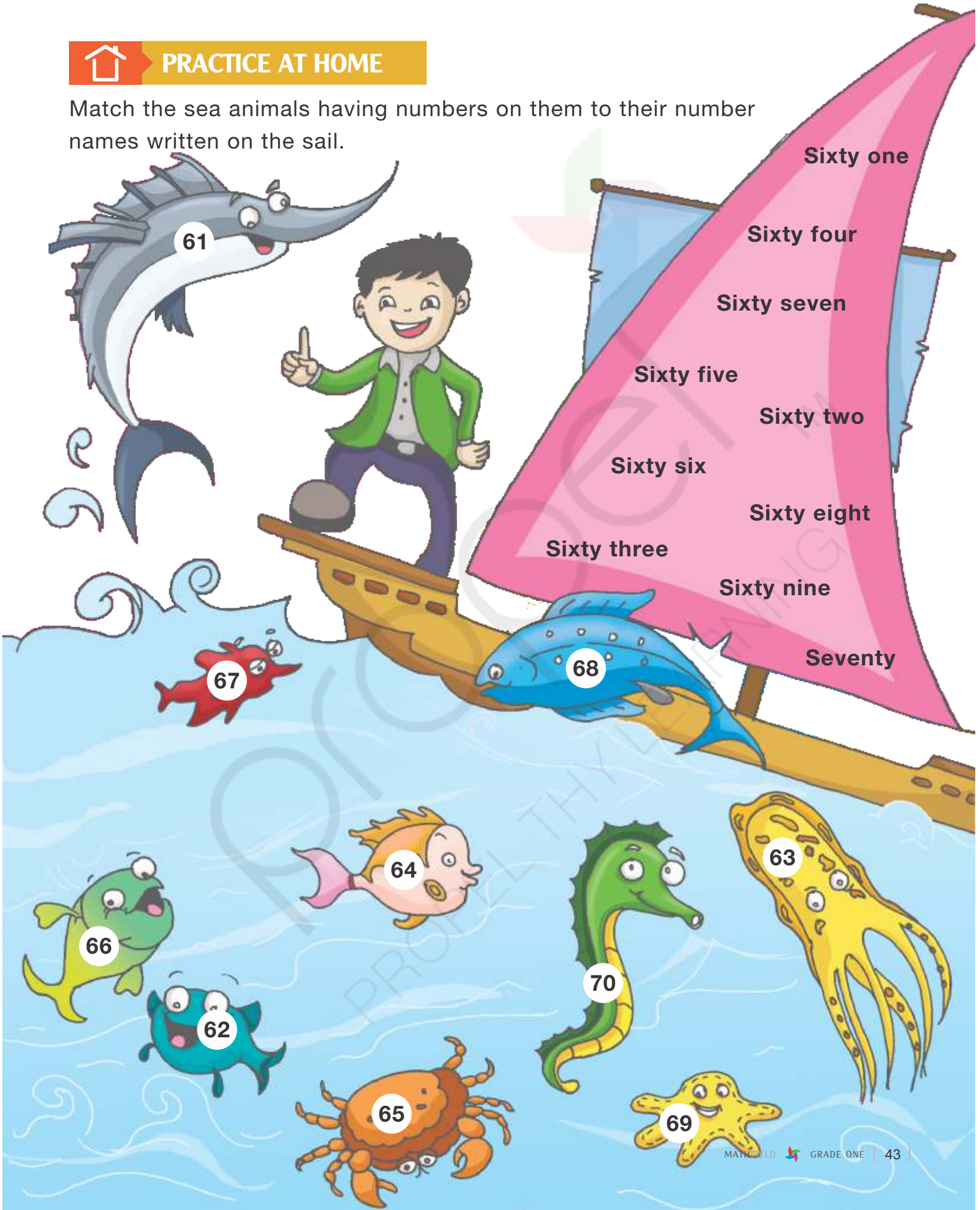
_____ tens and _____ ones

Using blocks, draw how 70 will look like.



PRACTICE AT HOME

Match the sea animals having numbers on them to their number names written on the sail.





Ones, Tens and Names of Numbers from 71 to 99

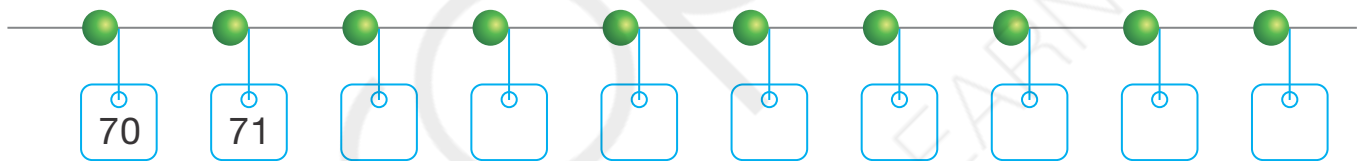
1. Observe the pattern in the numbers given below.

10	20	30	40	50	60	70
↓	↓	↓	↓	↓	↓	
11	21	31	41	51	61	?

See how the numbers are changing. What happens when 1 is added to the numbers in the first row? Can you guess which number will come after 70?



2. The numbers 70 and 71 are marked on the bead string. Write the missing numbers on the blank tags. Say their name aloud.



3. Observe the pattern in the numbers given below.

9	19	29	39	49	59	69
↓	↓	↓	↓	↓	↓	↓
10	20	30	40	50	60	70



See how the numbers are changing. What happens when 1 is added to the numbers in the first row? Can you guess which number will come after 79?

4. Fill in the following blanks.

a. 71

b. 73

c. 70

d. 75

e. 76

f. 78

g. 76 78

h. 77 79

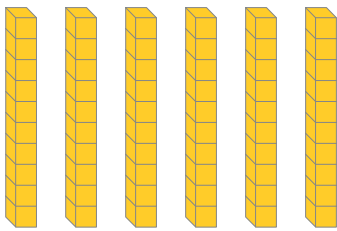
i. 79



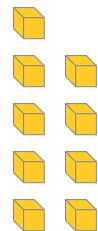
I ACT

Now, count the following blocks and write the numbers.

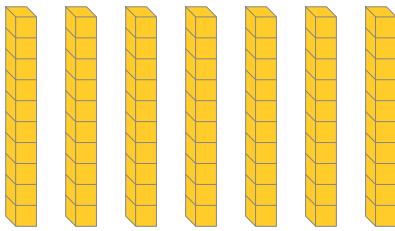
Tens



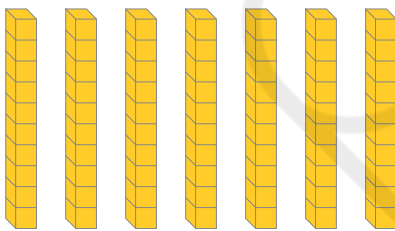
Ones



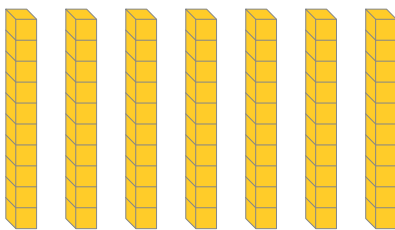
_____ tens and _____ ones



_____ tens and _____ ones

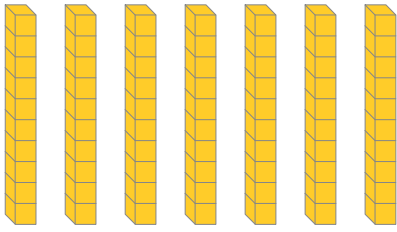


_____ tens and _____ ones

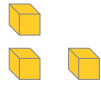


_____ tens and _____ ones

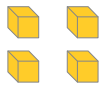
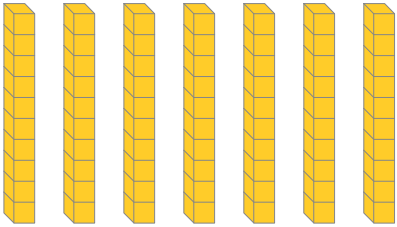
Tens



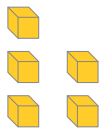
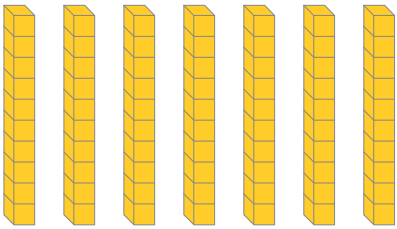
Ones



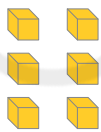
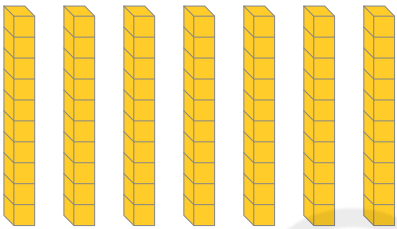
_____ tens and _____ ones



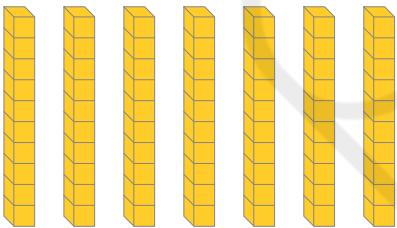
_____ tens and _____ ones



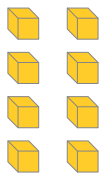
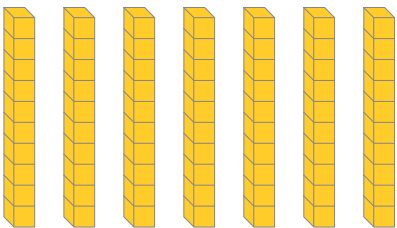
_____ tens and _____ ones



_____ tens and _____ ones

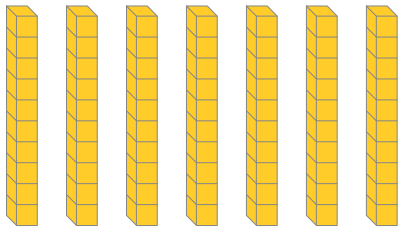


_____ tens and _____ ones

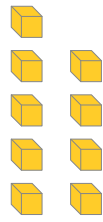


_____ tens and _____ ones

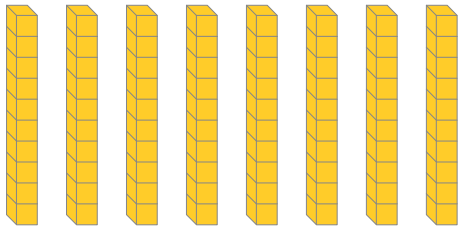
Tens



Ones



_____ tens and _____ ones



_____ tens and _____ ones



Write the number names. One example has been done for you.

71 _____ *Seventy one*

78 _____

74 _____

72 _____

80 _____

77 _____

73 _____

76 _____

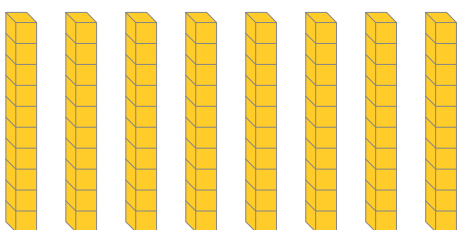
75 _____

79 _____



Count the following blocks and write the numbers.

Tens

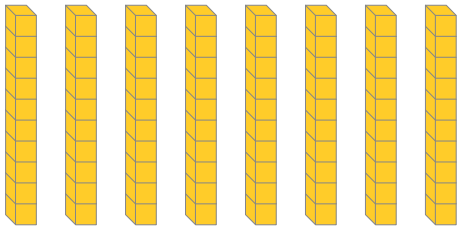


Ones

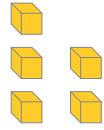


_____ tens and _____ ones

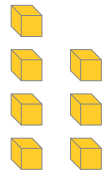
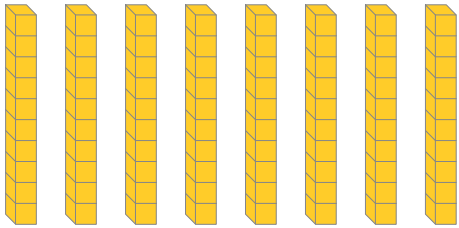
Tens



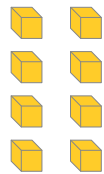
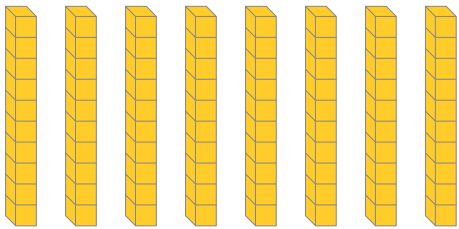
Ones



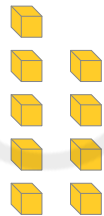
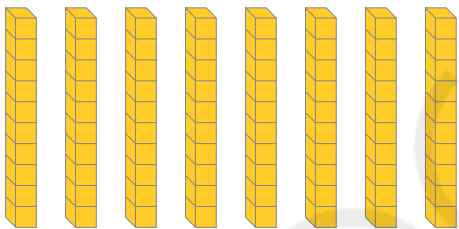
_____ tens and _____ ones



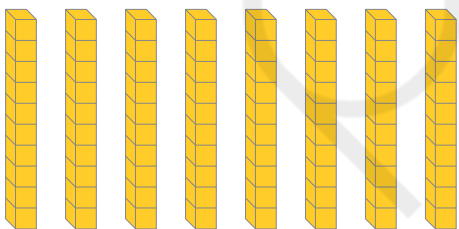
_____ tens and _____ ones



_____ tens and _____ ones

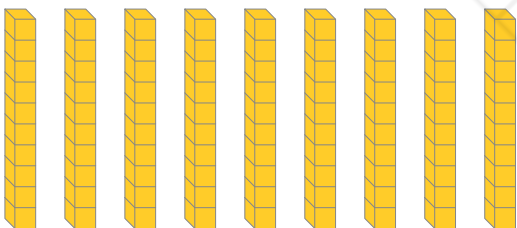


_____ tens and _____ ones



_____ tens and _____ ones

When we add one more bead to 89, it becomes 90. 90 has 9 tens and 0 ones.



_____ tens and _____ ones



PRACTICE AT HOME

Write the names of following numbers.

81

83

85

87

89

82

84

86

88

90



I PLAY

Take a string of beads and count in tens till 90. Now, add one more bead. How many beads do you have now? _____

With the help of the string, show the numbers given below. Ask your partner to check the number of your beads.

1. 90 and 3 more

2. 90 and 5 more

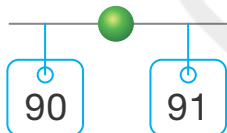
3. 90 and 4 more



I ACT

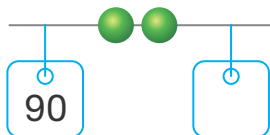
In the following task, write the number on the tag after counting the beads. This string is beginning from 90. Write the number name as well. One example has been done for you.

1.



 9 tens and 1 ones = Ninety one

2.



 tens and ones =



_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



_____ tens and _____ ones = _____



PRACTICE AT HOME

Fill in the correct tens and ones for the given numbers. Write their names too.

Number

Number Name

52

_____ tens and _____ ones = _____

49

_____ tens and _____ ones = _____

36

_____ tens and _____ ones = _____

59

_____ tens and _____ ones = _____

70

_____ tens and _____ ones = _____

83

_____ tens and _____ ones = _____

99

_____ tens and _____ ones = _____

27

_____ tens and _____ ones = _____

46

_____ tens and _____ ones = _____

95

_____ tens and _____ ones = _____

61

_____ tens and _____ ones = _____

18

_____ tens and _____ ones = _____

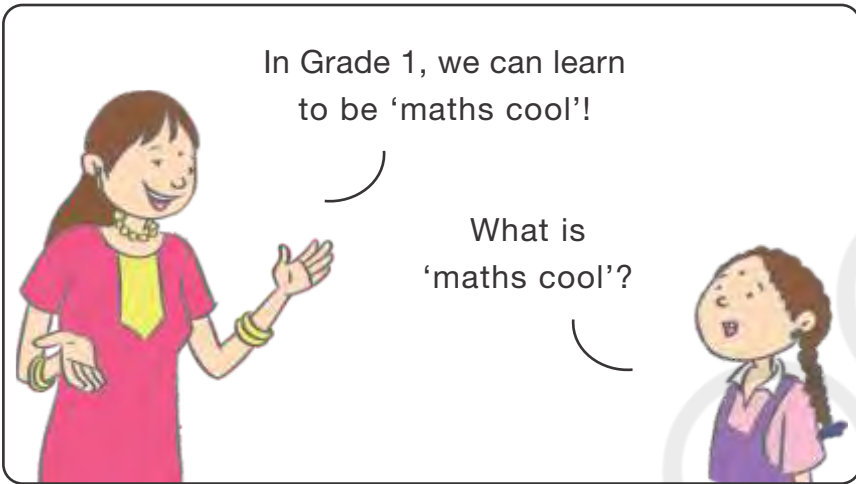


COMPARISON OF TWO-DIGIT NUMBERS

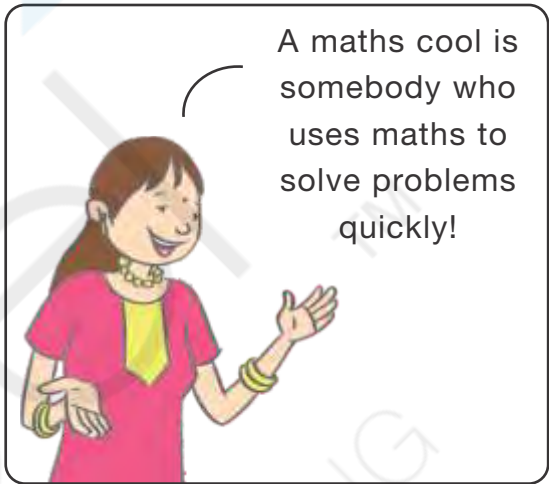
I EXPLORE

In Grade 1, we can learn to be 'maths cool'!

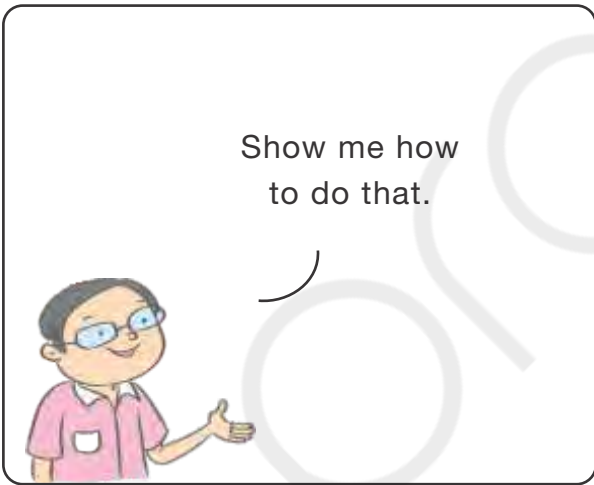
What is 'maths cool'?



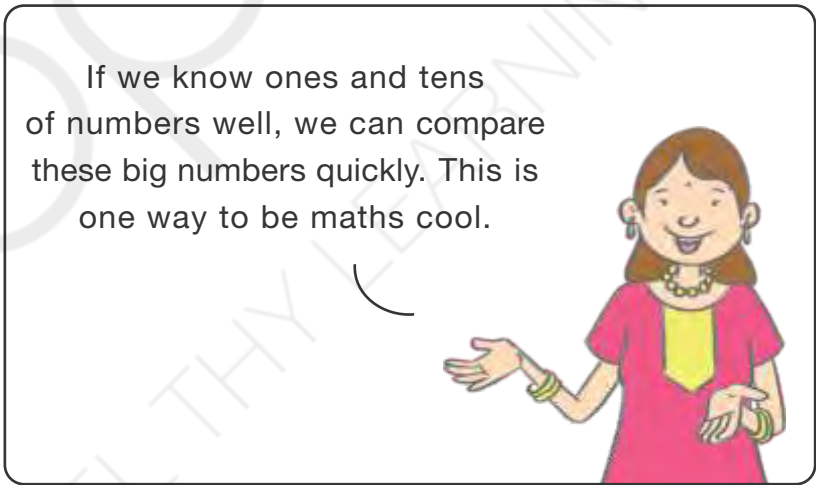
A maths cool is somebody who uses maths to solve problems quickly!



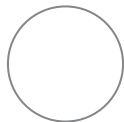
Show me how to do that.



If we know ones and tens of numbers well, we can compare these big numbers quickly. This is one way to be maths cool.



Let us represent 14 and 24 using kidney beans. Compare them using the $>$ or $<$ sign.



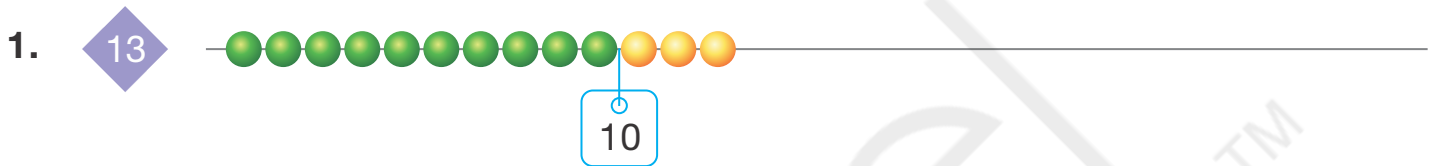
Repeat this activity with some more sets of numbers.

 I TALK

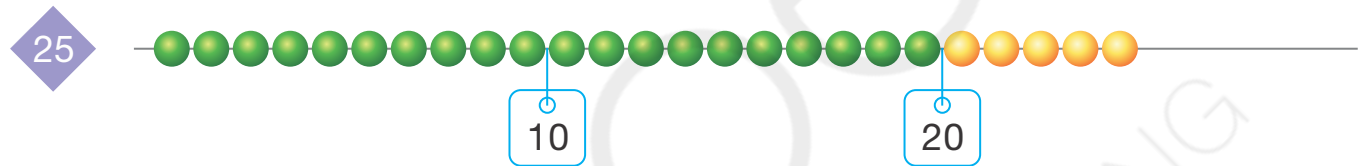
1. What did you do in this activity? What helped you do this activity?
2. How did you compare two numbers? Why do you think 24 is greater than 14?

 I ACT

We know that a number, which has more tens, is bigger. Let's use that understanding to compare the following numbers.



There are 1 tens and 3 ones in 13.

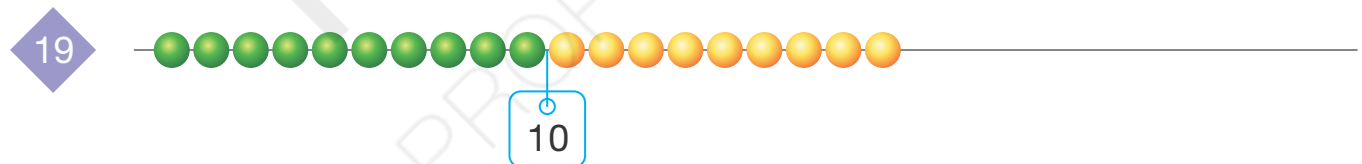


There are 2 tens and 5 ones in 25.

Which number has more tens?



There are _____ tens and _____ ones in 29.



There are _____ tens and _____ ones in 19.

Which number has more tens?

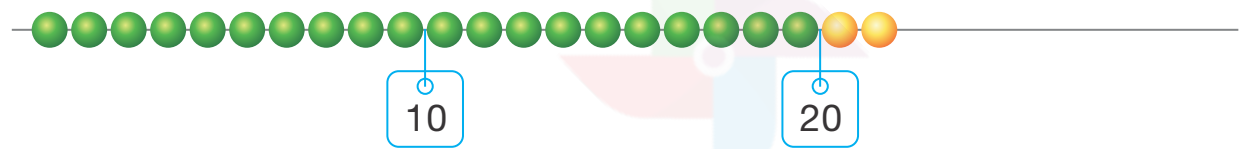
3.

11



There are _____ tens and _____ ones in 11.

22



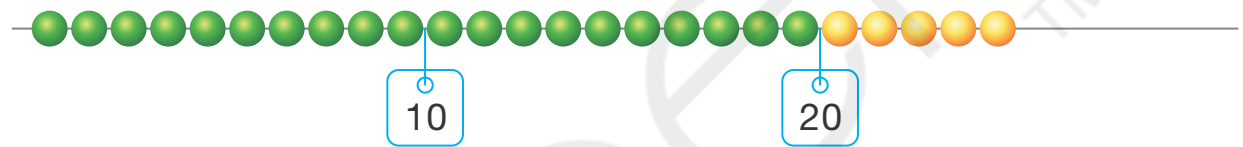
There are _____ tens and _____ ones in 22.

Which number has more tens?

11 22

4.

25



There are _____ tens and _____ ones in 25.

15



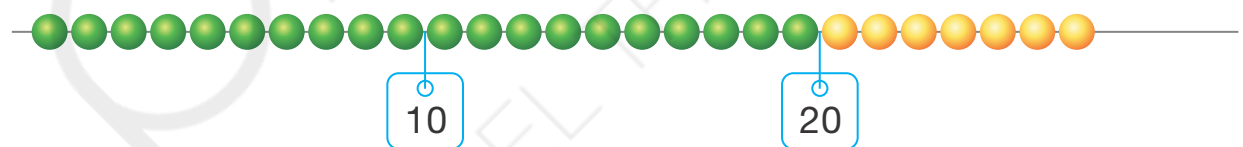
There are _____ tens and _____ ones in 15.

Which number has more tens?

25 15

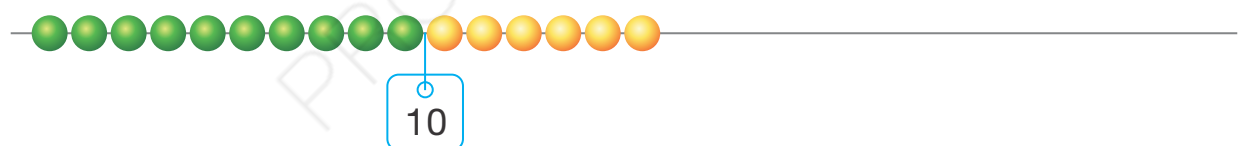
5.

27



There are _____ tens and _____ ones in 27.

16



There are _____ tens and _____ ones in 16.

Which number has more tens?

27 16



I EXPLORE

Let us compare the following numbers shown on ganit mala.

19 = One tens and nine ones
16 = One tens and six ones

How did you compare these numbers?
What helped you compare these numbers?

19 and 16 have an equal number of tens, but 19 has more ones than 16. So, 19 is greater than 16.

When the number of tens is equal, we compare the number of ones to know the greater or smaller number.

$19 > 16$

Let's see one more example.

24

There are 2 tens and 4 ones in 24.

26

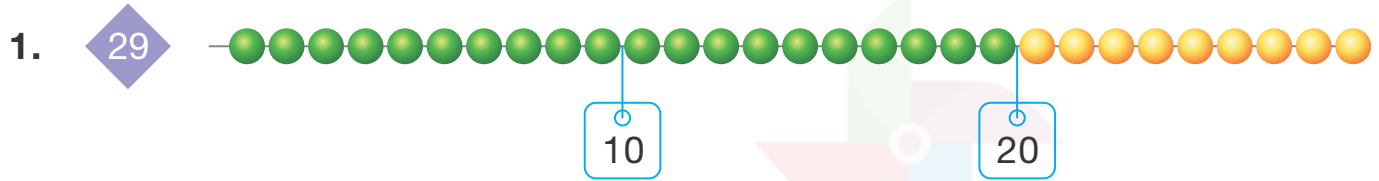
There are 2 tens and 6 ones in 26.

Which number has more ones? 24 < 26

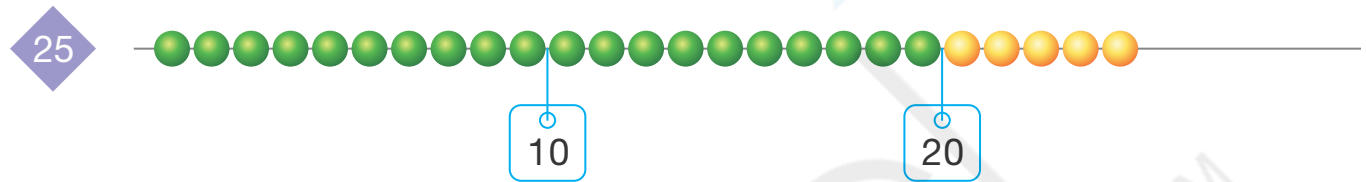


I ACT

Compare the following numbers.

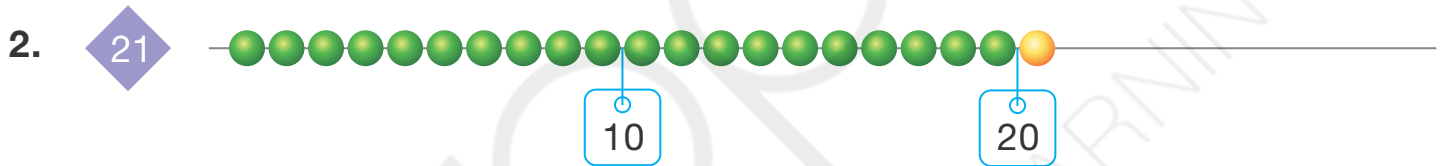


There are _____ tens and _____ ones in 29.

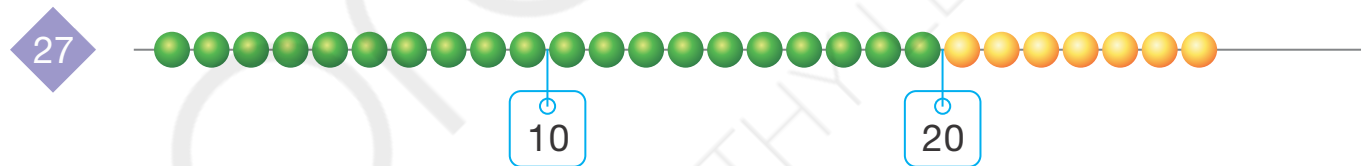


There are _____ tens and _____ ones in 25.

Which number has more ones? 29 25

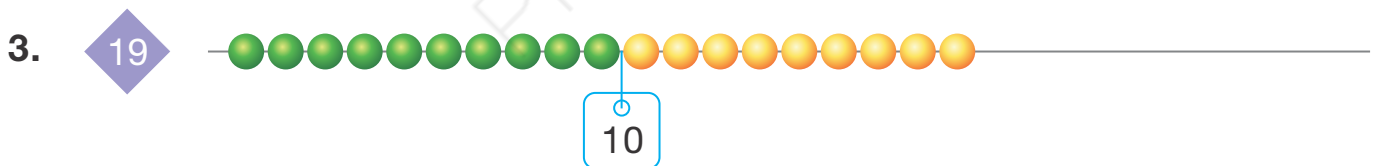


There are _____ tens and _____ ones in 21.

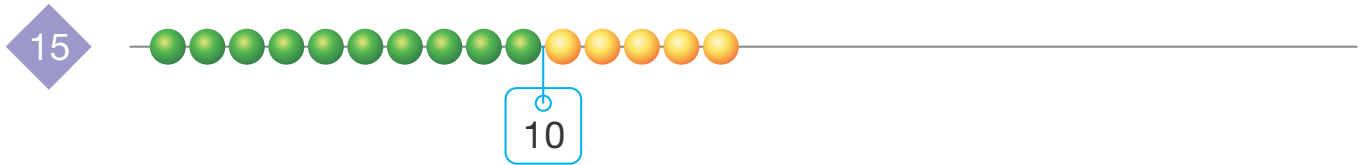


There are _____ tens and _____ ones in 27.

Which number has more ones? 21 27



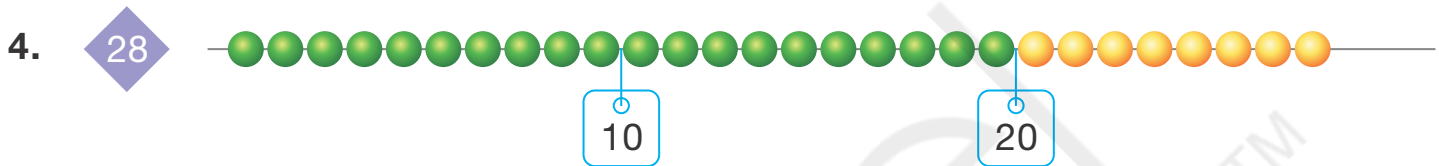
There are _____ tens and _____ ones in 19.



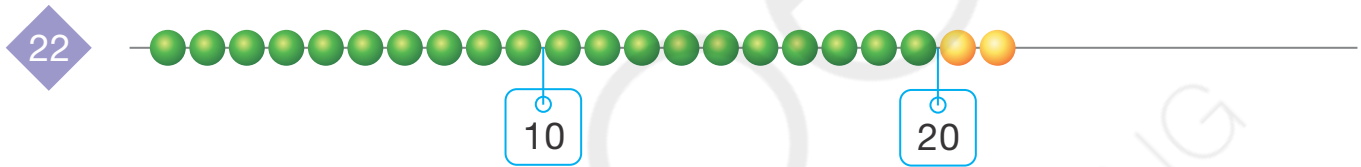
There are _____ tens and _____ ones in 15.

Which number has more ones?

19 15



There are _____ tens and _____ ones in 28.



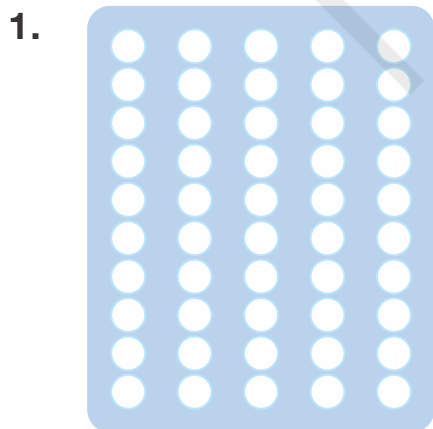
There are _____ tens and _____ ones in 22.

Which number has more ones?

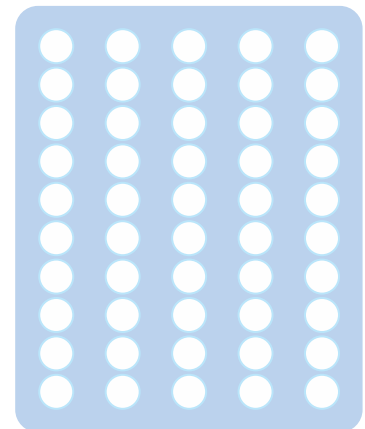
28 22

I ACT

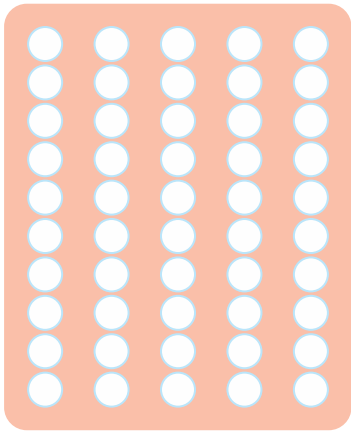
You have played with mathmats in the class. Now, colour the following circles according to the given numbers. Also, compare these numbers.



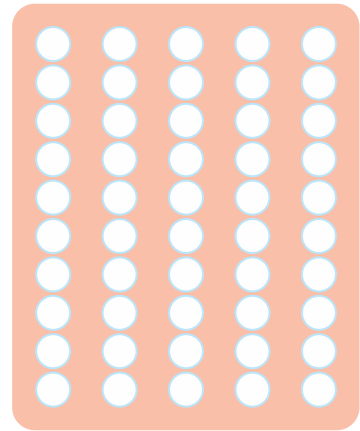
14 9



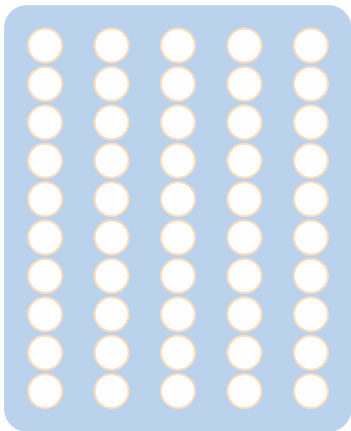
2.



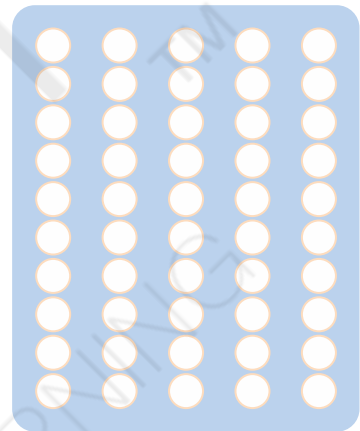
$$\boxed{31} \bigcirc \boxed{21}$$



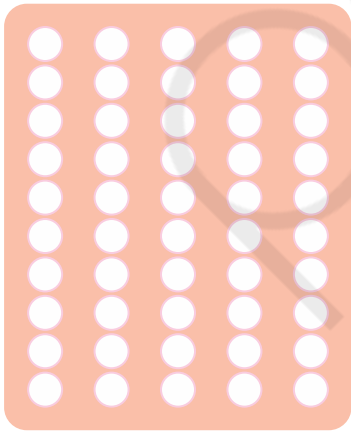
3.



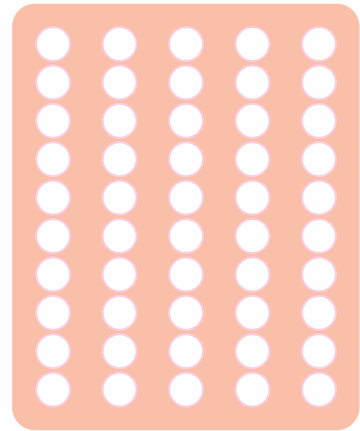
$$\boxed{29} \bigcirc \boxed{19}$$



4.



$$\boxed{47} \bigcirc \boxed{42}$$



This task helps in building visualisation skills. Encourage children to draw ganit mala or use kidney beans whenever they find it difficult to visualise a quantity. This unit also helps in revising the numbers done earlier.

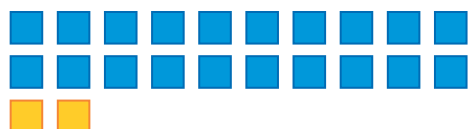


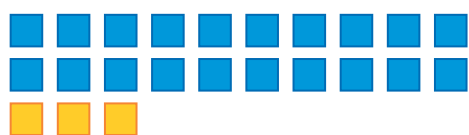
PRACTICE AT HOME

Compare Numbers

Let's use what we know about tens and ones to compare the numbers.

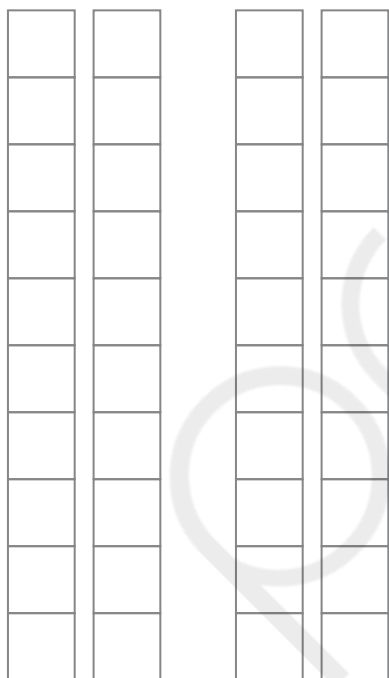
- Count the coloured boxes and write the numbers. Compare the numbers and put the appropriate sign of $>$, $<$ or $=$.







- Colour the boxes to show the given numbers. Compare the numbers and put the appropriate sign of $>$, $<$ or $=$.







This is a revision task. It helps in building the skill of representation in children when they convert symbols into pictures and vice versa.

Increasing and Decreasing Order

I OBSERVE

Deepak played with some bowls. Deepak's mother asked him to keep the bowls on the shelf after playing. When he went near the shelf, he saw that bowls were arranged in the following manner. How are the bowls arranged?



Deepak wants to arrange the bottles in the same manner. How will he arrange them? Draw it.



Can you arrange 8, 2 and 4 in the similar manner?

Which number is smaller?
Which number is greater?

Let us help Deepak and Hetal to rewrite the numbers from smaller to greater. Draw the number of dots or pictures of your choice to show these numbers as well.

What happens when you arrange the numbers from smaller to greater?

When we arrange numbers from smaller to greater, it is called increasing order.



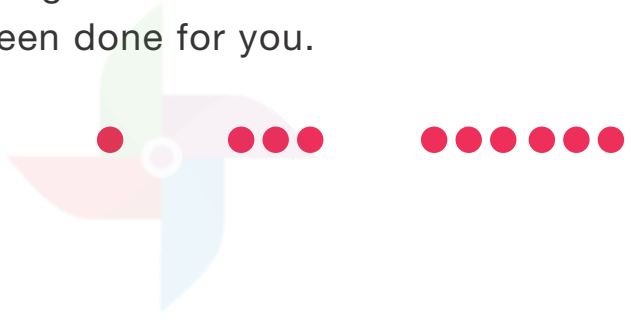
The number of things increases in this order. In 2, 3 and 4, the numbers are increasing.



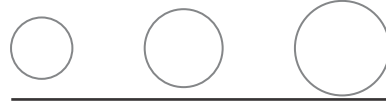
I ACT

Arrange the following numbers in increasing order. Draw dots to show the increasing numbers. One example has been done for you.

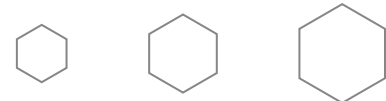
1. 3, 1, 6



2. 5, 4, 2



3. 10, 15, 5



4. 18, 8, 2



Observe the pattern on the board. What order do you see?



Is it different from increasing order?

It is called the **decreasing order**. In this order, the number of things reduces or becomes lesser than the previous number.

Arrange the following numbers in decreasing order.

1. 2, 6, 4



2. 3, 0, 5



3. 7, 10, 3

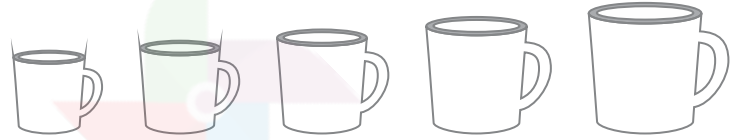




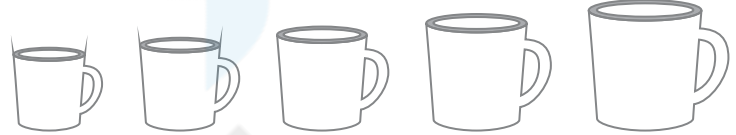
I ACT

1. Arrange and write the following in increasing order. Use the sizes of the mugs as cues and write on them.

a. 2, 1, 5, 3, 7



b. 5, 1, 6, 4, 3



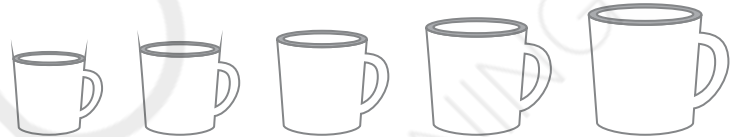
c. 6, 9, 2, 5, 3



d. 2, 0, 4, 5, 8



e. 7, 6, 3, 0, 5



2. Now, arrange and write the following in decreasing order.

a. 1, 8, 4, 6, 2



b. 9, 3, 5, 0, 7



c. 3, 7, 8, 4, 1



d. 5, 7, 3, 1, 0



e. 9, 4, 6, 3, 8





I ACT



I can compare numbers quickly if I compare tens first and then ones.

Draw and compare the numbers. Write them in increasing and decreasing order.

Numbers	Draw and Compare	Increasing order	Decreasing order
13, 10, 15		10, 13, 15	15, 13, 10
12, 3, 11			
11, 4, 9			
10, 8, 13			
9, 12, 14			
5, 15, 10			



I ACT

Compare the following numbers. You can use ganit mala, beans or blocks if required.

1. Colour the **greatest** number. Remember to compare tens first and then ones.

a. (10) (38) (36)

b. (23) (25) (21)

c. (9) (29) (19)

d. (16) (18) (6)

2. Colour the **smallest** number.

a. (15) (5) (25)

b. (10) (20) (40)

c. (38) (30) (36)

d. (23) (33) (13)

3. Write the numbers from the **smallest** to the **greatest**.

a. (10) (5) (12)

() () ()

b. (13) (3) (33)

() () ()

c. (50) (20) (40)

() () ()



I EXPLORE

Sometimes you are glad. Sometimes you are sad. Move the sad face (☹️) through the maze, so that you are happy at the end. Make a path on which the sad face and the glad face (😊) come alternatively. You can move your pencil up and down or side-to-side, but not diagonally. If you hit the mad face (😬), you are going in the wrong direction!

START



FINISH



NUMBERS FROM 100 TO 199



I LISTEN

On the day of the jungle party, Deepak and Hetal see their school decorated with many strings of flowers. While counting, Deepak reaches the number 99, but there are more than 99 flowers! So, they start counting in the following way.

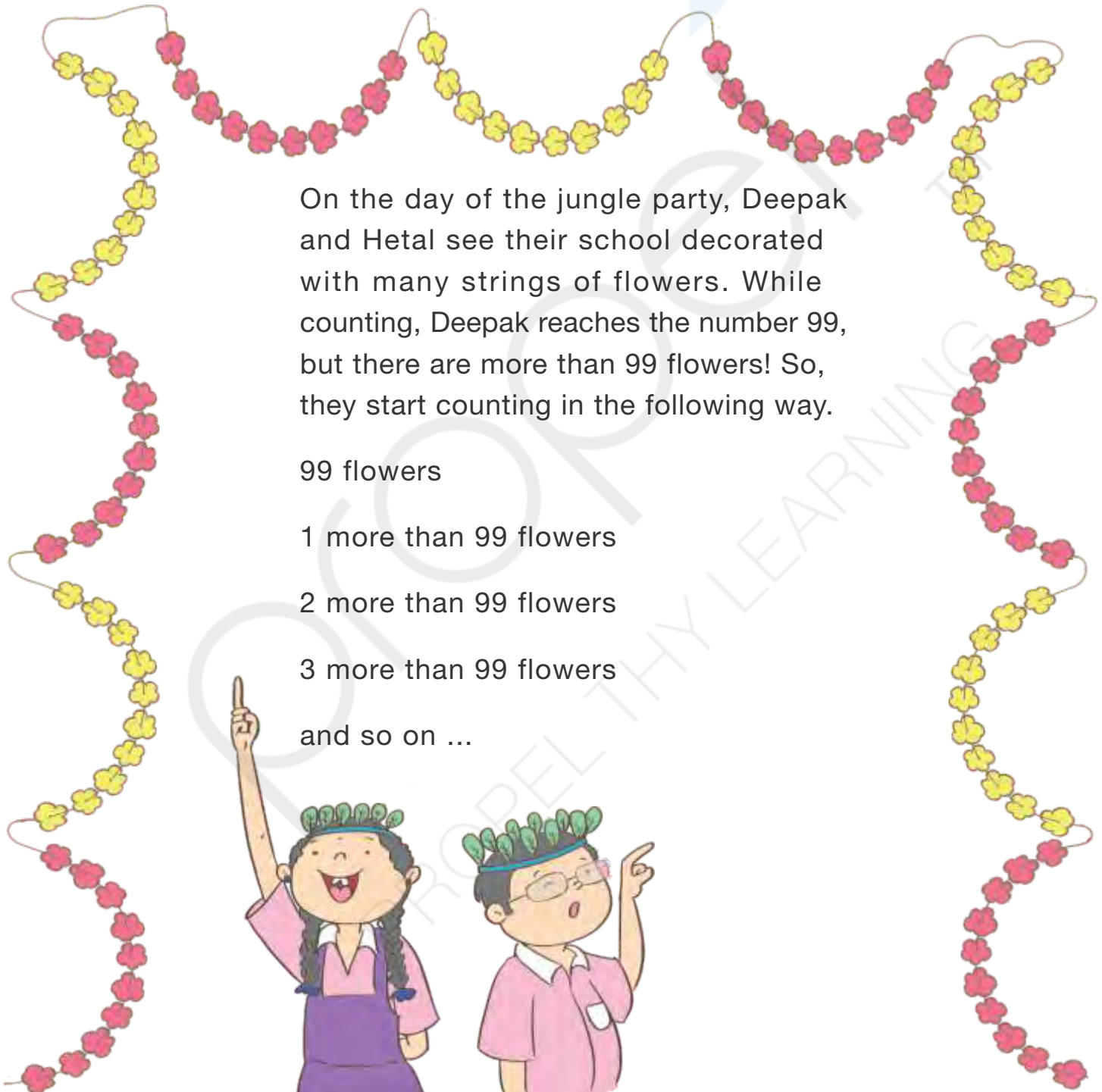
99 flowers

1 more than 99 flowers

2 more than 99 flowers

3 more than 99 flowers

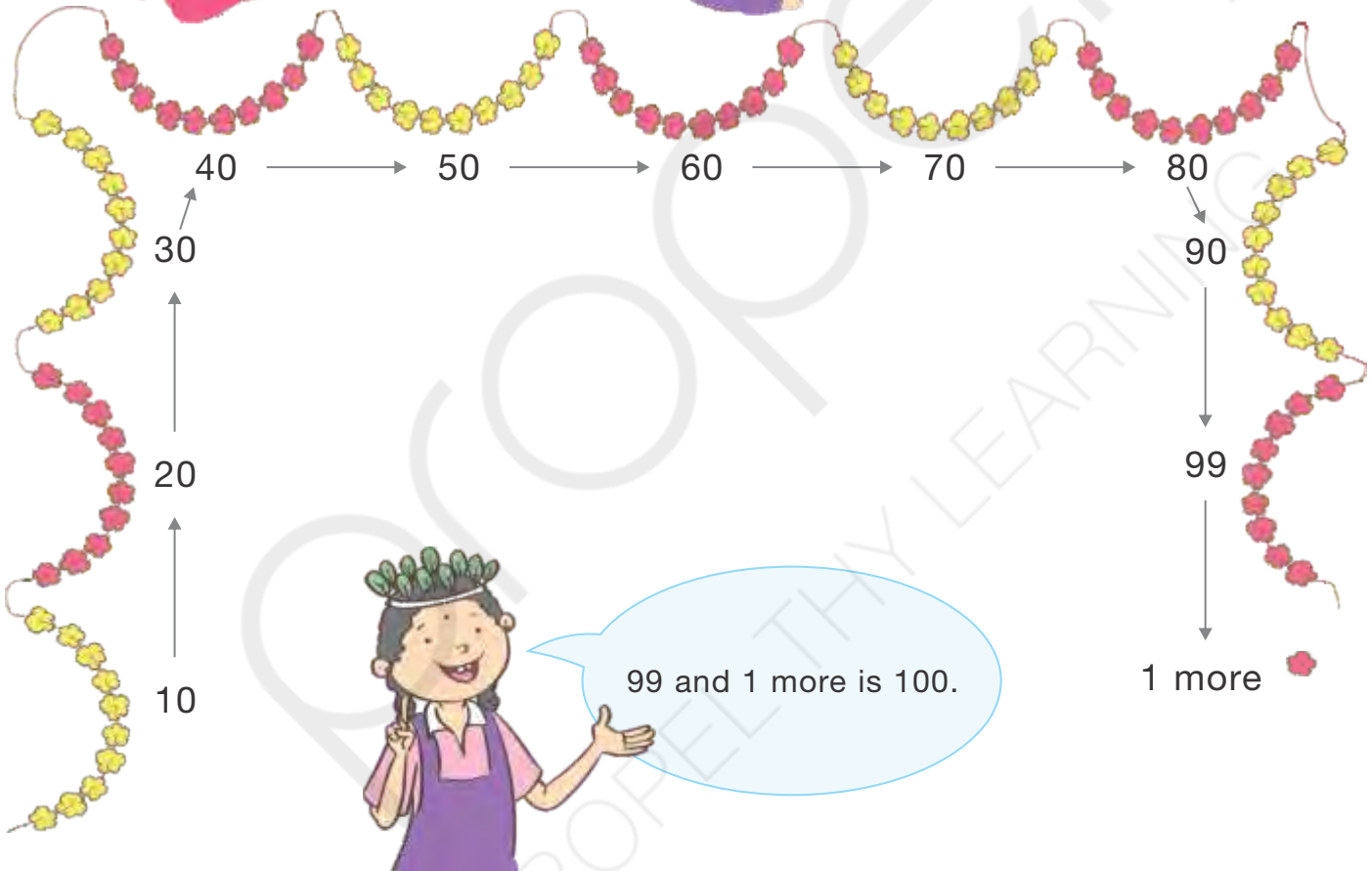
and so on ...



Their teacher notices them doing so.



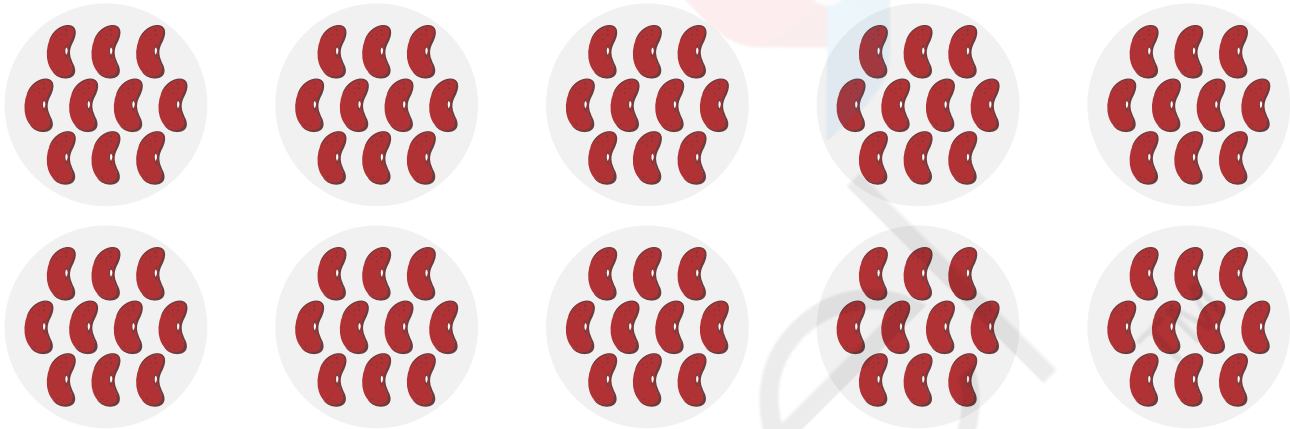
I like the way you are counting. Do you know that there are new number names for these numbers? One more than **99** is called **one hundred**.





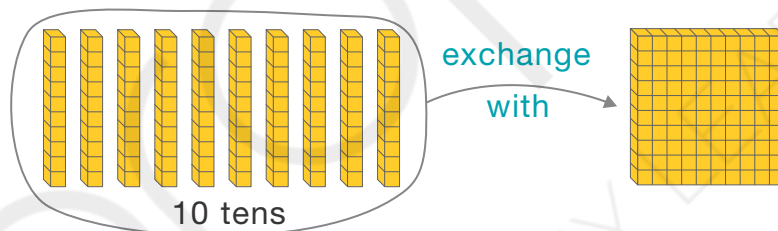
I ACT

1. Count 100 beads on ganit mala with your teacher.
2. Sit in pairs and make groups of 10 kidney beans. When you make such 10 groups, the number of kidney beans in them will be 100.



I ACT

Deepak takes 10 blocks of tens from his teacher and counts them. He keeps them together as shown below.



Now, look at the big block given by your teacher. It is equal to the one Deepak made by putting the blocks of tens together. You can use it instead of 10 blocks of tens.

10 blocks of tens = 1 block of hundreds or one hundred



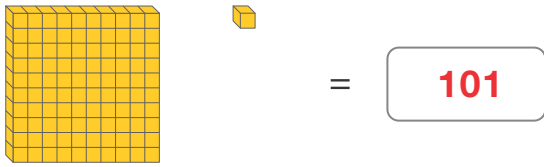
I PLAY

Play in groups of four. Take Diene's blocks. Roll a dice and take the number of blocks shown on it. Whenever your group has 10 blocks of ones, exchange them with 1 block of tens; if your group has 10 blocks of tens, exchange them with 1 block of hundreds. The group who gets a block of hundreds first wins the game.

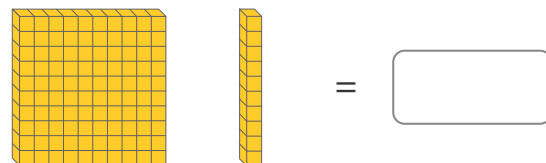
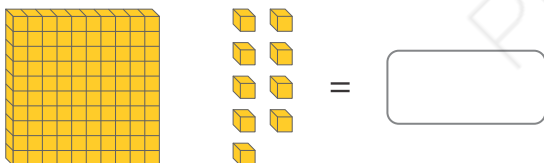
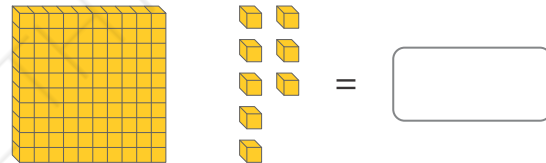
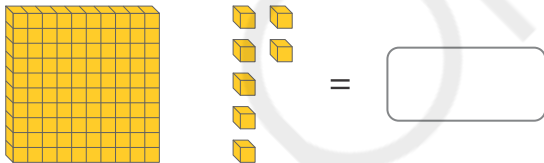
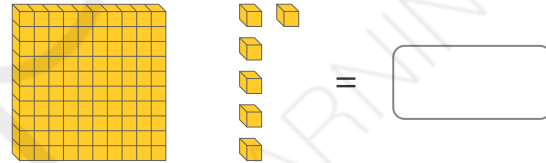
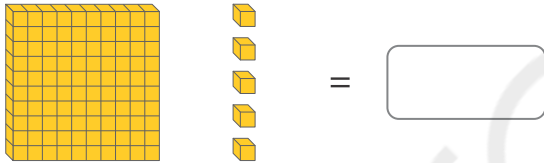
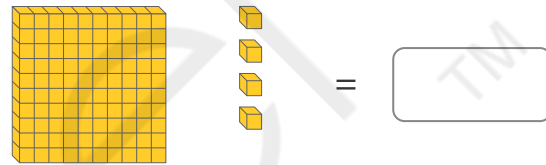
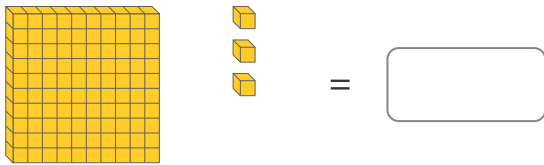
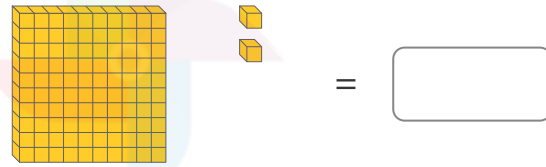


I ACT

Identify the numbers shown through the given blocks. Write the numbers and their names.



One hundred one



Now, I know that numbers extend in the same way after 100 as they extend after 1. One can keep adding to 100 and count on!




 I ACT



Let me write numbers till 199.

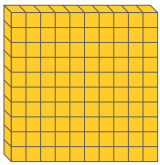
Hetal is tired of writing so many numbers at one go. Help her fill the following number grid.

101	102		104	105	106		108	109	110
111	112	113	114	115	116	117	118		120
	122		124	125		127	128	129	
131		133	134		136	137	138		140
141	142	143		145		147		149	
	152	153		155	156		158	159	160
161	162		164		166	167		169	
	172	173	174	175	176		178	179	180
181		183		185		187	188	189	190
191		193	194		196	197		199	

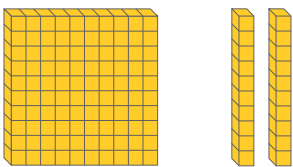


I ACT

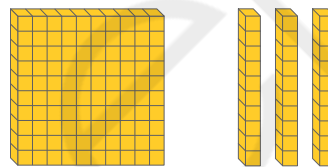
Play a game on the interactive board and represent numbers from 100 to 199. Thereafter, count the following blocks and write the numbers. Also, write their names.



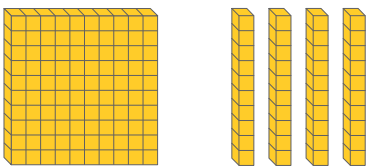
=



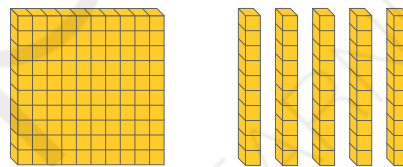
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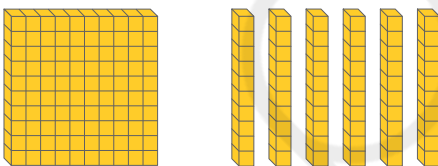
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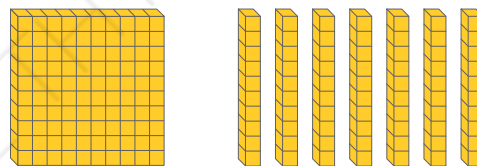
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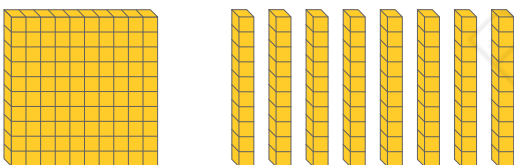
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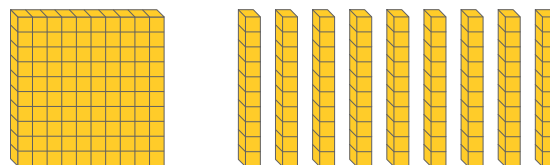
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I ACT

Complete the following number series.

112

122

139

150

161

171

183

190



Seeing numbers extending in the pattern of one more than the previous helps children count bigger quantities efficiently.



I ACT

Match the following numbers with their names.

One hundred one

One hundred nine

One hundred eleven

One hundred thirty five

One hundred twenty one

One hundred twenty five

One hundred fifty

One hundred fifty six

One hundred seventy four

One hundred seventy nine

One hundred ninety nine

One hundred seventy eight

One hundred sixty two

One hundred fifty four

One hundred forty five

179

156

150

199

162

145

178

109

154

111

125

174

121

101

135

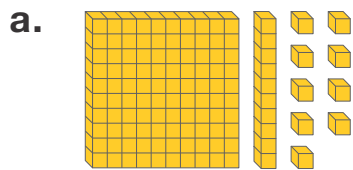


PROPEL THY LEARNING™

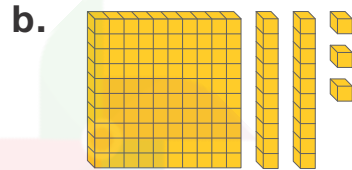


I PRACTISE

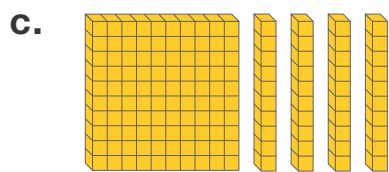
1. Write the number of the blocks shown.



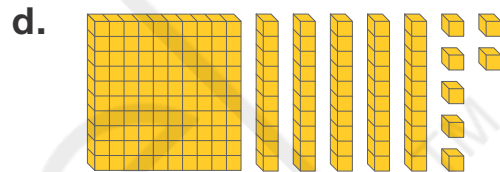
=



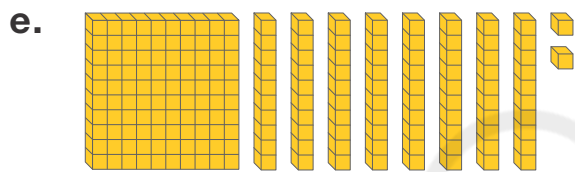
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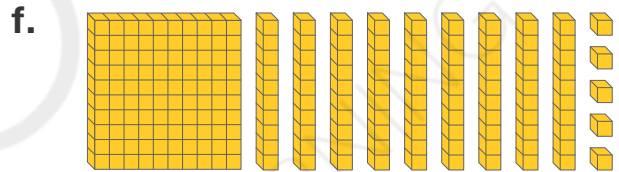
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=

2. Fill in the blanks.

a. 116 _____ 121

b. 155 _____ 160

c. 187 _____ 192

d. 178 _____ 183

e. 162 _____ 167

f. 194 _____ 199

3. Write any 10 numbers from 100 to 199 and their names in your notebook.



I PRACTISE

Hetal and Deepak decorate their class with numbers and their names.

Check if they have made the pairs correctly. Tick (✓) the correct pairs and cross (x) the incorrect ones.



One hundred three

103

One hundred eighty eight

188

One hundred forty five

140

One hundred seventy three

173

One hundred forty one

141

One hundred thirty six

163

One hundred twenty two

122

One hundred ninety four

149

One hundred twenty seven

127

One hundred sixty eight

168

One hundred fifty nine

195

One hundred seventy eight

170

One hundred eighty four

186

One hundred fifty two

152

One hundred ninety nine

199

One hundred thirty nine

139



SINGLE-DIGIT ADDITION

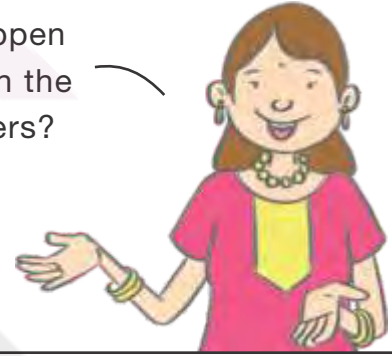
I have 5 flowers.



I have 4 flowers.



What will happen if we join both the sets of flowers?



We will get a bigger set. Joining both sets will make a set of 9 flowers.



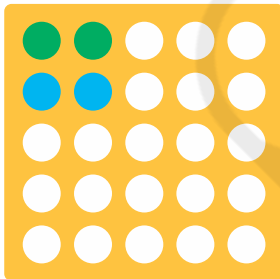
Correct. You know how to add small numbers. Let us learn some new ways of adding numbers.



I REVISE

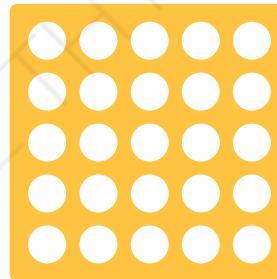
Fill colours in mathmats to show the statements given below. Then add the number of rubber plugs you coloured. An example has been done for you.

1.



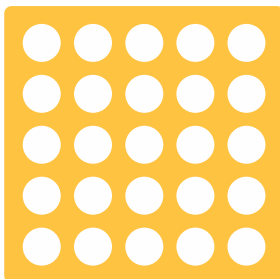
$$\begin{array}{r} 2 \text{ rubber plugs} \\ + 2 \text{ rubber plugs} \\ \hline 4 \text{ rubber plugs} \end{array}$$

2.



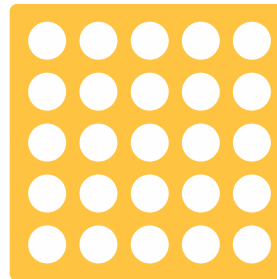
$$\begin{array}{r} 4 \text{ rubber plugs} \\ + 1 \text{ rubber plug} \\ \hline \text{rubber plugs} \end{array}$$

3.



$$\begin{array}{r} 6 \text{ rubber plugs} \\ + 2 \text{ rubber plugs} \\ \hline \text{rubber plugs} \end{array}$$

4.




$$\begin{array}{r} 3 \text{ rubber plugs} \\ + 5 \text{ rubber plugs} \\ \hline \text{rubber plugs} \end{array}$$








PRACTICE AT HOME

Do you remember we played with dominoes in the class? Let us match the dominoes with their correct answers now.


 $4 + 2 = 6$
These are addends. This is the sum.

We use the symbol '+' for addition. We call it '+' plus. The answer is called 'total' or 'sum'.



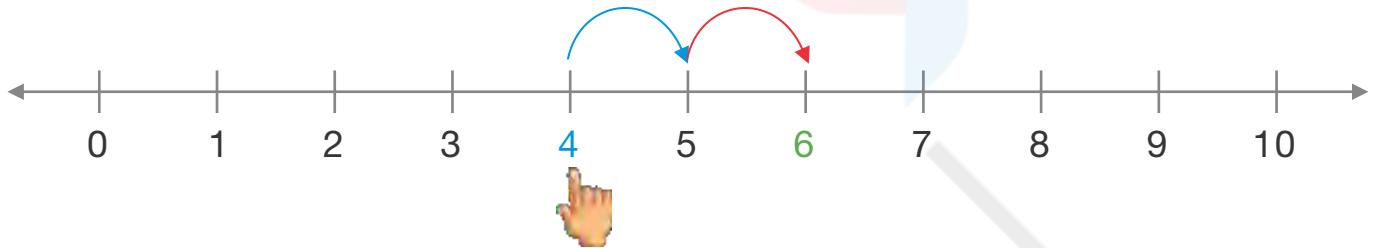
- 
2 plus 2 5
- 
3 plus 4 9
- 
5 plus 5 4
- 
1 plus 6 7
- 
6 plus 3 10
- 
4 plus 1 7



Count On to Add

We can use our fingers or objects for addition. Let us now use a number line to add.

$4 + 2 = ?$



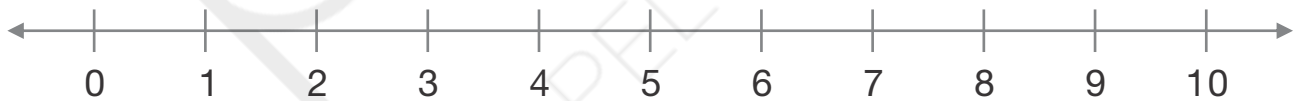
To add 4 and 2, first point your finger to 4, and then move it 2 steps forward. You will reach 6. That is the answer.

Use the number line to add the following and fill in the boxes.

1. $5 + 1 =$



2. $4 + 4 =$



3. $3 + 2 =$



4. $1 + 5 =$



5. $3 + 3 =$



6. $8 + 2 =$



7. $6 + 3 =$



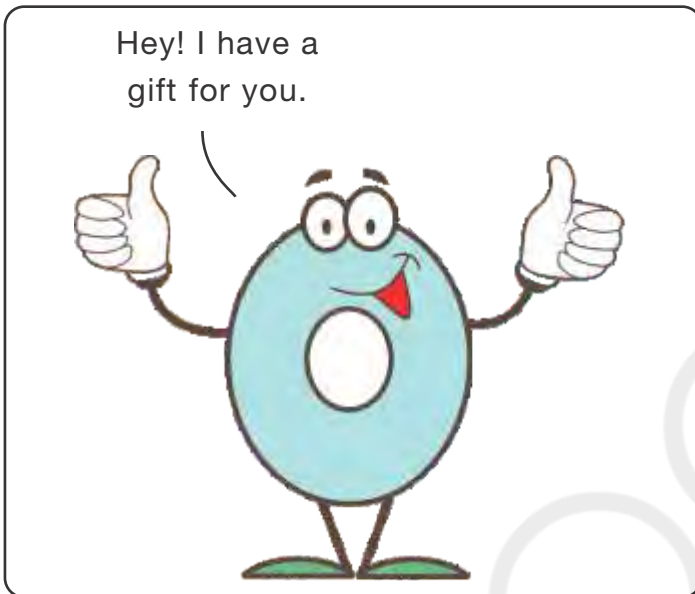
8. $7 + 1 =$





Adding a Zero

Once, there was a man called Zero. He loved gifting zeros to everybody. He would swing his fist in the air and say, 'Hey, I have a surprise for you,' and give a zero. One day, he met Hetal, 'Hi, you have 2 chocolates. Let me give you some more.' Then he opened his fist but there was nothing.



Zero laughed aloud.

Did Zero give any chocolate to Hetal?

How can we write this as a number? _____

Let us see.



$$2 + \square = 2$$

Did the number change? Why?



I ACT

Let us see what happens when we add a zero to a number.

1. $4 + 0 =$

2. $5 + 0 =$

3. $6 + 0 =$

4. $7 + 0 =$

5. $2 + 0 =$

6. $9 + 0 =$

7. $1 + 0 =$

8. $0 + 0 =$



I TALK

Did the numbers change when you added zero to them?

Talk about the reasons for what you find out.





I MATHEMATIZE

What happens when we add 1 to a number?



Let us check it using the number line.



$0 + 1 = 1$

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

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

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

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

$8 + 1 = \underline{\quad}$

$2 + 1 = \underline{\quad}$

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

$9 + 1 = \underline{\quad}$

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

When we add 1 to any number, the sum is the next number on the number line.



I ACT

Listen to your teacher carefully as she calls out the following questions. Quickly tell the answer using the number line.

a. $2 + 1$

b. $6 + 1$

c. $8 + 1$

d. $4 + 1$

e. $9 + 1$

f. $3 + 1$

Help Your Child

Children observe the pattern and induce that the value of a number doesn't change when a zero is added to it; also, when 1 is added, the answer is the next number. These patterns help develop the skill of mental arithmetic in children.



I MATHEMATIZE



Now, I know that if we add 2 to any number, the sum will be 2 steps forward on the number line.

Exactly! You are becoming maths cool.



$0 + 2 = 2$

$1 + 2 = \underline{\quad}$

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

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

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

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

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

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

$8 + 2 = \underline{\quad}$

$9 + 2 = \underline{\quad}$



I MATHEMATIZE



You can also count on to find the sum. For $5 + 3$, keep the bigger number, 5 in mind and count on 3 steps to add.

Fill in the blanks using 'counting on' on number line.

- a. 1 more than 5 is _____ . b. 1 more than 7 is _____ .
c. 2 more than 3 is _____ . d. 2 more than 5 is _____ .
e. 2 more than 6 is _____ . f. 3 more than 5 is _____ .
g. 3 more than 4 is _____ . h. 4 more than 4 is _____ .



I MATHEMATIZE

We are maths cool!
We can add two numbers without using the number line now.
Deepak,
let us add $4 + 2$.

I will keep the bigger number in mind and count on my fingers.

5 6

4

$4 + 2 = 6$

Let us count on and find out the sum quickly.

- a. $4 + 3 =$ _____ b. $9 + 1 =$ _____ c. $2 + 7 =$ _____
d. $8 + 2 =$ _____ e. $5 + 4 =$ _____ f. $2 + 5 =$ _____
g. $4 + 6 =$ _____ h. $3 + 2 =$ _____ i. $6 + 3 =$ _____



Through these tasks, children learn to use various strategies to add two numbers. They will learn number combinations in the next term. The skill of mental arithmetic will get better gradually. In the beginning, give your child enough time for these tasks.



I REVISE



$$2 + 1 = 3$$

This is the same as





$$\begin{array}{r} 2 \\ + 1 \\ \hline 3 \end{array}$$


See the domino above. Does the answer change when we turn the domino?


$$2 + 1 \text{ is the same as } 2 + 1$$


Now, solve the following questions.


1. 
$$\begin{array}{r} 6 \\ + 2 \\ \hline \square \end{array}$$

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

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



4. 
$$\begin{array}{r} 4 \\ + 4 \\ \hline \square \end{array}$$

5. 
$$\begin{array}{r} 4 \\ + 1 \\ \hline \square \end{array}$$

6. 
$$\begin{array}{r} 5 \\ + 4 \\ \hline \square \end{array}$$













I TALK

See this card.  It is $2 + 3$. What do we get when we add these numbers? Then we rotate the card. What do we see?  It is $3 + 2$. What do we get when we add these numbers? Why does this happen? Is this true for other numbers as well? Let us check. Take any two cards and add the numbers written on them. Now, change their order and check whether you get the same answer or not. Ask your friends to repeat this activity and check if their answers also match after changing the order of numbers.



PRACTICE AT HOME

Match the cards with the same number of dots.

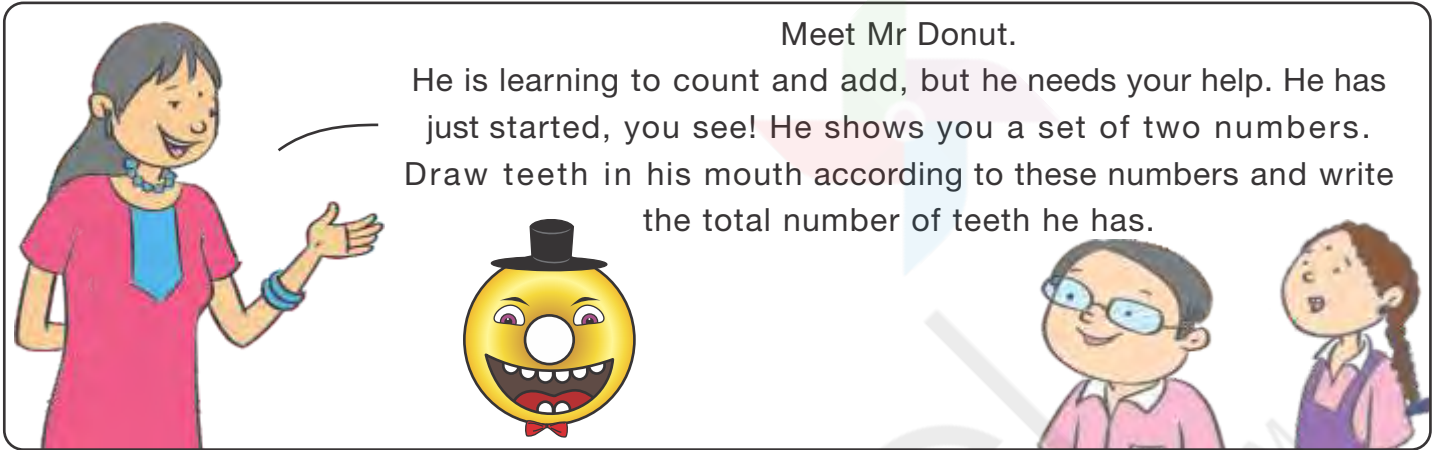
-  
-  
-  
-  
-  

Help Your
Child

At this stage, children only explore the commutative property of addition, i.e., the sum remains the same even if the order of addends changes, using dominoes in the classroom. They revisit and use it later in higher grades.



Story Sums

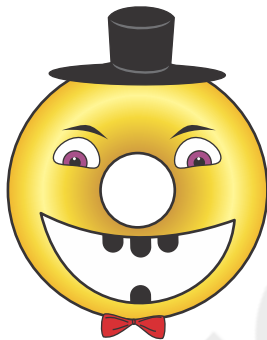


Meet Mr Donut.

He is learning to count and add, but he needs your help. He has just started, you see! He shows you a set of two numbers. Draw teeth in his mouth according to these numbers and write the total number of teeth he has.

One example has been done for you.

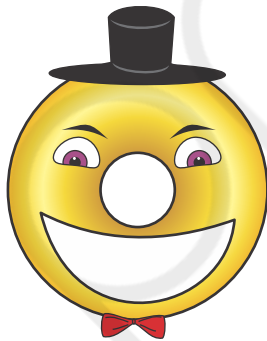
1.
$$\begin{array}{r} 3 \\ + 1 \\ \hline 4 \\ \hline \end{array}$$



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



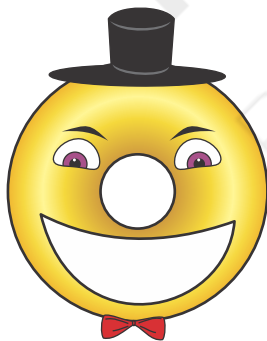
3.
$$\begin{array}{r} 4 \\ + 5 \\ \hline \\ \hline \end{array}$$



4.
$$\begin{array}{r} 6 \\ + 2 \\ \hline \\ \hline \end{array}$$



5.
$$\begin{array}{r} 3 \\ + 0 \\ \hline \\ \hline \end{array}$$



6.
$$\begin{array}{r} 8 \\ + 1 \\ \hline \\ \hline \end{array}$$





Story Sums

Solve the following story sums. Draw their images if you feel like, under each question.

1. Kirat saw 3 bugs. Ben saw 5 bugs.
How many bugs did they see together?

$$\begin{array}{r} 3 \text{ bugs} \\ + 5 \text{ bugs} \\ \hline \text{Total} \quad \text{bugs} \end{array}$$

2. Piya has 2 green frocks and 4 red frocks.
How many frocks does she have in all?

$$\begin{array}{r} 2 \text{ frocks} \\ + 4 \text{ frocks} \\ \hline \text{Total} \quad \text{frocks} \end{array}$$

3. There are 4 children in the class. After sometime,
4 more children come. How many children are
there now?

$$\begin{array}{r} 4 \text{ children} \\ + 4 \text{ children} \\ \hline \text{Total} \quad \text{children} \end{array}$$

4. In a pond, there are 5 fish. Then, 2 more
are added. How many fish are there in all?

$$\begin{array}{r} 5 \text{ fish} \\ + 2 \text{ fish} \\ \hline \text{Total} \quad \text{fish} \end{array}$$

5. Dipali saw 4 ants. David saw 5 ants.
How many ants did they see altogether?

$$\begin{array}{r} 4 \text{ ants} \\ + 5 \text{ ants} \\ \hline \text{Total} \quad \text{ants} \end{array}$$



Word problems are named as story sums for children to relate with them easily. Please use the same vocabulary at home.



PRACTICE AT HOME

Story Sums

1. Sasha has 3 cats.
Deepti has 2 cats.
How many cats
are there in all?



$$\begin{array}{r} 3 \text{ cats} \\ + 2 \text{ cats} \\ \hline \text{Total} \quad \underline{\quad} \text{ cats} \end{array}$$



2. We saw 2 bugs.
We saw 4 more.
How many bugs
did we see in all?



$$\begin{array}{r} 2 \text{ bugs} \\ + 4 \text{ bugs} \\ \hline \text{Total} \quad \underline{\quad} \text{ bugs} \end{array}$$



3. Mehul has 5 pens.
Sushil has 3 pens.
How many pens do
they have in all?



$$\begin{array}{r} 5 \text{ pens} \\ + 3 \text{ pens} \\ \hline \text{Total} \quad \underline{\quad} \text{ pens} \end{array}$$



4. I have 4 hats.
Mom has 1 hat.
How many hats
are there in all?



$$\begin{array}{r} 4 \text{ hats} \\ + 1 \text{ hat} \\ \hline \text{Total} \quad \underline{\quad} \text{ hats} \end{array}$$



Help Your
Child

Word problems help children see that addition is useful in various contexts. The teacher reads the word problems for them to understand. Similarly, they require your support at home too.

Revision

Hetal loves learning in Grade 1 now. She has new friends like Deepak too. She is happy learning new things. She is becoming 'maths cool'. Let us know what all have they learnt in Grade 1 so far.



I REVISE

I know ones and tens in number and their names.



I can compare numbers.



1. Write ones and tens of given numbers. Write their names too.

a. 63 _____ tens and _____ ones = _____

b. 78 _____ tens and _____ ones = _____

c. 84 _____ tens and _____ ones = _____

d. 71 _____ tens and _____ ones = _____

2. Compare numbers using the appropriate signs $<$, $>$ or $=$.

a. 14 _____ 24

b. 70 _____ 80

c. 10 _____ 90

d. 85 _____ 85

e. 99 _____ 91

f. 17 _____ 75



I know odd and even numbers.

I know numbers till 199.



3. Write odd or even for the given numbers.

8 _____

1 _____

2 _____

7 _____

5 _____

3 _____

6 _____

10 _____

4 _____

9 _____

4. Fill in the following number grid.

101	102	103	104		106	107	108		110
111	112	113		115	116		118	119	120
	122	123	124	125	126	127	128	129	130
131	132		134	135		137	138	139	
141	142	143	144		146	147	148	149	150
151		153	154	155	156	157	158		160
161	162	163		165	166	167	168	169	
	172		174	175	176	177	178		180
181	182	183	184	185	186		188	189	190
	192	193	194		196	197	198	199	



I know how to
add numbers
in different ways.

I can solve story
sums too!



5. Add the following using the number line.



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

$6 + 3 = \underline{\quad}$

$9 + 1 = \underline{\quad}$

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

$8 + 2 = \underline{\quad}$

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

6. Keep the greater number in mind and add the smaller numbers using fingers.

$8 + 2 = \underline{\quad}$

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

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

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

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

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

7. Solve the following story sums. Also, draw their images.

- a. There are seven red apples and two green apples in a basket. How many total apples are there in the basket?

$$\begin{array}{r} 7 \text{ red apples} \\ + 2 \text{ green apples} \\ \hline \hline \end{array}$$

- b. Elika has one ball. Malini has nine balls. How many balls do they have in all?

$$\begin{array}{r} 1 \text{ ball} \\ + 9 \text{ balls} \\ \hline \hline \end{array}$$

- c. Josh has three oranges and Sharon has seven oranges. How many oranges do Josh and Sharon have altogether?

$$\begin{array}{r} 3 \text{ oranges} \\ + 7 \text{ oranges} \\ \hline \hline \end{array}$$

- d. Abaan has two peaches and Saba has four peaches. How many peaches do Abaan and Saba have altogether?

$$\begin{array}{r} 2 \text{ peaches} \\ + 4 \text{ peaches} \\ \hline \hline \end{array}$$

- e. Swati has four toys and Disha has five toys. How many toys do Swati and Disha have altogether?

$$\begin{array}{r} 4 \text{ toys} \\ + 5 \text{ toys} \\ \hline \hline \end{array}$$



SINGLE-DIGIT SUBTRACTION



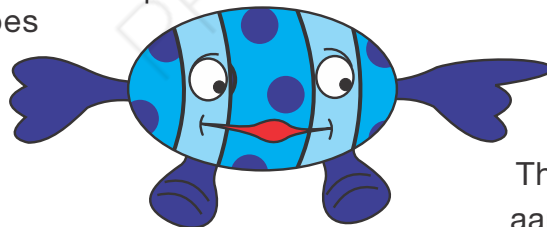
I REVISE

$$4 - 1 = 3$$

You have learnt how to subtract in the previous grade. Watch the story on the interactive board and find out the answers.

Hello, do you remember Mr Donut whom you met while doing addition? I am his cousin. My name is Candy.

I have a mango tree in my garden. Help me count the number of mangoes on the tree.



mangoes

I will give them to my parents. They will prepare tasty aam panna, aam papad and mango pickle for me.

There comes a squirrel ...



Hi Candy, I love mangoes. Will you please give me one mango? My baby will be happy to have it.

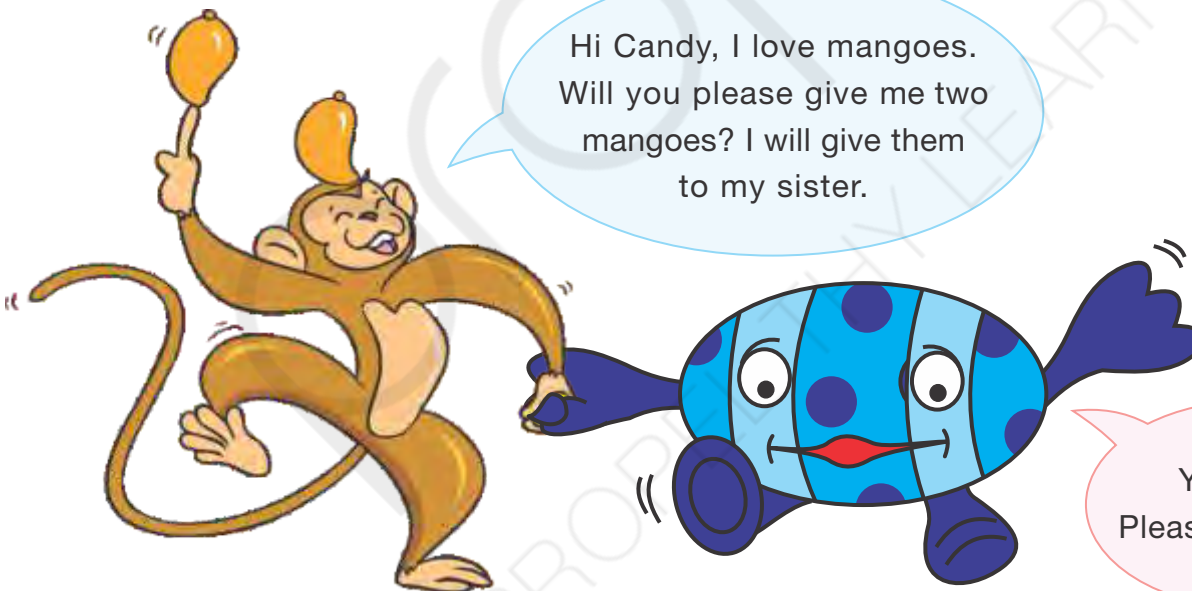
Yes, sure. Please take one.



The squirrel takes away 1 mango from the 10 mangoes. How many mangoes are left with Candy now?

mangoes

There comes a monkey ...



Hi Candy, I love mangoes. Will you please give me two mangoes? I will give them to my sister.

Yes, sure. Please take them.

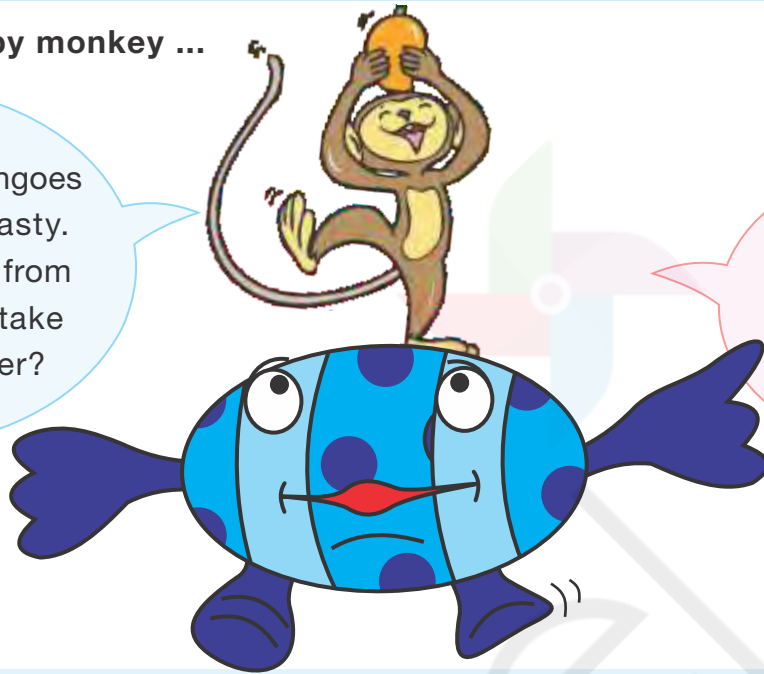


The monkey takes away 2 mangoes from the 9 mangoes. How many mangoes are left on the tree now?

mangoes

There comes a baby monkey ...

Hi Candy, these mangoes seem to be very tasty. I could smell them from a distance. Can I take one for my mother?



I would love to give you a mango for your mother. Please take one.



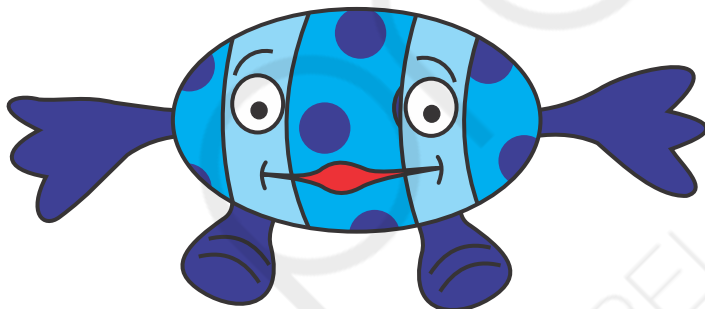
The baby monkey takes away 1 mango from the 7 mangoes. How many mangoes are left on the tree now?

mangoes



I TALK

1. What is happening in the story?



Are my mangoes getting less or more when I am giving them away?

2. Can Candy's parents still make a lot of aam panna, aam papad and mango pickle? Will they be able to make a lesser quantity of these items than what they could?

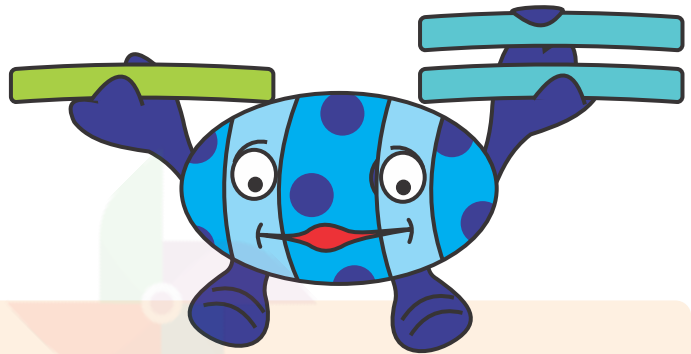
Help Your Child

Children observe that subtraction means reduction of the number of objects in a set. This story is a repetitive text. This enables children to read with minimal help after they listen to it from the teacher.



I REVISE

You have learnt the symbol of subtraction and equal to. Let's recall them and meet Candy's classmate, Scoopy.



How much is 1 less than 4?

See:

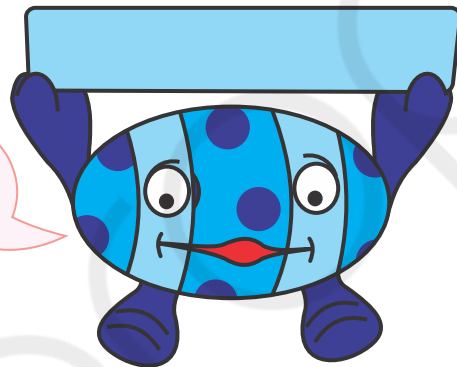


Say: 4 minus 1 is equal to 3

Write: $4 - 1 = 3$

'Taking away' is called 'minus' or 'subtraction'.

Writing $4 - 1 = 3$ takes less time.



Oh yes! It is easy.



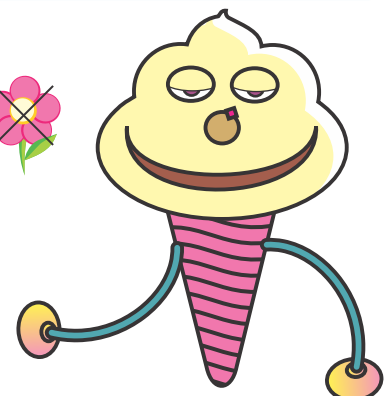
I TALK

For a subtraction sum, answer the following.

1. What does the first number show?
2. What does the second number show?
3. What does the third number show?



$$3 - 1 = 2$$



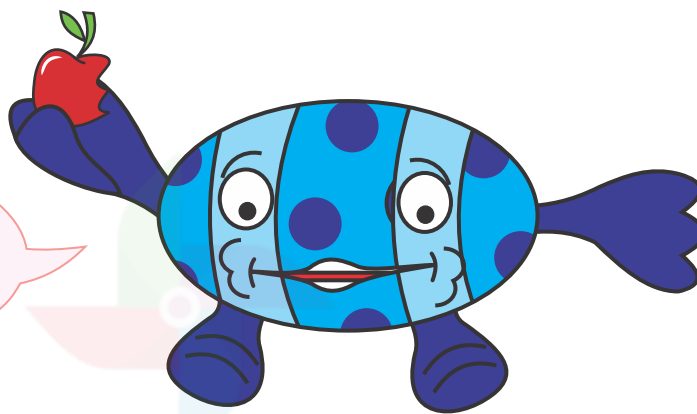
Help Your Child

First, children learn a new concept through concrete things. When they become comfortable using those things, they learn through pictures. After these two modes, they become ready to use symbols for the same concept.



PRACTICE AT HOME

I am eating some fruits. Find out how many fruits will be left for Scoopy. Subtract and colour the remaining fruits for her.



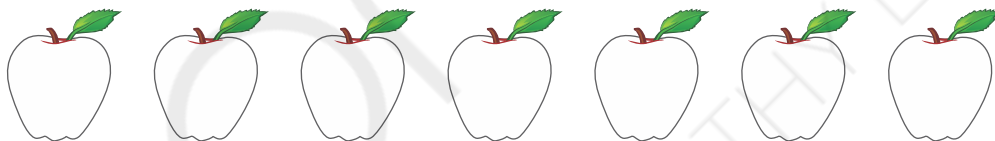
1. 4 bananas – 2 bananas = bananas



2. 5 guavas – 3 guavas = guavas



3. 7 apples – 5 apples = apples



4. 9 papayas – 4 papayas = papayas



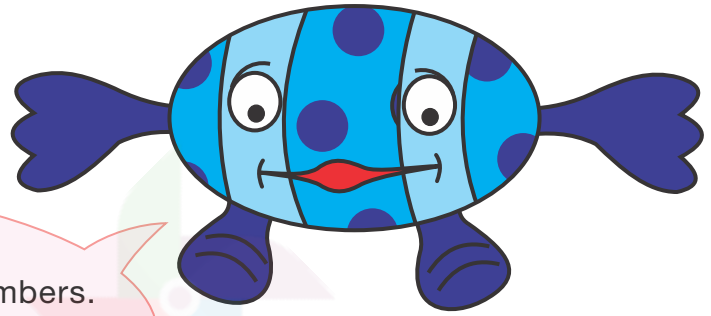
Help Your Child

If needed, suggest to your child to cross out the number of objects to be subtracted from a set before writing the answer. This task helps children represent subtraction facts in a different form.

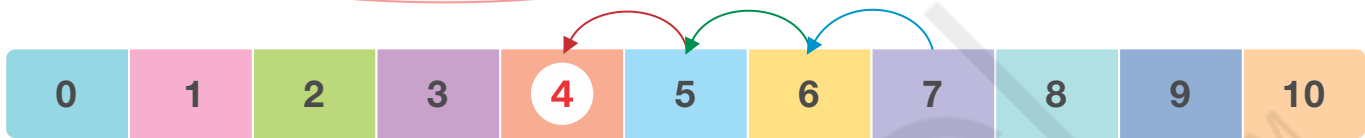


I ACT

Counting Back to Subtract



Let us learn a new way of subtracting numbers. To find out $7 - 3$, point your finger to 7 and move it 3 squares backwards. You will reach at 4.



$$7 - 3 = 4$$

Use the number strip to solve the following questions.

1. $5 - 3 =$



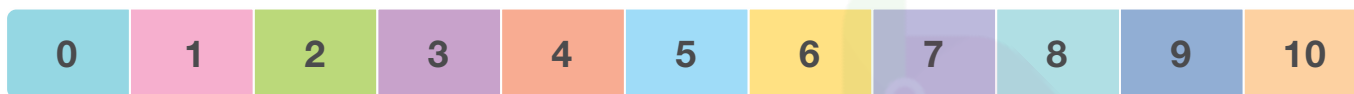
2. $7 - 5 =$



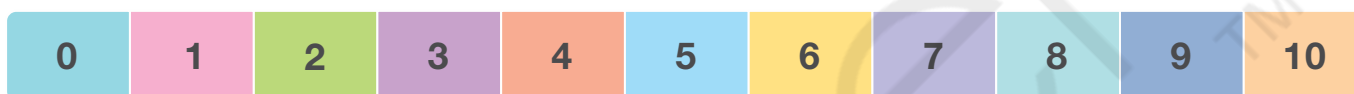
3. $9 - 3 =$



4. $4 - 3 =$



5. $5 - 1 =$



6. $10 - 6 =$



7. $9 - 5 =$



Using number strips helps children see the backward movement and reduction in quantity as a result of subtraction.



I PRACTISE

Vertical Subtraction

See the questions: $6 - 4 = 2$ and $\begin{array}{r} 6 \\ - 4 \\ \hline 2 \end{array}$.

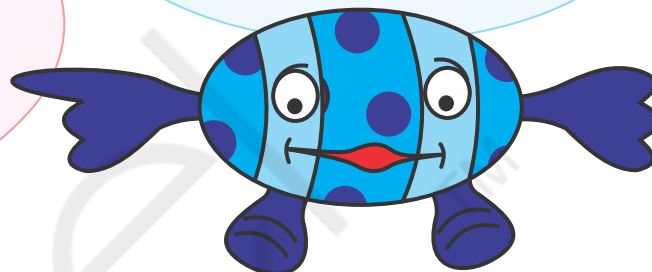
Subtraction questions can be written like this too.

$$\begin{array}{r} 6 \\ - 4 \\ \hline 2 \end{array}$$

This is the same as $6 - 4 = 2$.



Are these questions same or different? Share the reason for your answer.



Solve the following questions and check if this is always true.

1. $\begin{array}{r} 9 \\ - 5 \\ \hline \square \end{array}$

$9 - 5 = \square$

2. $\begin{array}{r} 4 \\ - 3 \\ \hline \square \end{array}$

$4 - 3 = \square$

3. $\begin{array}{r} 8 \\ - 6 \\ \hline \square \end{array}$

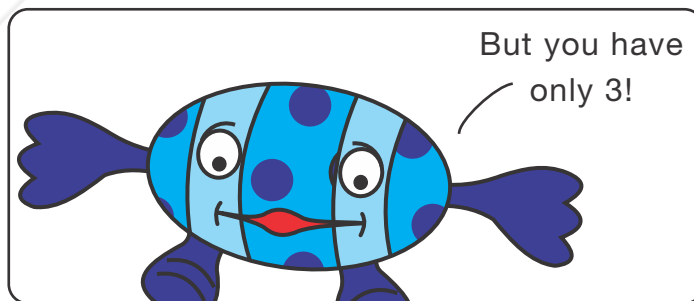
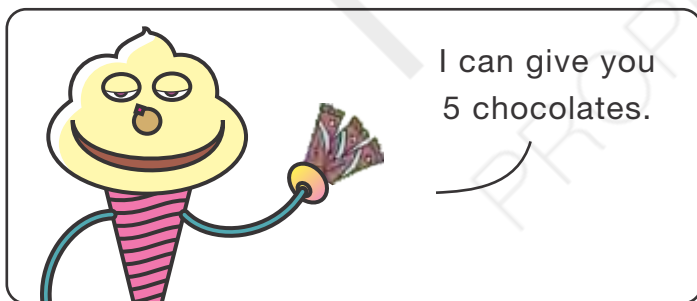
$8 - 6 = \square$

4. $\begin{array}{r} 7 \\ - 1 \\ \hline \square \end{array}$

$7 - 1 = \square$



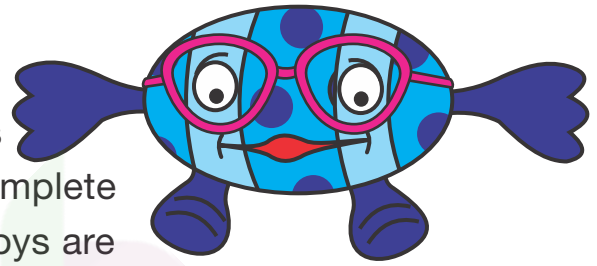
I TALK



Can 5 things be taken away from a set of 3 things? Do we always subtract the small number from the big number? Give reasons for your answer.



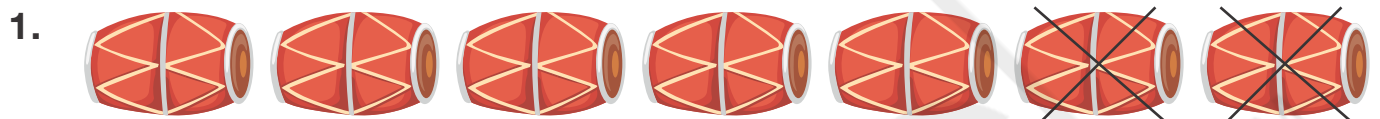
I ACT



Scoopy has some toys to play with. Candy takes some of them away. See each picture and complete the subtraction sentence to find out how many toys are left with Scoopy. Read these sentences in another way. One example has been done for you.

When we subtract from a number, it is reduced.
Let us read.

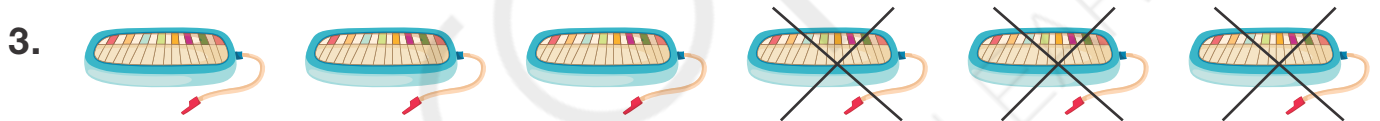
We can say:



$7 - 2 = 5$ We can also say: 2 less than 7 is 5.



$9 - 3 = \underline{\quad}$ or 3 less than 9 is .



$6 - 3 = \underline{\quad}$ or 3 less than 6 is .



$8 - 4 = \underline{\quad}$ or 4 less than 8 is .



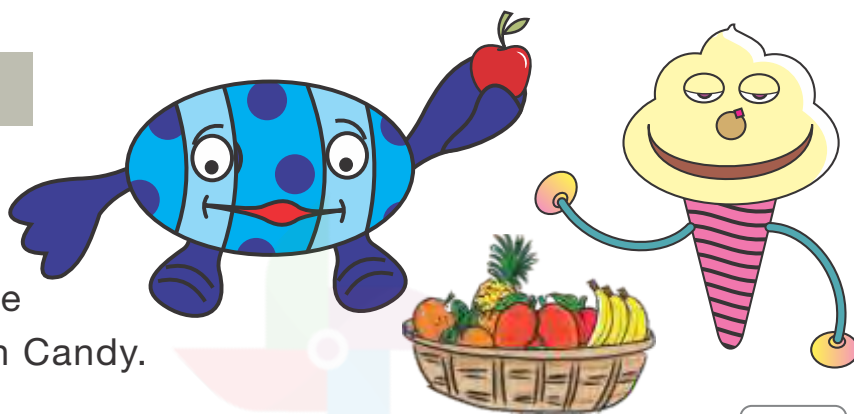
Changing pictures to number sentences and words helps children develop representation skills. This helps them internalise the learning as they get an opportunity to transfer their learning to various forms. Through this task, they also develop the language associated with subtraction.



I EXPLORE

Subtracting One

Candy shares one fruit of each kind he has with Scoopy. Write the number of fruits that are left with Candy.



1. 

$4 - 1 = \square$

2. 


$8 - 1 = \square$

3. 

$10 - 1 = \square$

4. 

$3 - 1 = \square$

5. 

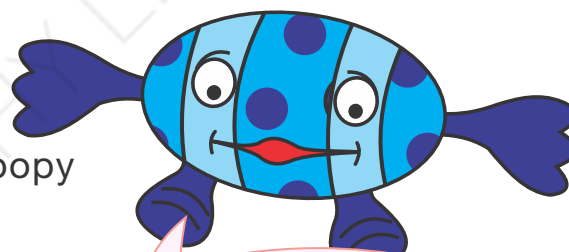
$6 - 1 = \square$



I TALK

What happens when Candy gives 1 fruit to Scoopy from each set?

What do we find out about subtracting one from this situation?



When we subtract 1 from a number, the answer is the number before that.



I ACT

Now, answer the following problems.

1. $7 - 1 = \square$

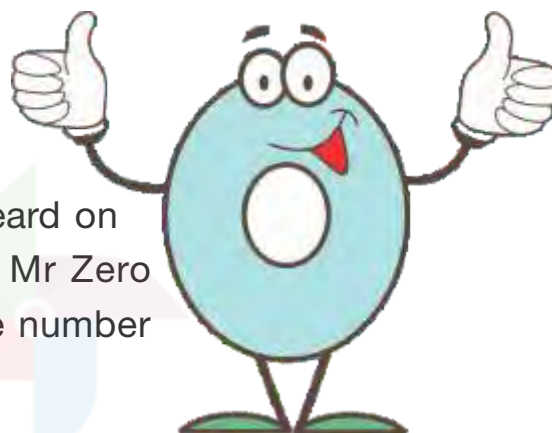
2. $2 - 1 = \square$

3. $9 - 1 = \square$



Subtracting a Zero

Do you remember the story of Mr Zero that you heard on the interactive board? What used to happen when Mr Zero gifted something to children? Did that add to the number of things they already had?



Can Mr Zero take away a number of things from somebody? Let's check it by solving the following questions.

1.
$$\begin{array}{r} 4 \quad \bullet \bullet \\ - 0 \\ \hline \square \end{array}$$

2.
$$\begin{array}{r} 6 \quad \bullet \bullet \bullet \\ - 0 \\ \hline \square \end{array}$$

3.
$$\begin{array}{r} 3 \quad \bullet \bullet \bullet \\ - 0 \\ \hline \square \end{array}$$

4.
$$\begin{array}{r} 7 \quad \bullet \bullet \bullet \bullet \\ - 0 \\ \hline \square \end{array}$$

5.
$$\begin{array}{r} 8 \quad \bullet \bullet \bullet \bullet \\ - 0 \\ \hline \square \end{array}$$

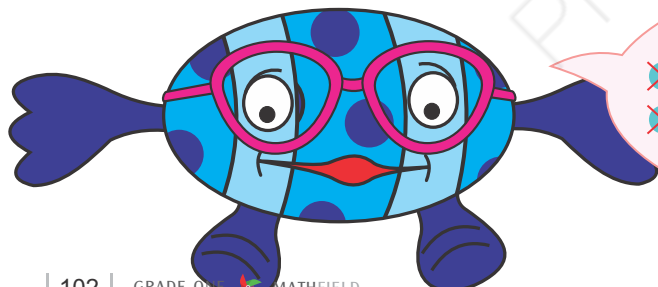
6.
$$\begin{array}{r} 5 \quad \bullet \bullet \bullet \\ - 0 \\ \hline \square \end{array}$$

Wow! When we subtract a zero from any number, the answer is the number itself.



Subtracting a Number from Itself

Now, through the interactive board, find out what happens when a number is subtracted from itself.

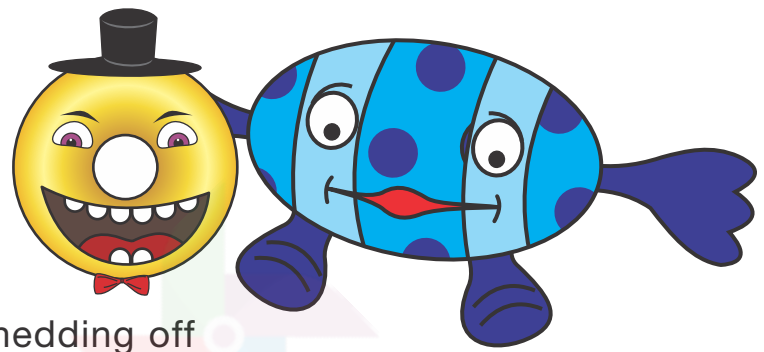


$$5 - 5 = 0$$

No blocks are left. Check with other numbers too and write them in your notebook.



I ACT



Story Sums

Do you remember Mr Donut?

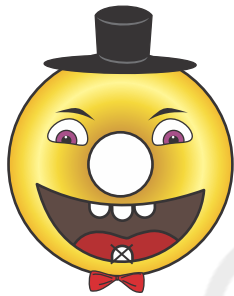
He is growing up. His old teeth are shedding off for new ones to grow.

Cross out the teeth shed off according to the given questions. Write how many teeth are left in the mouth.

One example has been given for you.

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

3



$$\begin{array}{r} 4 \\ - 2 \\ \hline \end{array}$$



$$\begin{array}{r} 6 \\ - 4 \\ \hline \end{array}$$



$$\begin{array}{r} 8 \\ - 6 \\ \hline \end{array}$$



$$\begin{array}{r} 8 \\ - 3 \\ \hline \end{array}$$



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





I EXPLORE

Subtracting One Less than a Number

Scoopy wants more fruits. Candy gives her the following number of fruits. Find out the number of remaining fruits.



$6 - 5 = \square$



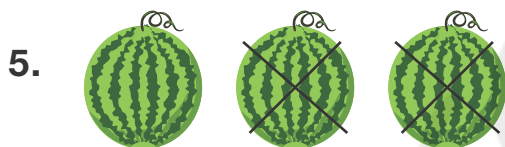
$7 - 6 = \square$



$8 - 7 = \square$



$9 - 8 = \square$



$3 - 2 = \square$



I TALK

What do we find out about subtracting a number one less than the number of things we have?

We always get 1 as an answer, when we subtract a number one less than the number of things in a set.



I ACT

Now, answer the following problems.

1. $5 - 4 = \square$

2. $4 - 3 = \square$

3. $10 - 9 = \square$

4. $1 - 0 = \square$

5. $2 - 1 = \square$



I ACT

Scoopy is reading the story of Prachi and Aditya. Let us read with her.

Prachi has a toy corner in her house. One day, she feels that she doesn't need so many toys. She plans to give away some of them to Aditya. Aditya comes to her home daily with his mother. When his mother cleans the house, Aditya and Prachi play together. Find out how many toys are left with Prachi after she gives away some of her toys to Aditya.

1. Prachi has 5 dolls. She gives 4 dolls to Aditya.
How many dolls are left with her?



$$\begin{array}{r} 5 \text{ dolls} \\ - 4 \text{ dolls} \\ \hline \text{doll} \end{array}$$

2. Prachi has 6 toy drums. She gives 2 toy drums to Aditya.
How many drums does she have now?



$$\begin{array}{r} 6 \text{ toy drums} \\ - 2 \text{ toy drums} \\ \hline \text{toy drums} \end{array}$$

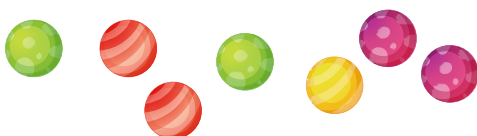
Aditya feels happy to have the toys. Next day, he brings some ice-cream sticks and coloured marbles to play with.

3. Aditya has 8 ice-cream sticks. He gives 3 sticks to Prachi. How many sticks are left with him?



$$\begin{array}{r} 8 \text{ ice-cream sticks} \\ - 3 \text{ ice-cream sticks} \\ \hline \text{ice-cream sticks} \end{array}$$

4. Aditya has 7 coloured marbles. He gives 2 marbles to Prachi. How many marbles are left with him?

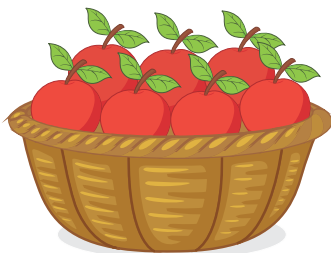


$$\begin{array}{r} 7 \text{ coloured marbles} \\ - 2 \text{ coloured marbles} \\ \hline \text{coloured marbles} \end{array}$$



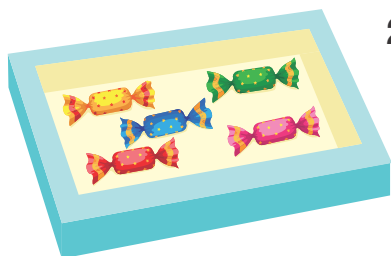
PRACTICE AT HOME

Solve the following story sums.



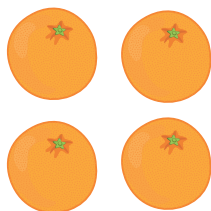
1. Nina has 7 apples in a basket. She eats 2 of them. How many apples are left with her?

$$\begin{array}{r} 7 \text{ apples} \\ - 2 \text{ apples} \\ \hline \text{apples} \end{array}$$



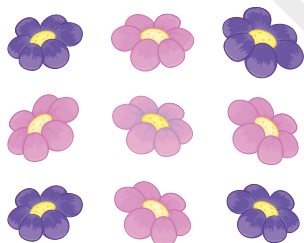
2. Sushil has 5 sweets in a box. He eats all of them. How many sweets are left with him?

$$\begin{array}{r} \square \text{ sweets} \\ - \square \text{ sweets} \\ \hline \text{sweets} \end{array}$$



3. Jimmy has 4 oranges. He eats 2 of them. How many oranges are left with him?

$$\begin{array}{r} \square \text{ oranges} \\ - \square \text{ oranges} \\ \hline \text{oranges} \end{array}$$



4. Kirat finds 9 flowers in her garden. She uses 5 of them to make a garland. She keeps the rest of them in a vase. How many flowers are kept in the vase?

$$\begin{array}{r} \square \text{ flowers} \\ - \square \text{ flowers} \\ \hline \text{flowers} \end{array}$$

Help Your Child

With word problems, children learn to apply subtraction in various contexts. The teacher reads the word problems for them to understand. They may require your support at home too.



I PRACTISE

Solve the following story sums. You can draw their image as well.



1. Jaya has 6 crayons. She gives 4 crayons to her friend, Shreya. How many crayons are left with her?

crayons

– crayons

_____ crayons

2. Ali has 8 erasers. He gives 3 erasers to Harpreet. How many erasers are left with him?

erasers

– erasers

_____ erasers

3. Hetal has 10 bags. She gifts 2 bags to Mala. How many bags does she have now?

bags

– bags

_____ bags

4. Rehaan has 7 cookies. He eats none. How many cookies does he have?

cookies

– cookies

_____ cookies

5. Kriti has 8 toys. She breaks 2 toys. How many toys does she have now?

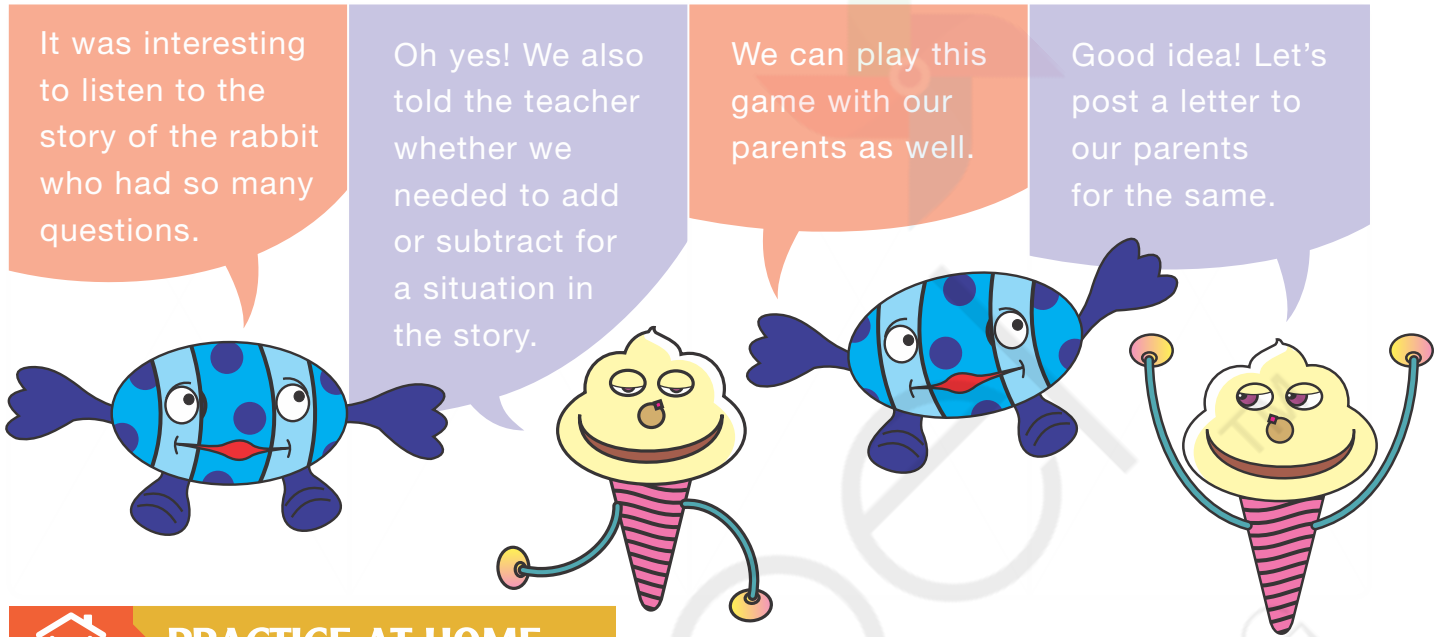
toys

– toys

_____ toys

I WATCH

Let us watch the story of a rabbit on the interactive board and make addition or subtraction questions.



PRACTICE AT HOME

Dear Mom / Dad,

Ask me a story sum and I will tell you whether you need to add or subtract! Do the needful and tell me the answer. I will check the answer. Let me give you an example.

Swati had 8 stickers. She gave 5 stickers to her brother to decorate a card. How many stickers are left with her?

Create more story sums like this and keep asking.

I will check your answers and give you points.

Ten points will fetch you a hug!

Love

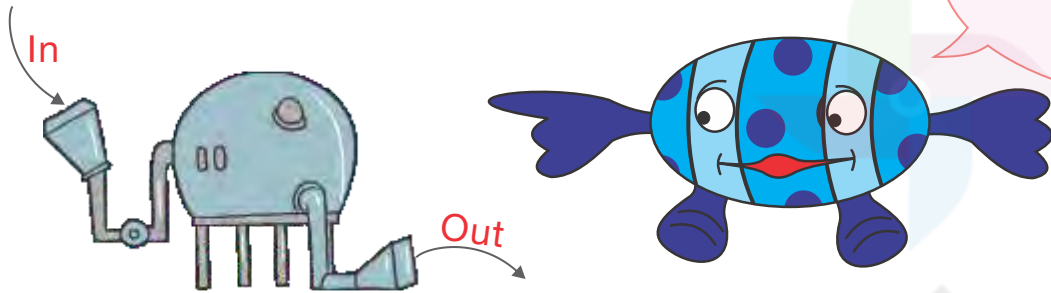




I ACT

Change Machine

I have a change machine. It changes a question to a different form. Let's see what it does.



1. In  Out $4 - 2 = 2$

2. In $5 - 1 = 4$ Out 

The change machine changes pictures to number statements and number statements to pictures. Write or draw what the change machine will do to the following questions.

1. In $7 - 4 = 3$ Out

2. In Out 

3. In $8 - 5 = 3$ Out

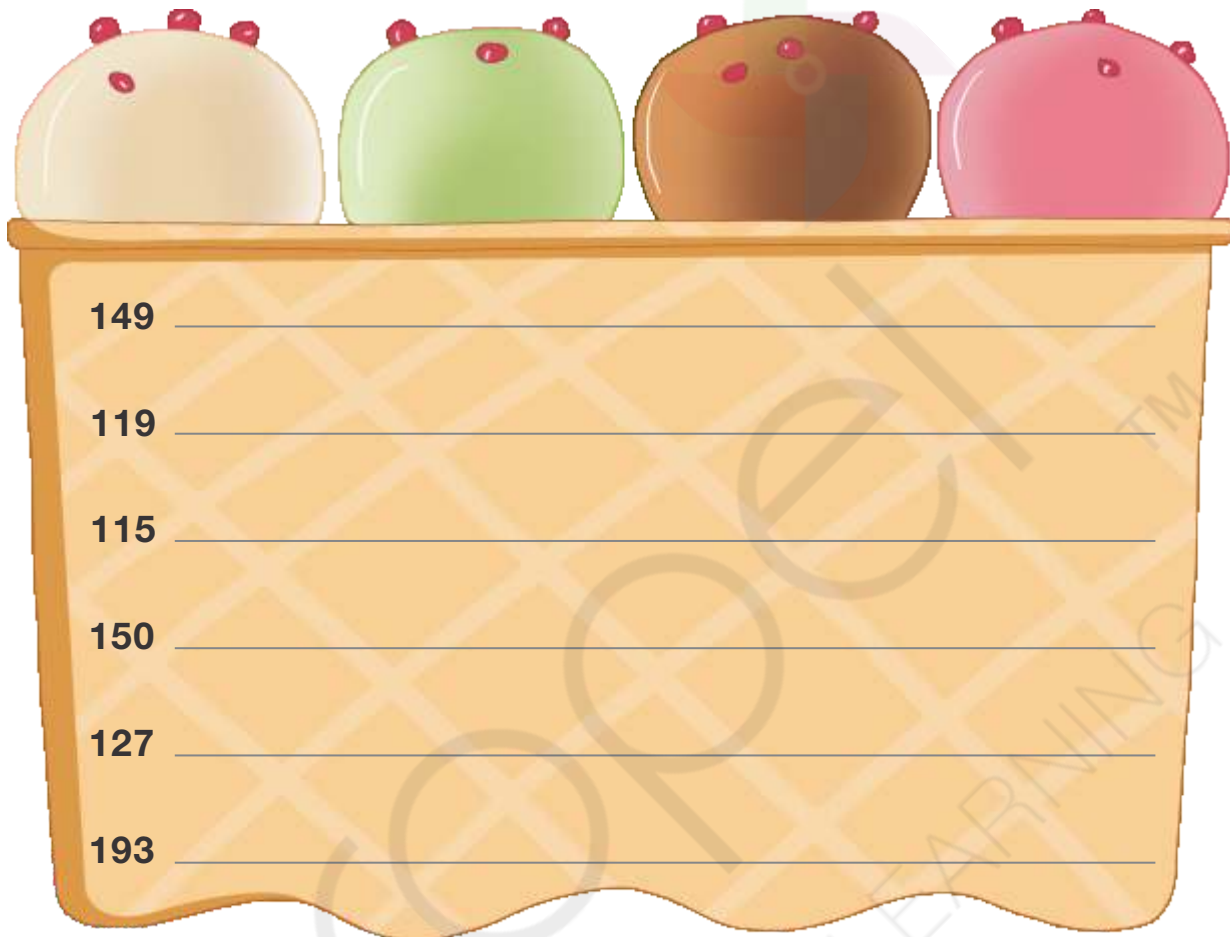


The change machine provides an interesting context for children to learn converting a pictorial representation into numeric form and vice versa.



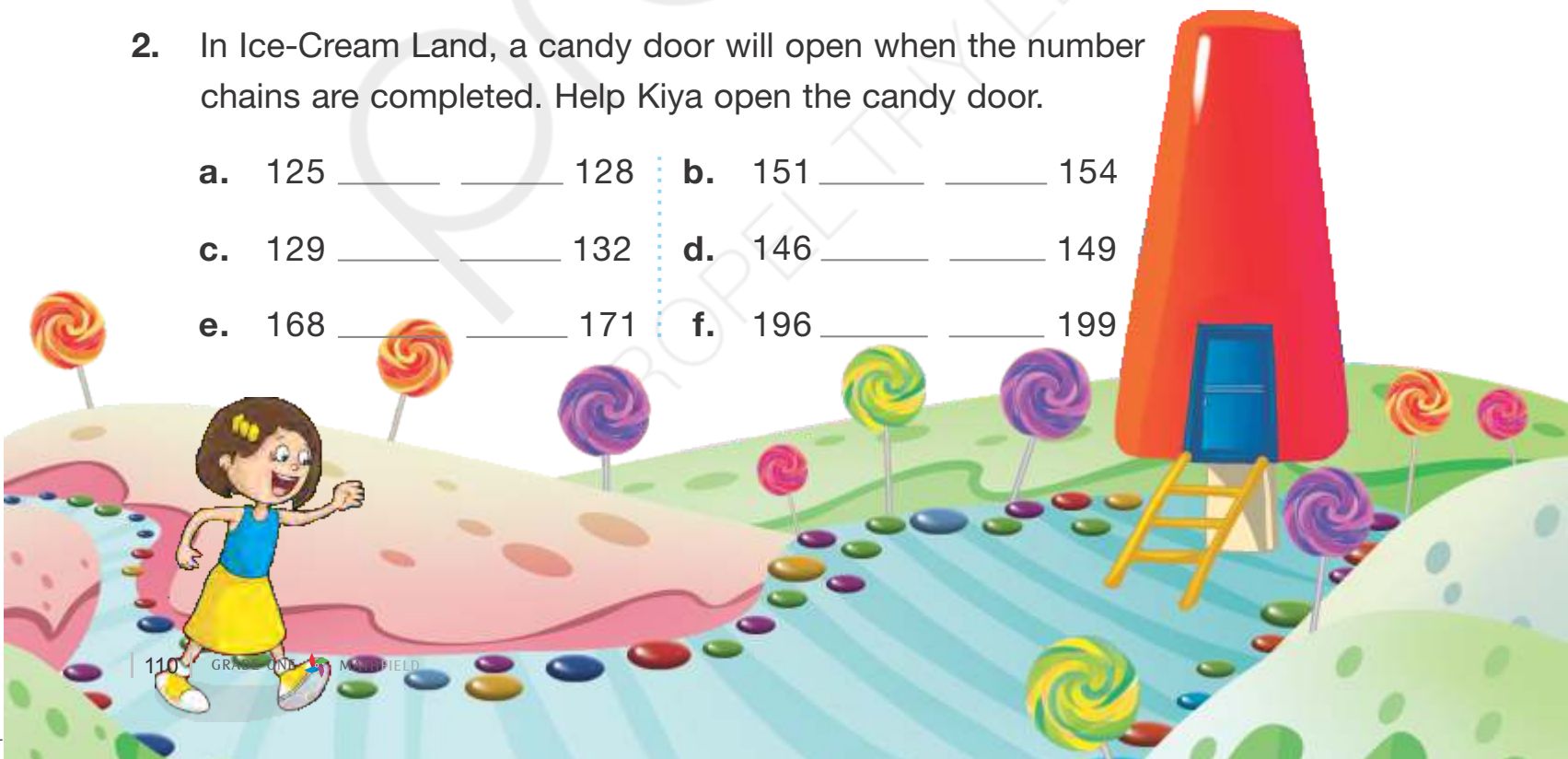
I REVERSE

1. Kiya is in Ice-Cream Land. Write the number names for the numbers given below to help Kiya have the ice cream.

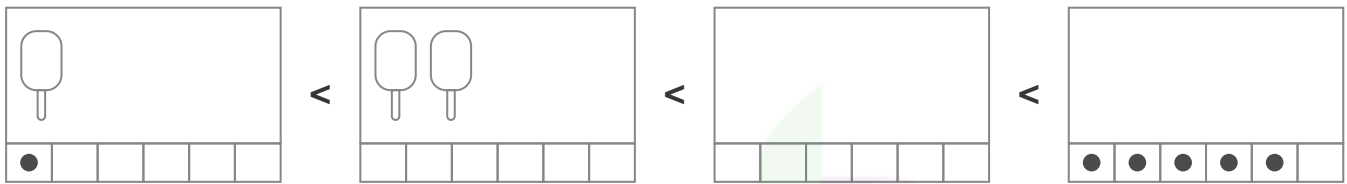


2. In Ice-Cream Land, a candy door will open when the number chains are completed. Help Kiya open the candy door.

- a. 125 _____ 128 b. 151 _____ 154
- c. 129 _____ 132 d. 146 _____ 149
- e. 168 _____ 171 f. 196 _____ 199



3. Complete the drawing to make the signs correct.



4. Use the signs of comparison (<, > or =) for the following numbers.

a. 22 _____ 52

b. 45 _____ 25

c. 96 _____ 90

d. 76 _____ 67

e. 66 _____ 99

f. 38 _____ 38

g. 58 _____ 58

h. 35 _____ 53

i. 91 _____ 41

j. 64 _____ 57

k. 75 _____ 95

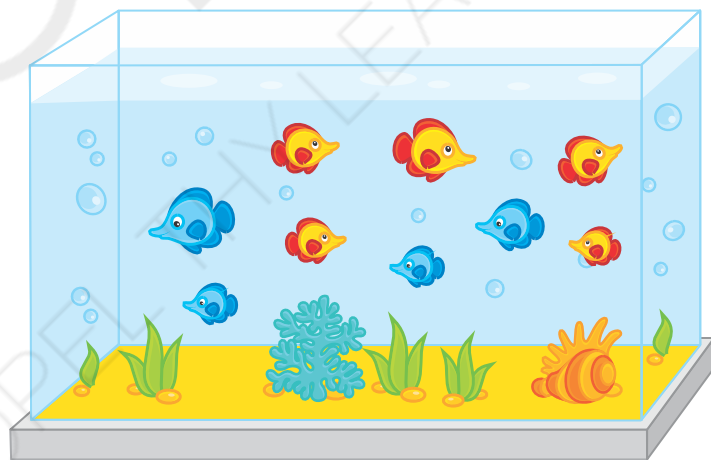
l. 52 _____ 52

m. 85 _____ 98

n. 69 _____ 69

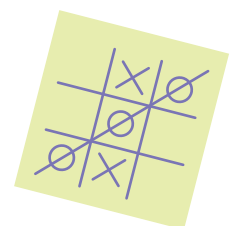
o. 25 _____ 62

5. Think of a story sum for this picture. Share your story sum with the class.

$$\begin{array}{r}
 \square \\
 + \square \\
 \hline
 \square
 \end{array}$$


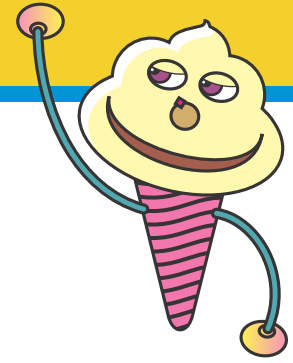
 I MATHEMATIZE

Play cross and nought with your partner. Some smartphones also have this game! Talk to your parents and play the game with them on their phones.





SHAPES AND SPATIAL UNDERSTANDING

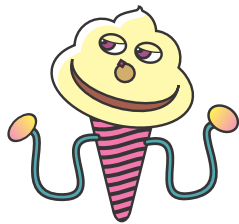
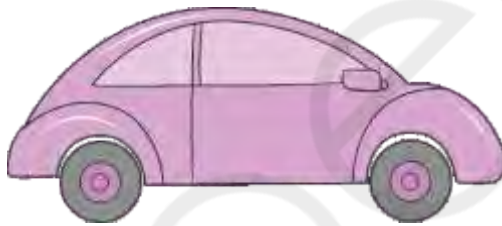


I TALK

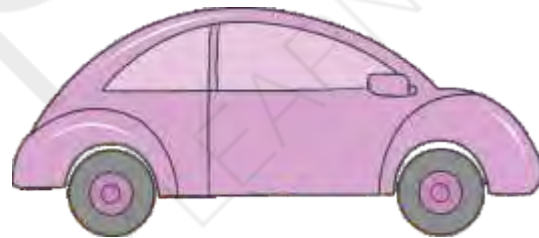
Hi, I am Scoopy, the monster you met earlier. You watched the video of Tom and Jerry in the class and talked about various positional words. Now, observe my positions and fill in the blanks.



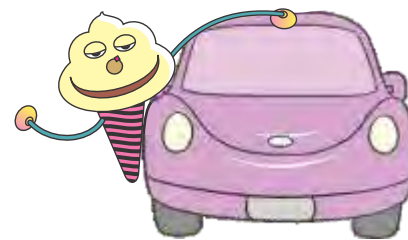
I am _____ the car. (near/far)



I am _____ the car. (near/far)



I am _____ the car.
(beside/behind)



I am _____ the car.
(beside/behind)



I OBSERVE

You listened to a story narrated by your teacher using puppets. You also talked about the position of various people and things in the story. Now, look at the given picture and talk about what you see in it.

Who is **far** from the tree?

Who is **near** the tree?

What is **on** the tree?

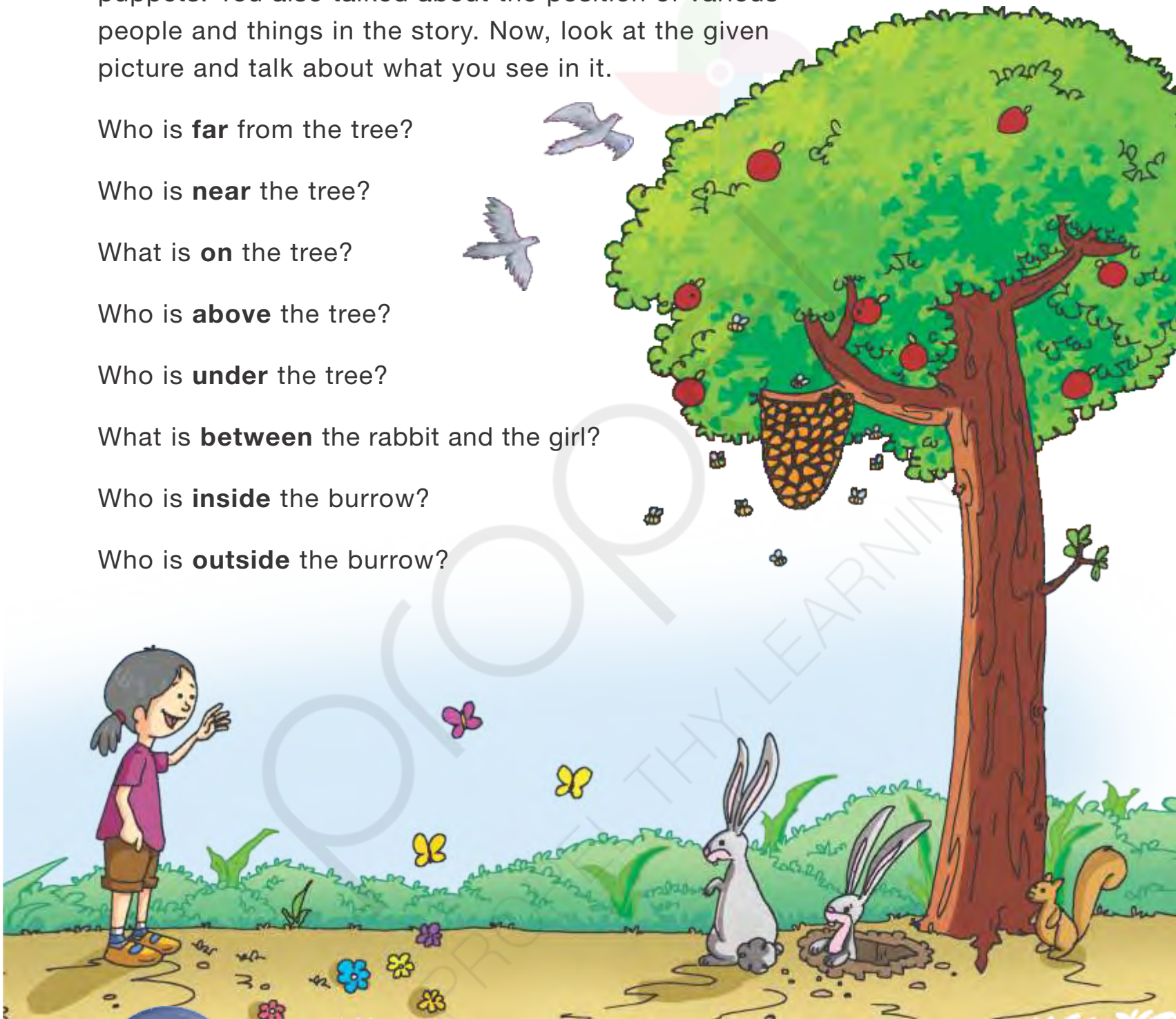
Who is **above** the tree?

Who is **under** the tree?

What is **between** the rabbit and the girl?

Who is **inside** the burrow?

Who is **outside** the burrow?



Help Your
Child

Use these bold words often in your interaction with children. These are positional words. The concept of position plays a fundamental role in learning about shapes and developing spatial skills.

Three-Dimensional Shapes

Form groups of six students each in your class. Each group will take a few objects (10-12) from a bag. Play with them and observe the objects for some time. Sort similar-shaped objects together. Now, talk about why you grouped them that way.

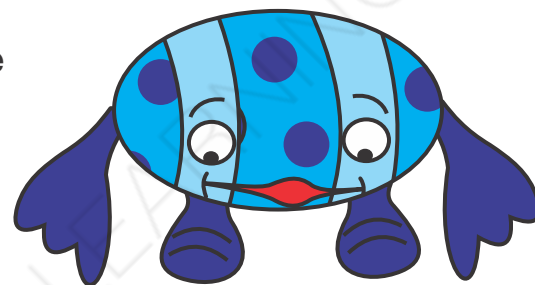
Pick up each object and look at it from different angles.

1. Does it look different?
2. Is it the same object?
3. Do you see the same shape?
4. Has the shape changed?

 I ACT

You played with objects of various shapes in the class. Let's play a game in groups of 4 now. A player from each team will close his/her eyes and pick up an object from the magic bag. He/She will touch it and guess its name.

The names of the objects my group could guess:



Hey, don't open your eyes.





I ACT

Scoopy is helping her father in keeping things neatly. You have sorted different objects on the interactive board. Help Scoopy by drawing lines to put **box**-like things with the camera and ball-like things with the football.



PRACTICE AT HOME

Candy saw that Scoopy was helping her father. He wanted to help too. Where would Candy put **cone**-like things and **bottle**-like things? Show it by drawing lines.





I TALK

In the class, look at the things that have similar shapes.

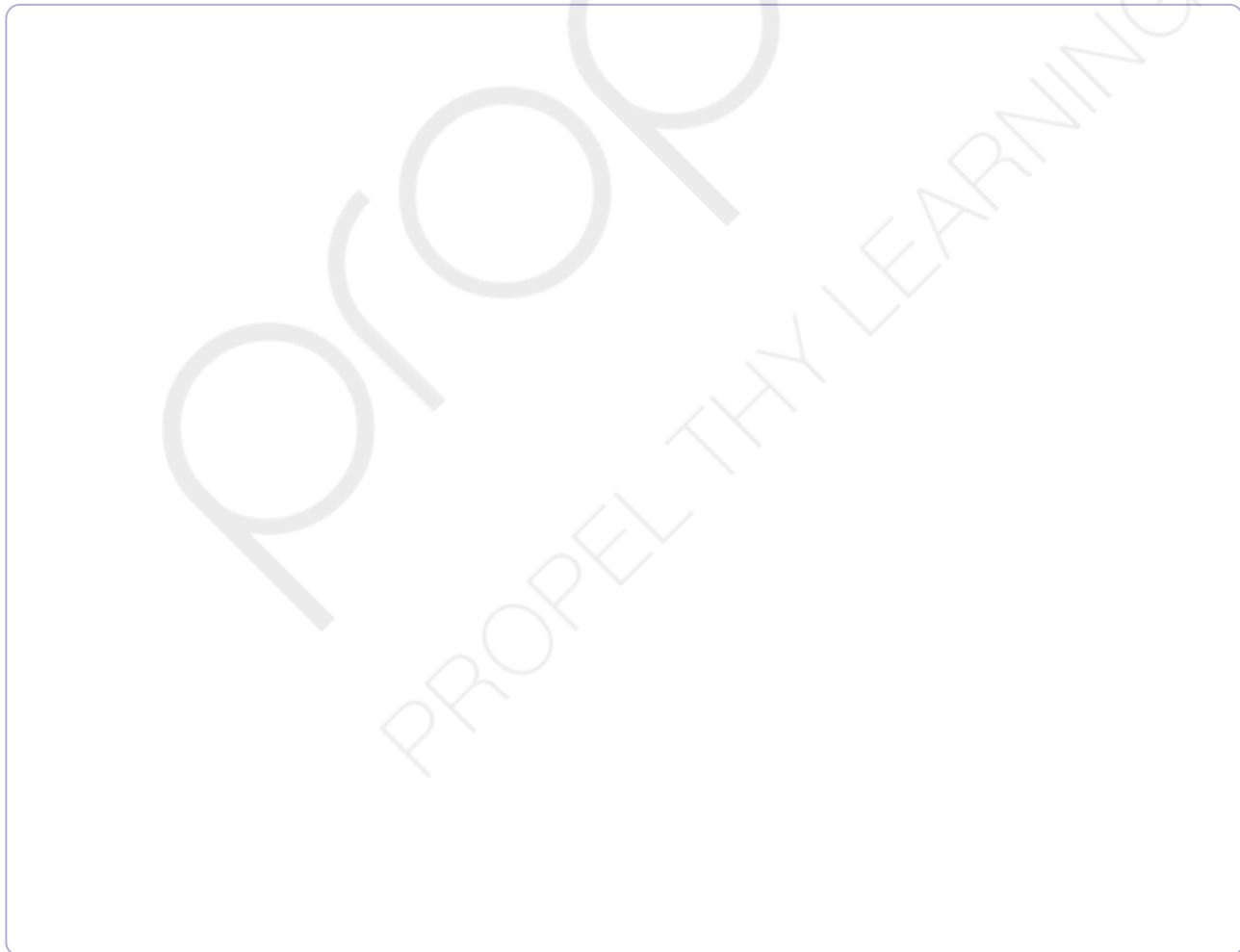
1. How many box-like things do you see?
2. Are there some ball-like things in the classroom?
Name them.
3. Which things look like a cone?
4. Which things look like a pipe?



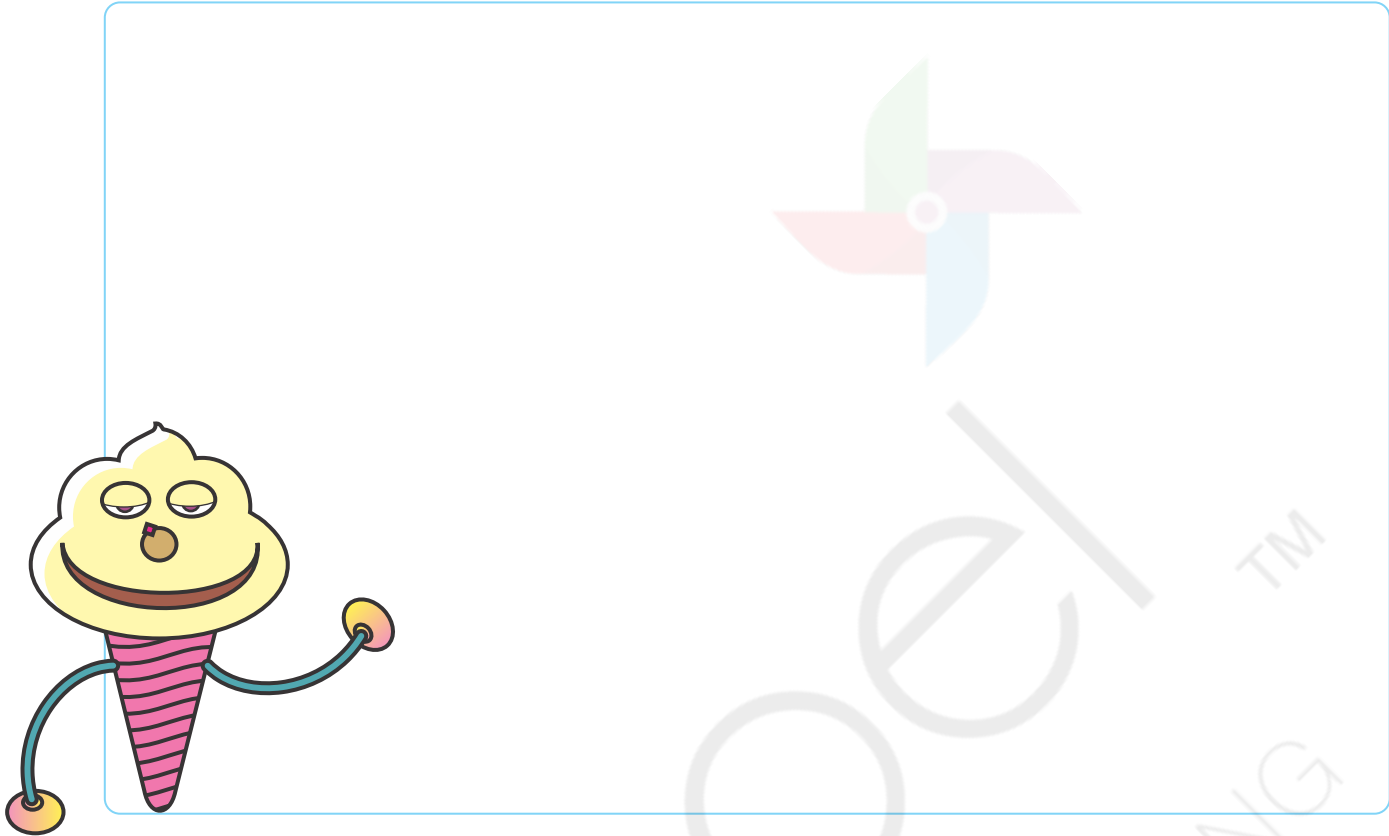
I ACT

Let's go for a walk in the school and observe various things and their shapes.

1. Draw and colour two box-like things. Also, name them.



2. Draw and colour two cone-like things. Also, name them.

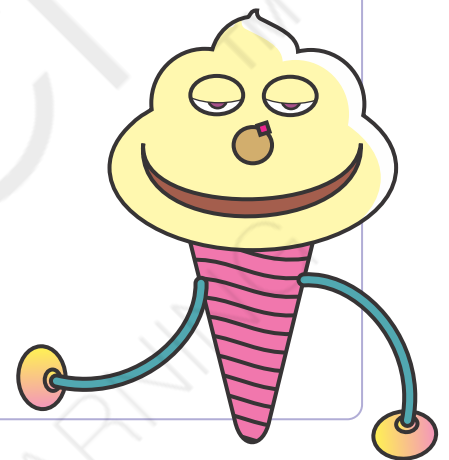
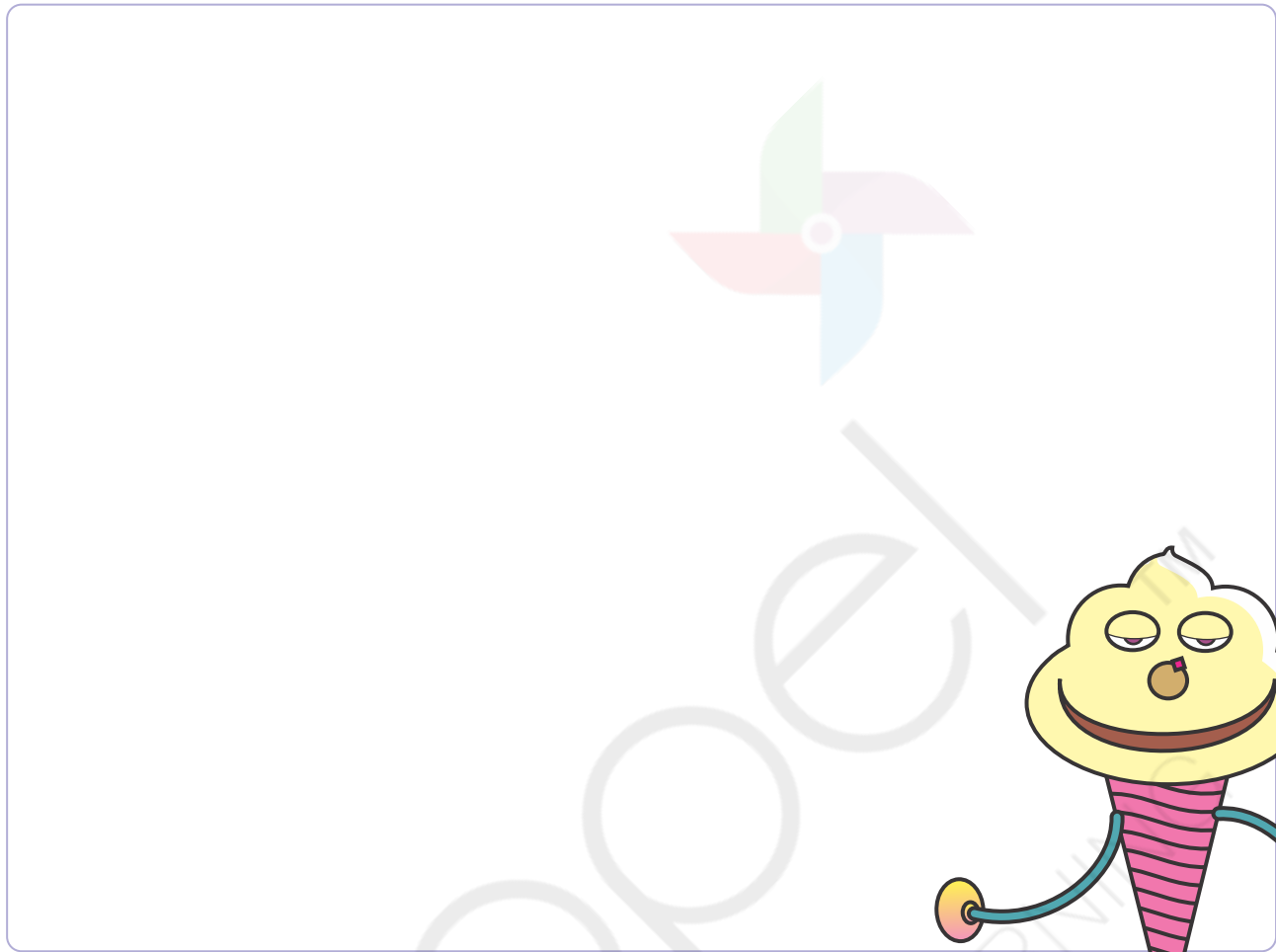


PRACTICE AT HOME

1. Draw and colour two ball-like things. Also, name them.



2. Draw and colour two pipe-like things. Also, name them.

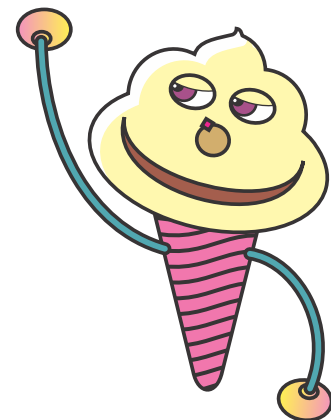


Orientation



When I saw an ice-cream cone upside down on the interactive board, I could not recognise it! I thought it was something else.

But when the teacher showed it again in another way, I could see what it was. Now, I know that changing the position and orientation of things does not change their shape.





I ACT

The objects given below are kept in different orientations. Match the objects that have the same shape.



Children have examined various objects in different orientations. This task strengthens their spatial skills.



Rolling or Sliding

See, the eraser is not rolling.

My notebook is sliding. It is not rolling.

Will my pencil roll?



Bring some objects like a ball, an empty lunch box, a pencil box, a birthday cap and some chalks to the playground. Place them on a slide. Observe which of these objects roll and which do not.



PRACTICE AT HOME

Scoopy's house has a slide. What can she roll on it? Tick (✓) the correct option for the following pictures.



Will this water bottle roll?

Yes No



Will this ice-cream cone roll?

Yes No



Will this box roll?

Yes No



Will this candle roll?

Yes No



Will this lemon roll?

Yes No



Will this book roll?

Yes No



Will this dice roll?

Yes No



Will this watermelon roll?

Yes No



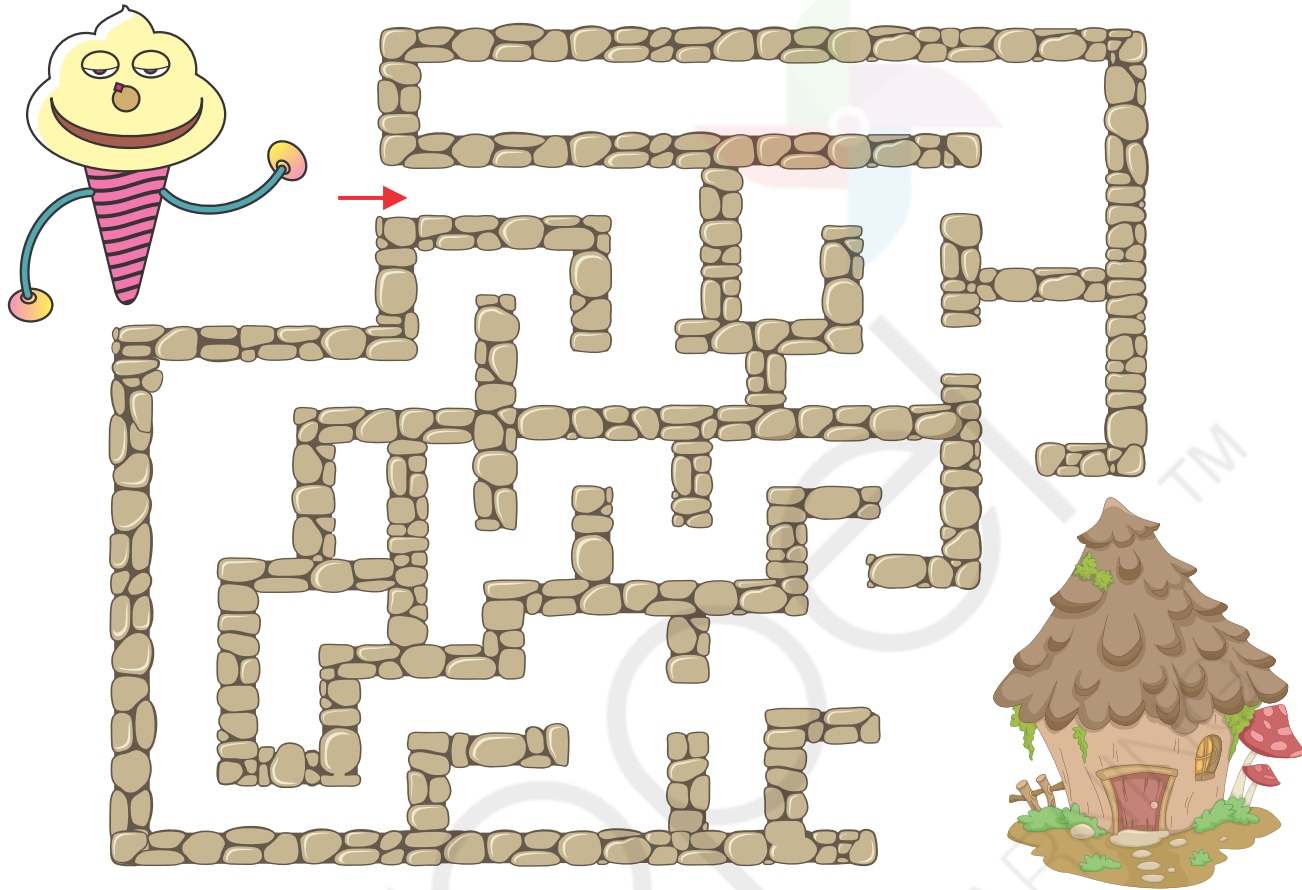
Help Your Child

While understanding the properties of rolling and sliding, children learn about flat and curved surfaces. This activity initiates an understanding of these concepts. They will learn these terms in Grade 2 when they will explore the rest of the properties of three-dimensional shapes.

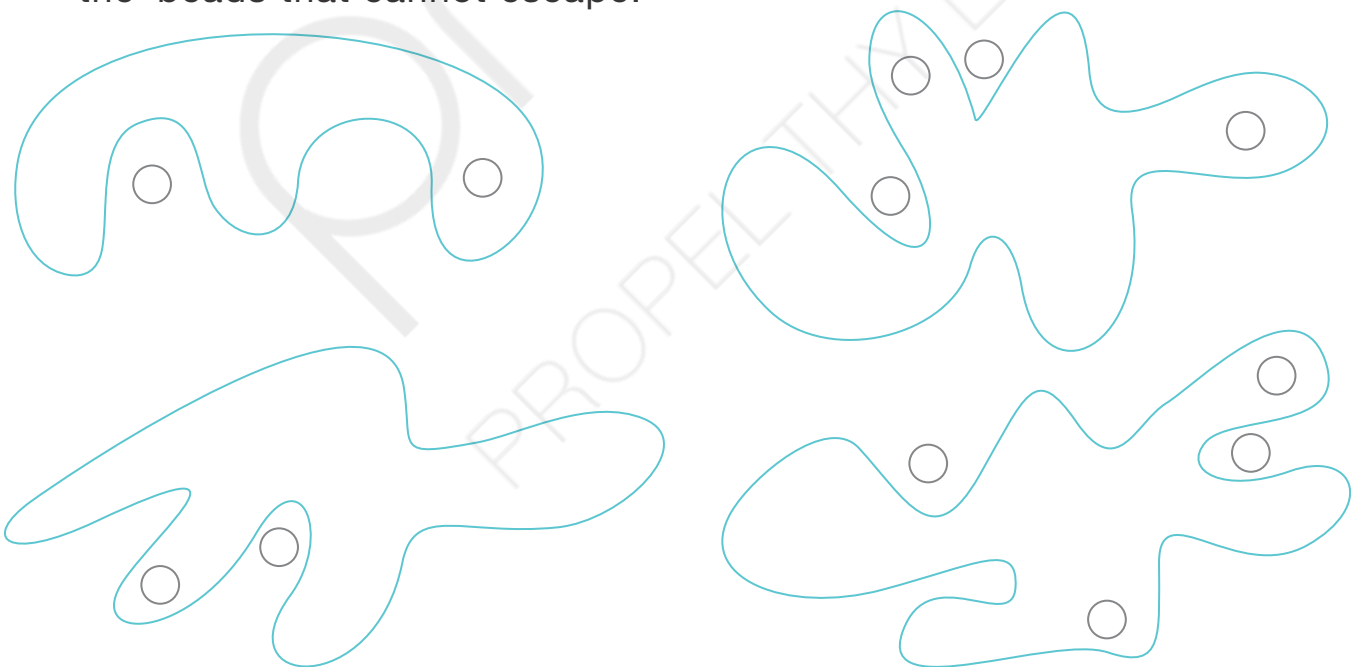


I EXPLORE

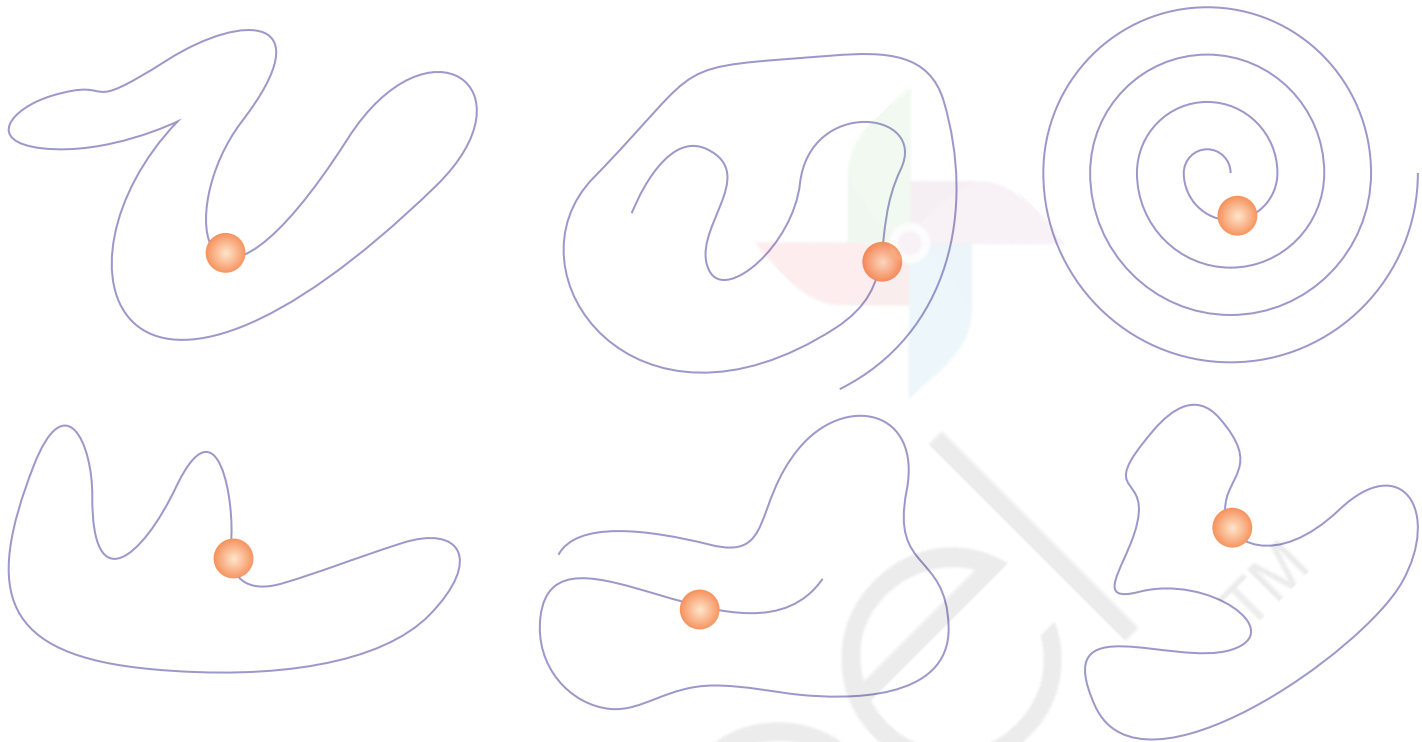
1. Can you find a way out of this maze? Help Scoopy reach her house.



2. Scoopy is playing with threads and beads. Look what she does. Colour the beads that cannot escape.



3. Tick (✓) the thread that could lose its bead.



4. Join the ends of the threads so that the beads cannot be lost.



The given tasks help in developing the sense of space and direction. Here, they are used as a preliminary exposure to open and closed figures.



I ACT

Two-Dimensional Shapes

Play with various shapes in the class. Write the number of shapes you used in your group.



Circle _____



Rectangle _____



Square _____



Triangle _____

Observe the circle and triangle.

Do they look similar or different?

What is the difference between them?

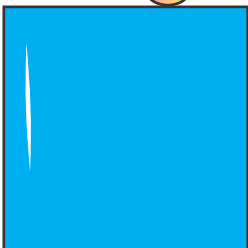
A circle is round and a triangle has three sides.

Observe the square and rectangle.

Do they look similar or different?

What is the difference between them?

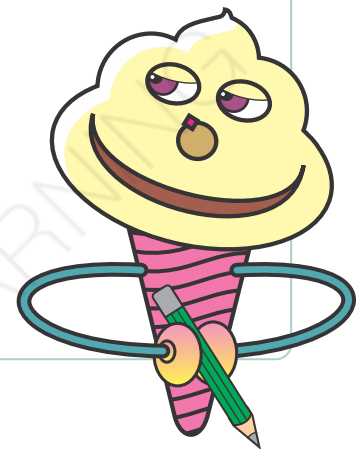
A square and rectangle both have four sides. But in a rectangle, two sides are longer than the other two.





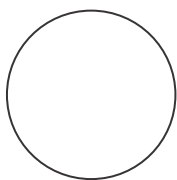
PRACTICE AT HOME

Take some toothpicks and try to make various shapes using them. Draw the shapes you make and write the number of toothpicks used.



I DRAW

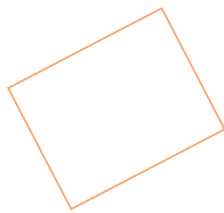
Draw a circle, triangle, rectangle and square. Using these shapes, draw an object and colour it. One example has been given below.





I PRACTISE

Match the following shapes to their correct names. Use different colour pencil for each shape.



Circle

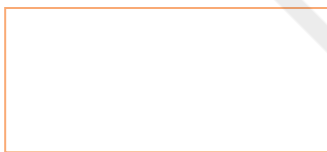
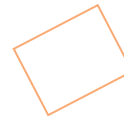


Triangle

Square



Rectangle



These exercises help children apply their understanding of 2D shapes. They also get an exposure of freehand drawing. Provide toothpicks to children for making different shapes. They can do this activity with straws as well.



Tangram



Play with tangram in the class and make various shapes of animals and people. Here are some of the things I made. Try not to overlap the pieces of tangram to make a figure. Also, don't leave any gaps.



Cow



Crow



Dog



Dolphin



Cat



Bird



PRACTICE AT HOME

Play with tangram at home and try to make various things with it. A sheet is given at the end of the book for you to make your own tangram.

Help Your
Child

Tangram is an old Chinese puzzle. It helps children develop spatial skills, creativity and visualisation.



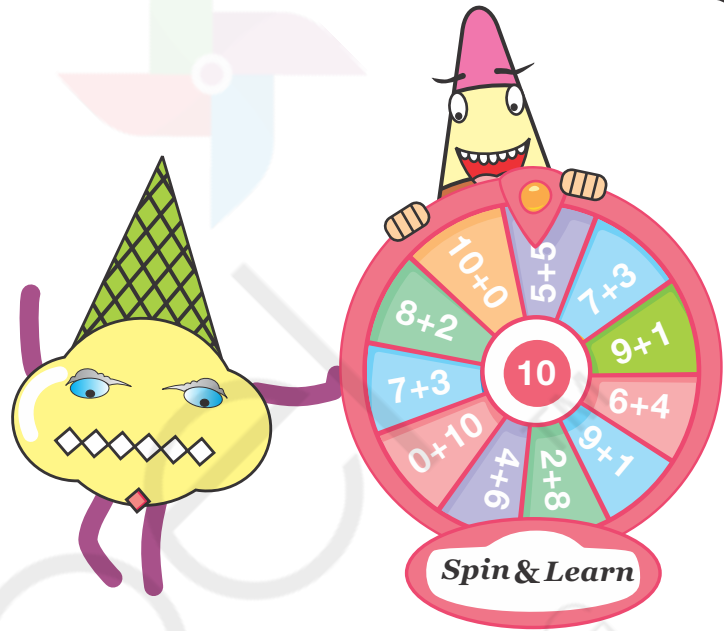
NUMBER COMBINATIONS TILL 10



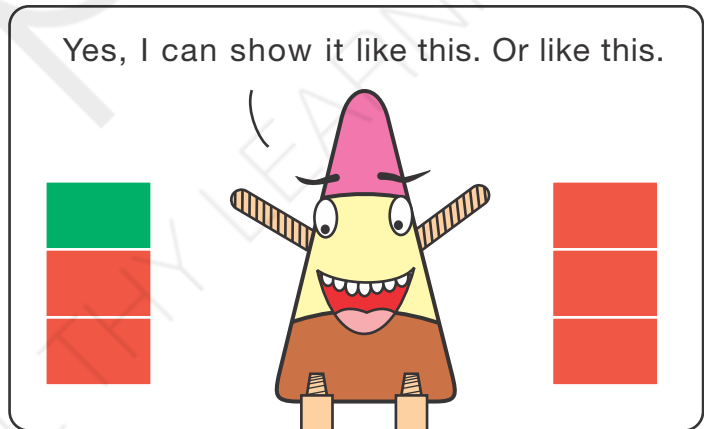
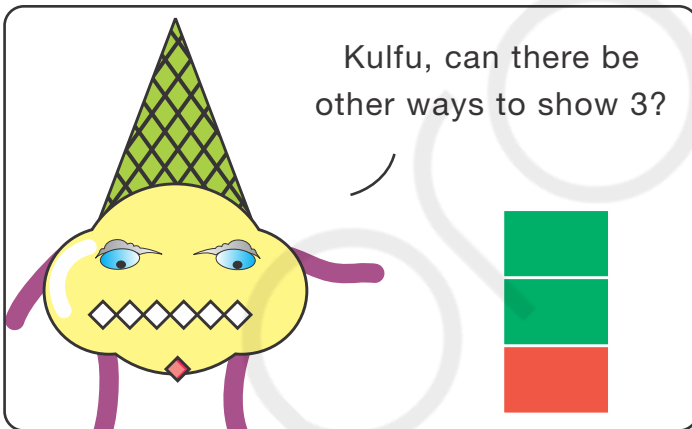
I OBSERVE

Addition Facts

Hi, I am Ulta Lolly. I am Scoopy's friend. I solve maths problems without using pencil and paper! Kufu, my sister, helped me learn this. Let me share with you how I learnt it.

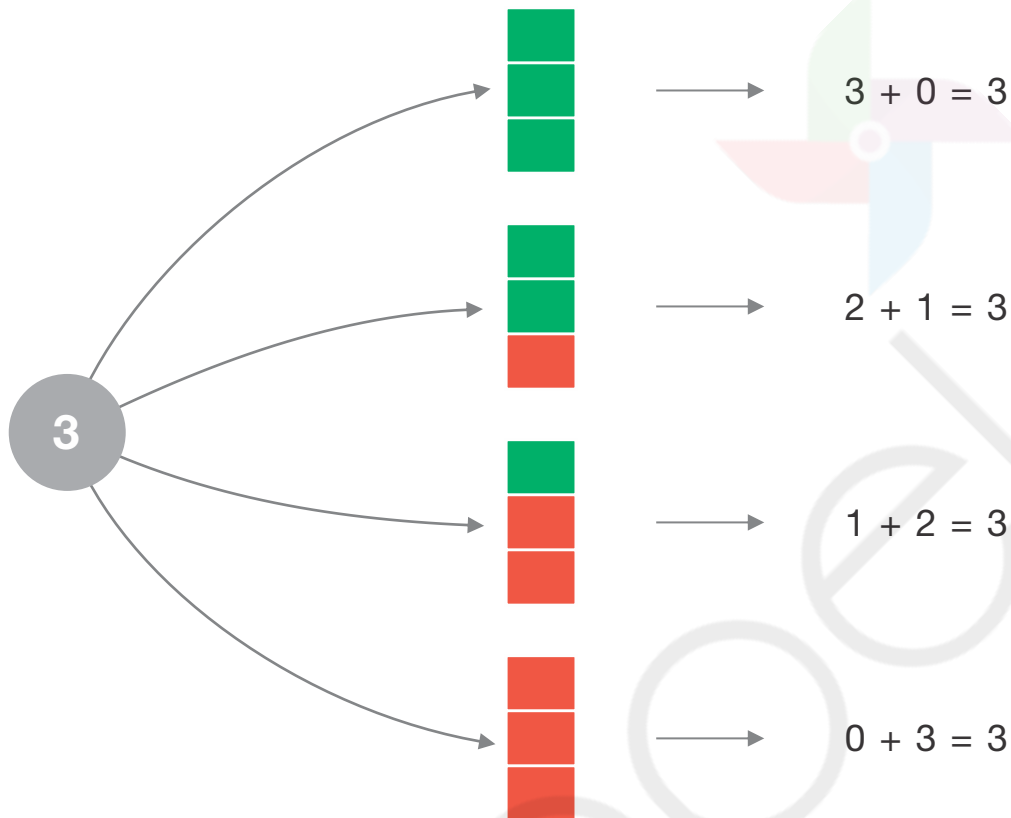


I showed 3 using blocks of two colours, i.e., green and red.

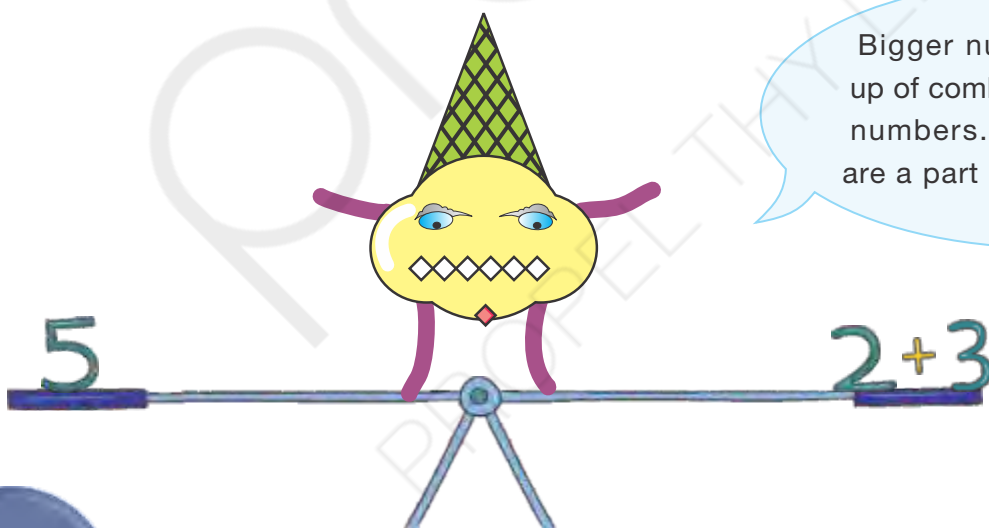


I TALK

How did Ulta Lolly and Kufu show number 3?



- Does the number change when we show it in different ways?
- Does it remain the same?



Help Your Child

Children build number combinations using blocks and pictures. Understanding number combinations helps them add quickly.



I ACT

1. You know that numbers can be shown using blocks of different colours. Take two blocks of different colours and show 4 in different possible ways. Record your ways here using dots. One example is given below.



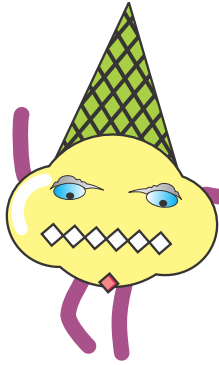
2. Write as many different number combinations as you can for the number 5. One example is given here.





I ACT

In how many ways can you show 6? Discuss with your partner and show it to your teacher. Now, write what you see in the following pictures.



$$0 + 6 = 6$$















I TALK

Now, show 7 in two different ways through drawing.

PROPEL THY LEARNING™


- Are there other ways too? Find out what your friends have drawn.
- Does a number change when we show it in different ways?
- Why do you say so?


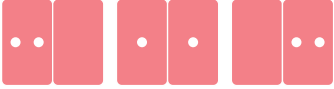








Addition Facts

Take turns in stacking Dot Cards and play Patte Par Patta. Whenever a card is stacked on the card having the same number of dots, the entire stack is taken by the player who has kept the last card.

PRACTICE AT HOME

Make your own Dot Cards at home and play Patte Par Patta with your family thrice a week.

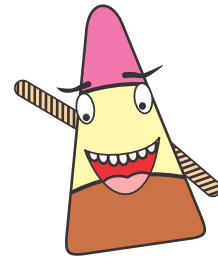


1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 



This game helps children know addition facts till 10. Observing the cards while playing develops an ability to recognise the number of dots on them without counting.

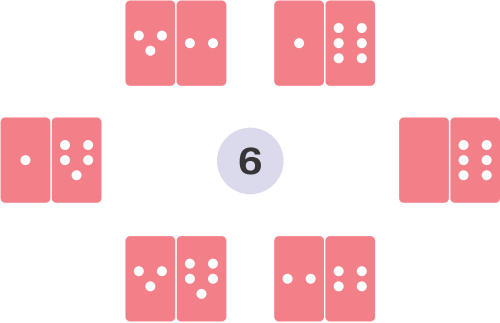
Now, play Patte Par Patta on the interactive board.



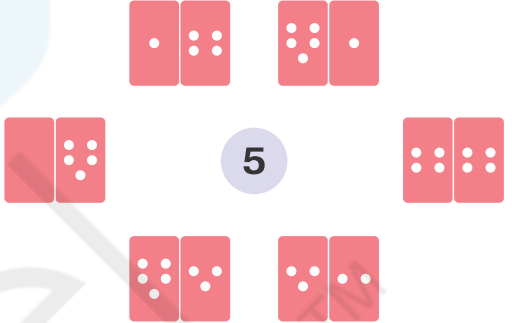
 I ACT

Kufu needs to stack the cards of each number separately. Match the number card with the corresponding Dot Cards.

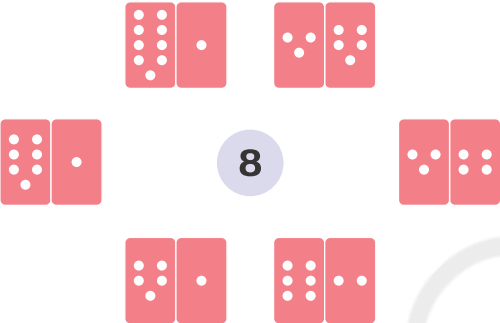
a.



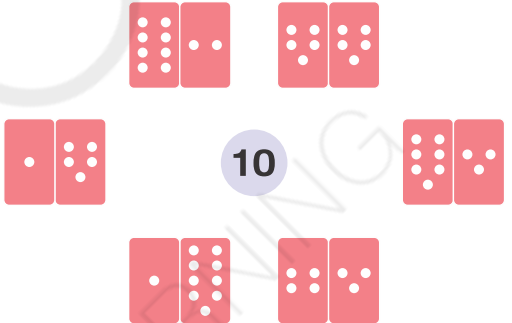
b.



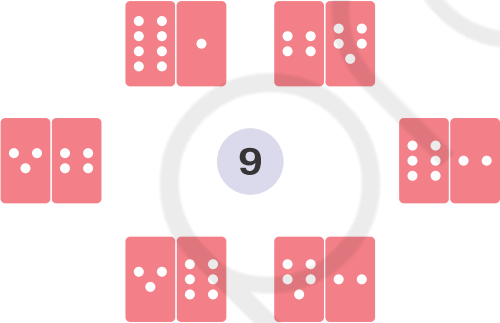
c.



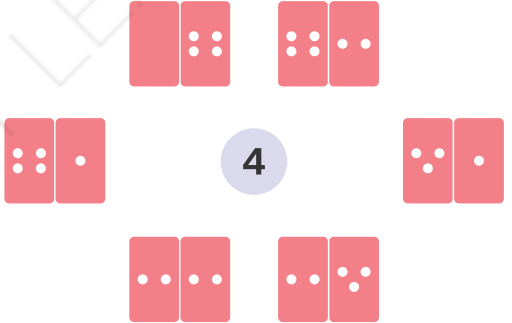
d.



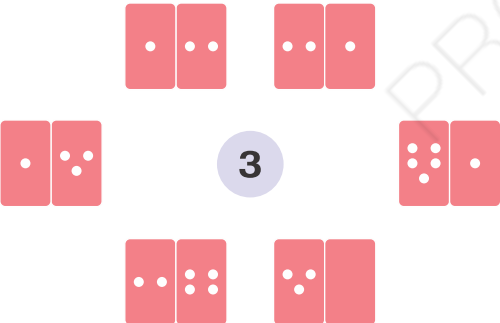
e.



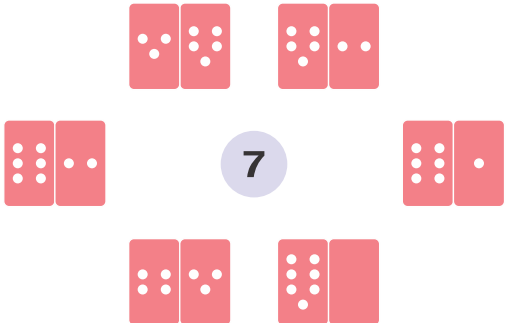
f.



g.

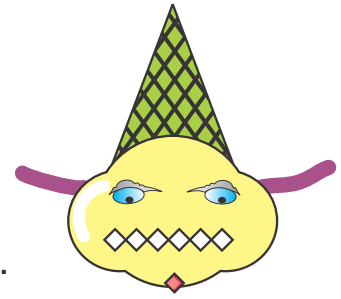


h.





I PRACTISE



Add the following numbers on the number line in any two ways.

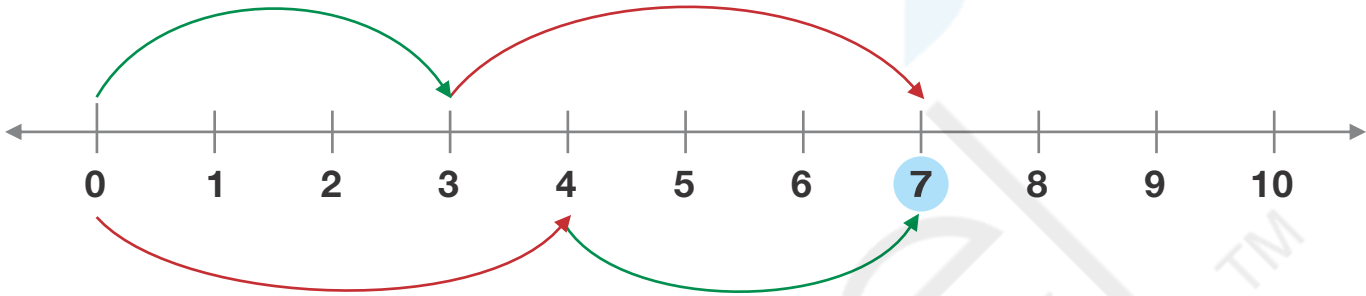
Also, show the answer by circling the number. One example has been done for you.

1. $3 + 4 =$

7

$4 + 3 =$

7



2. $3 + 1 =$

$1 + 3 =$



3. $4 + 2 =$

$2 + 4 =$



4. $5 + 3 =$

$3 + 5 =$

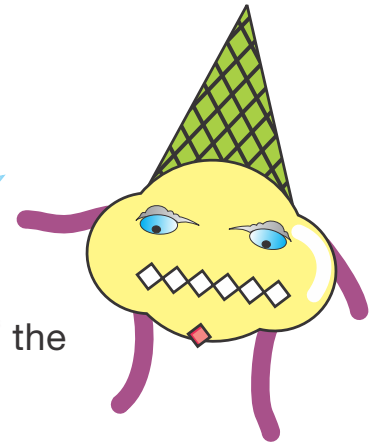


This task is based on the commutative property of addition (sum of numbers remains the same despite the change in their order). Children quickly learn two facts of the same number using this property.



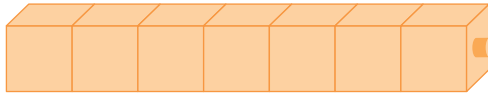
I ACT

Now, you can write addition facts yourself.



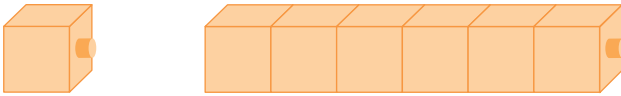
Count the blocks in each of the following sets and complete the addition fact. One example has been done for you.

1.



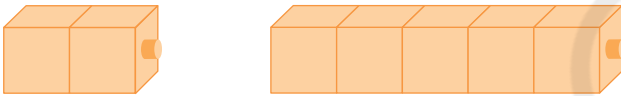
$$\boxed{0} + \boxed{7} = \boxed{7}$$

2.



$$\boxed{} + \boxed{} = \boxed{}$$

3.



$$\boxed{} + \boxed{} = \boxed{}$$

4.



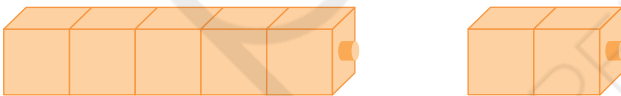
$$\boxed{} + \boxed{} = \boxed{}$$

5.



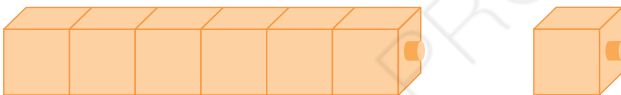
$$\boxed{} + \boxed{} = \boxed{}$$

6.



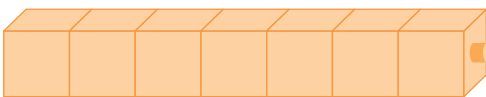
$$\boxed{} + \boxed{} = \boxed{}$$

7.



$$\boxed{} + \boxed{} = \boxed{}$$

8.

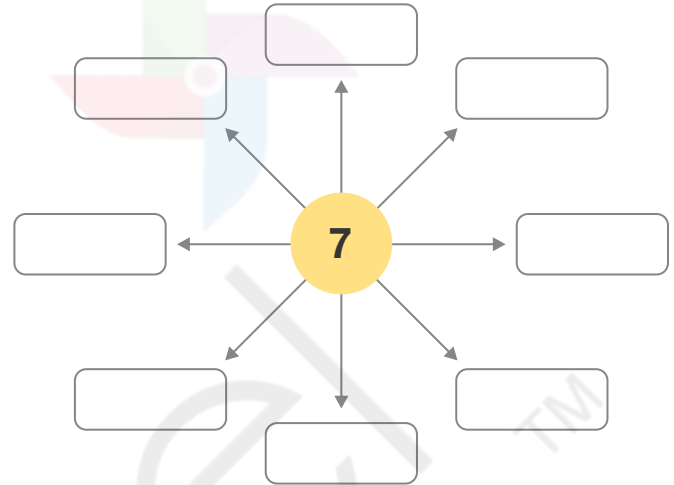
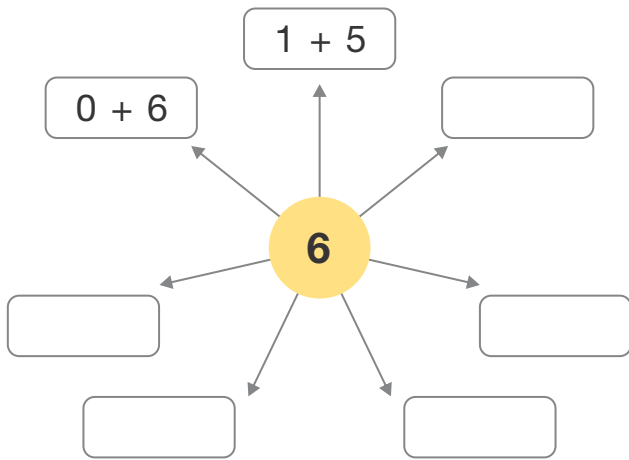


$$\boxed{} + \boxed{} = \boxed{}$$



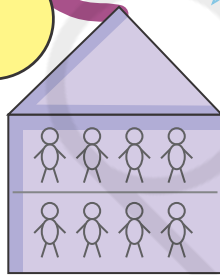
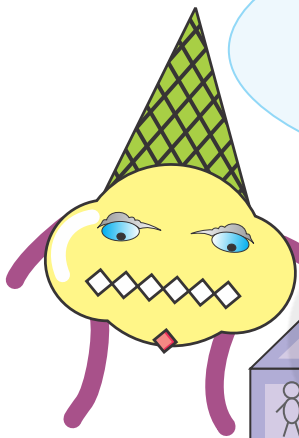
I PRACTISE

Use different number combinations to form the given numbers. Some examples have been done for you.

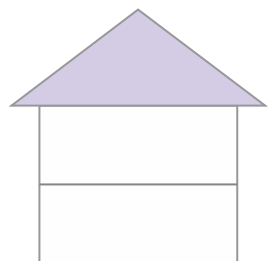
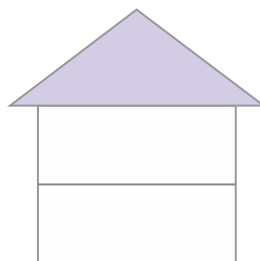
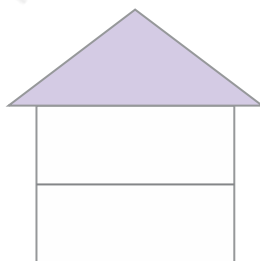
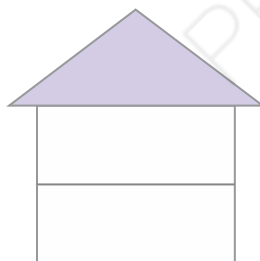
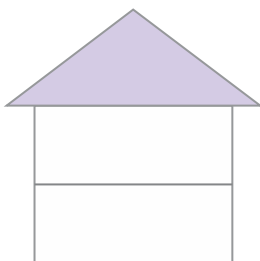
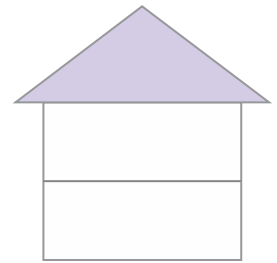
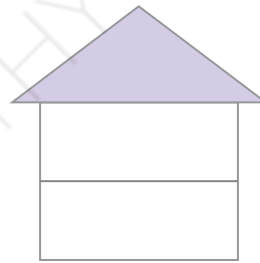
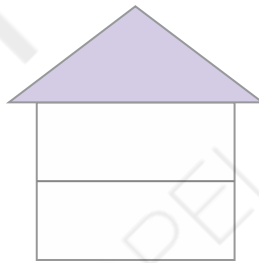


I ACT

Eight guests are coming to my house to stay. I live in a two-storey house. Draw and write in how many ways 8 people can live in my house. Discuss with your partner first. One example has been given.



$$4 + 4 = 8$$





I MATHEMATIZE

- Numbers from 6 to 10 are shown on the interactive board, one by one. Pick up the things available in the class and show different ways of making that number.
- Complete the addition facts. Try to do this as quickly as possible.

a. $4 + 2 =$

b. $10 + 0 =$

c. $5 + 3 =$

d. $3 + 6 =$

e. $6 + 4 =$

f. $8 + 1 =$

g. $2 + 8 =$

h. $7 + 2 =$

i. $9 + 1 =$

j. $4 + 3 =$



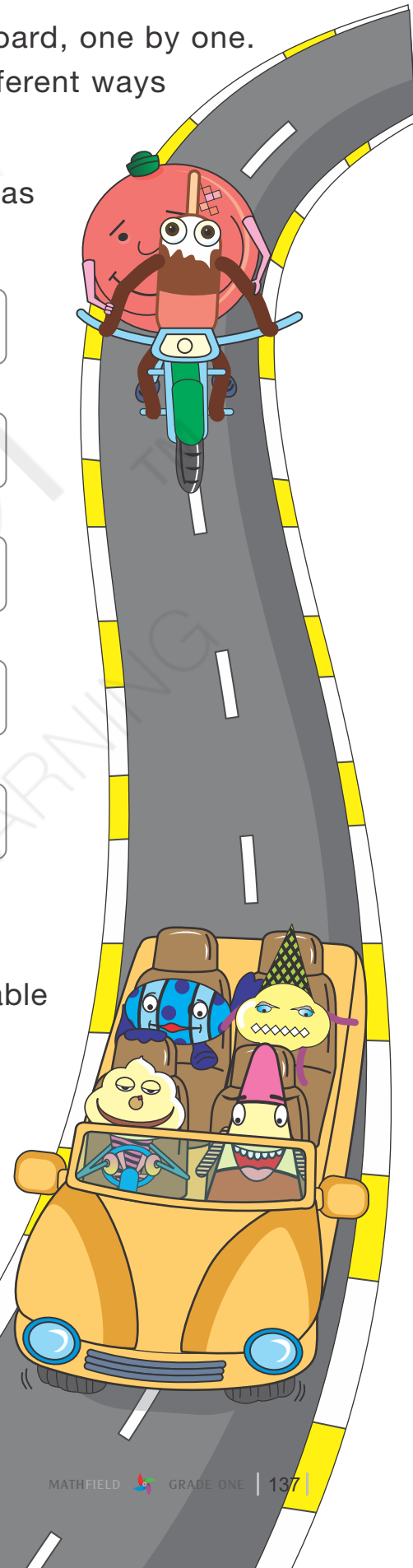
I EXPLORE

10 candies are going to the zoo. Bikes and cars are available to reach the zoo. A bike can carry 2 candies at the most. A car can carry 4 candies at the most.

How many cars and bikes will be required to take them to the zoo?

Show as many ways as you can to organise the 10 candies in cars and bikes.

Use a drawing sheet or your notebook for this task.

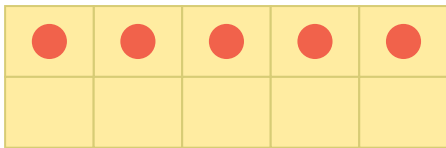
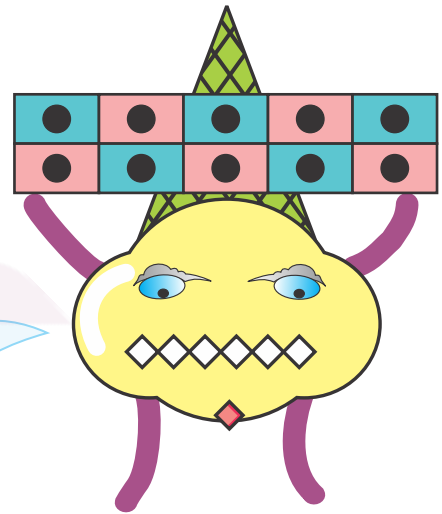


Subtraction Facts



I ACT

Hi! I have got a toy called Ten Frame. It has made subtracting numbers easy. It looks like this. Let's play with it.



Start with 5



Take away 1

Write $5 - 1 = 4$

See what the given Ten Frames show and write the subtraction facts.







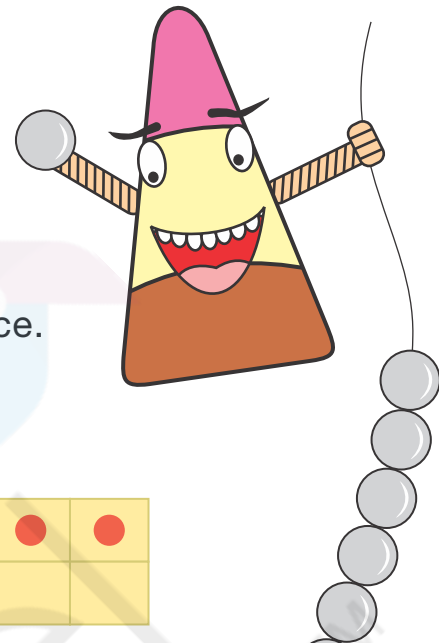




I TALK

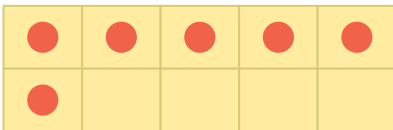
1. What happens when we cross out a dot from the given set of dots?
2. Is the number of dots increasing or decreasing?
3. When we subtract numbers one by one, how does the answer change?

When we subtract numbers one by one, we get different subtraction facts. These facts can help us subtract numbers quickly.



Fill the given Ten Frames as per the number sentence. Two examples are given for you.

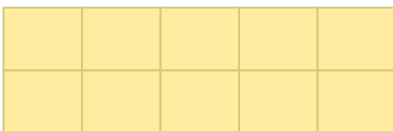
a. $6 - 0 = 6$



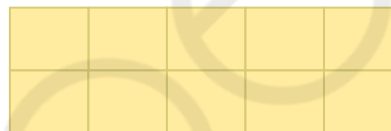
b. $6 - 1 = 5$



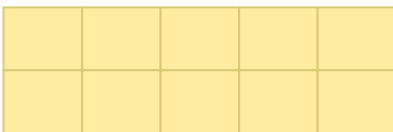
c. $6 - 2 = 4$



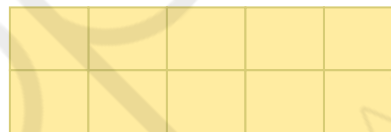
d. $6 - 3 = 3$



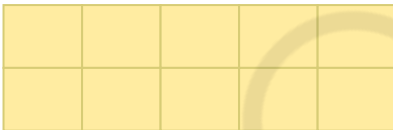
e. $6 - 4 = 2$



f. $6 - 5 = 1$



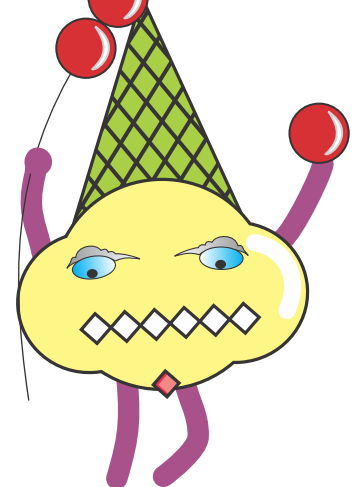
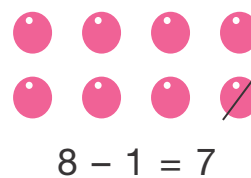
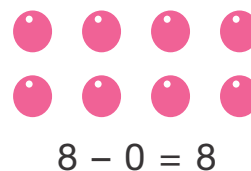
g. $6 - 6 = 0$



I ACT

Take 8 blocks or beads and share them with your partner. Keep them together.

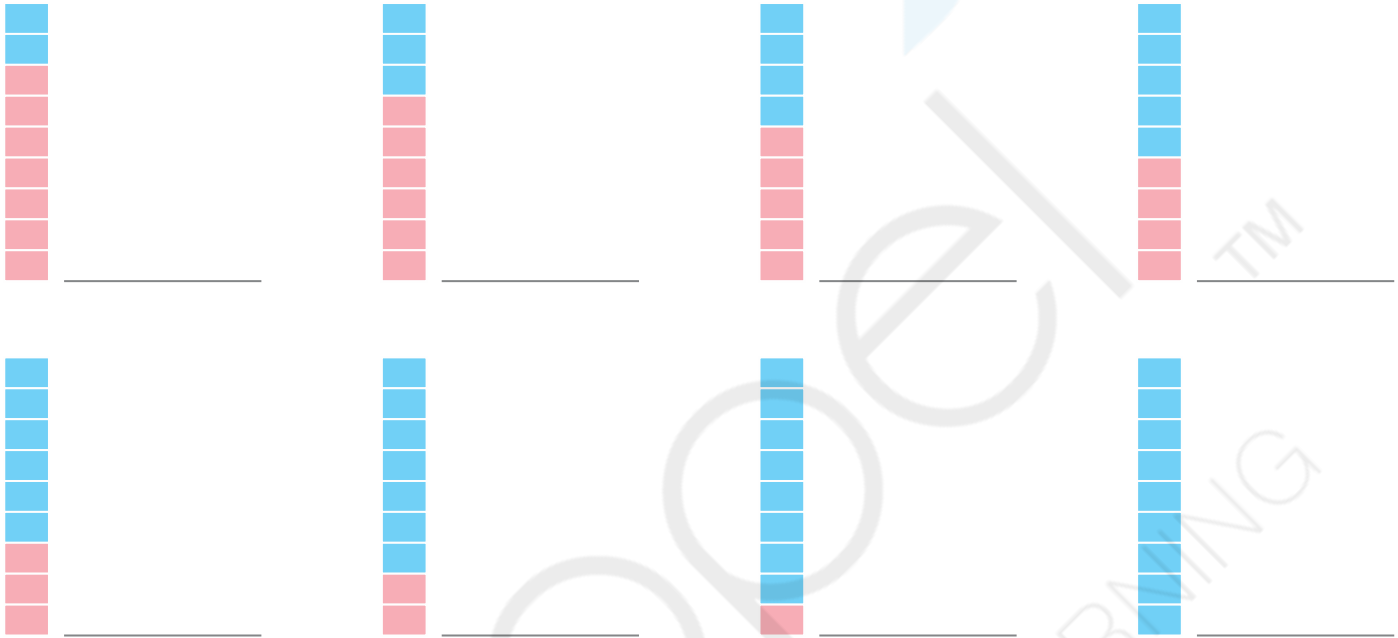
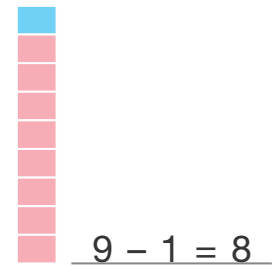
Take the beads or blocks away one by one and write the subtraction fact. Draw and write them down in your notebook. Two examples have been given for you.



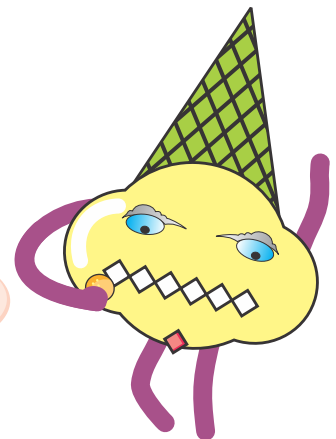
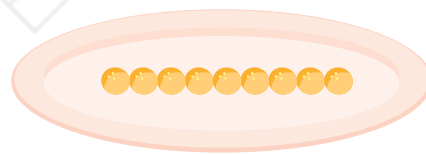
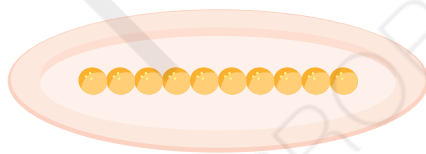
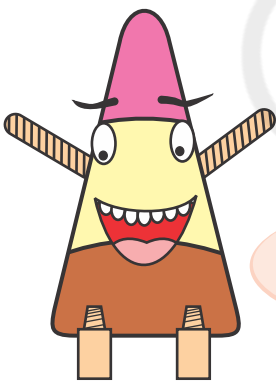


I ACT

1. Ulta Lolly is playing with 9 blocks and building towers. His sister, Kulfu, starts taking away the blocks from the towers one by one. Write how many blocks will be left in each tower.



2. Kulfu's mom prepares laddus for Ulta Lolly and her. Both of them have to share the laddus.

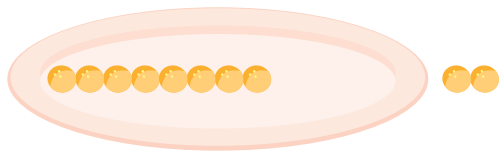


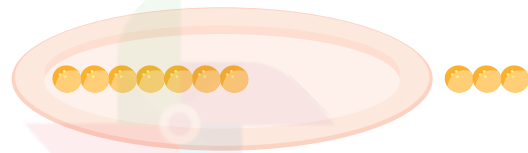
When Kulfu sees a plate full of 10 laddus, she thinks of $10 - 0 = 10$.

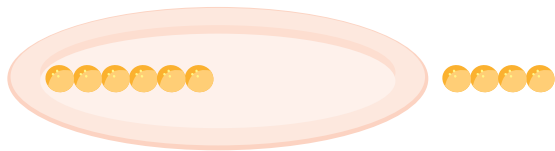
Suddenly, she notices Ulta Lolly taking away one laddu.

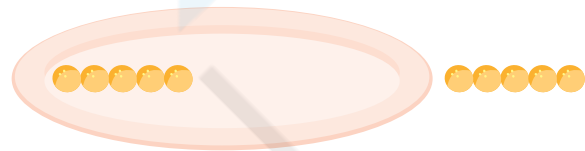
$$10 - 1 = 9$$

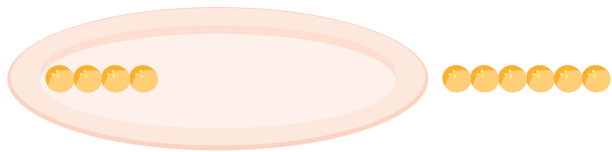
3. Kufu wants to share the laddus but Ulta Lolly takes them all, one by one! Some pictures of him taking away the laddus are given below. Write subtraction facts for them.







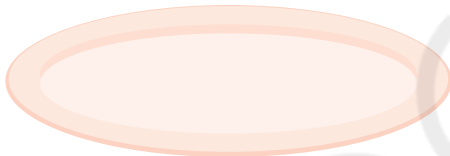




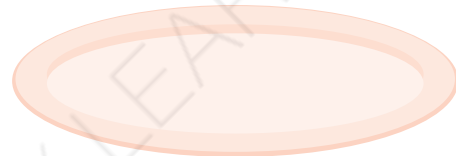


4. Draw the laddus for the given subtraction facts.

$$10 - 8 = 2$$



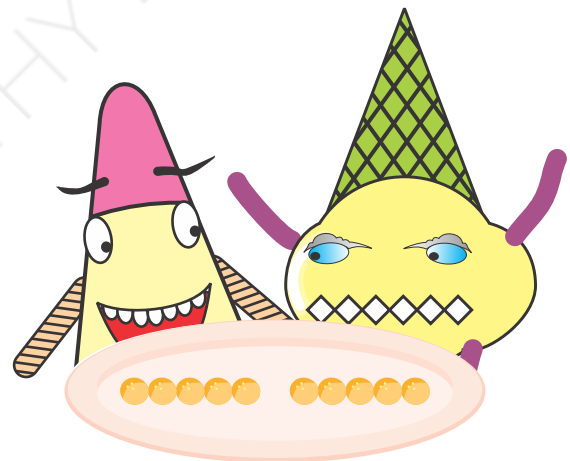
$$10 - 9 = 1$$



$$10 - 10 = 0$$



Kufu tells Ulta Lolly to share the laddus with her. Ulta Lolly gives her 5 laddus.



Take 10 blocks. Listen to the teacher calling out a subtraction sum. Calculate the answer mentally. You can use the blocks if you want. Check with your partner if he/she has got the same answer. Share your answer with your teacher.



I MATHEMATIZE

Subtract and write the answers. You may use the number line for help.



1. $10 - 1 = \square$

2. $9 - 1 = \square$

3. $8 - 1 = \square$

4. $7 - 1 = \square$

5. $3 - 1 = \square$

6. $5 - 1 = \square$

When you subtract 1 from a number, the answer is the number before that.



I MATHEMATIZE

You already know what happens when you subtract a zero from a number. Let us use this understanding to solve the following questions quickly.

1.
$$\begin{array}{r} 10 \\ - 0 \\ \hline \square \end{array}$$

2.
$$\begin{array}{r} 4 \\ - 0 \\ \hline \square \end{array}$$

3.
$$\begin{array}{r} 2 \\ - 0 \\ \hline \square \end{array}$$

4.
$$\begin{array}{r} 6 \\ - 0 \\ \hline \square \end{array}$$

5.
$$\begin{array}{r} 8 \\ - 0 \\ \hline \square \end{array}$$

6.
$$\begin{array}{r} 1 \\ - 0 \\ \hline \square \end{array}$$

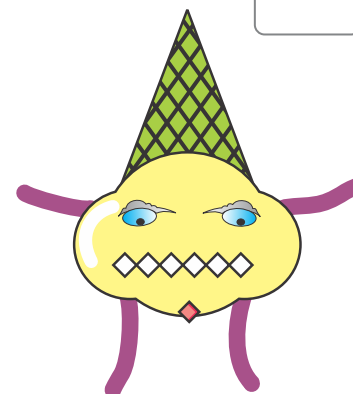
7.
$$\begin{array}{r} 0 \\ - 0 \\ \hline \square \end{array}$$

8.
$$\begin{array}{r} 3 \\ - 0 \\ \hline \square \end{array}$$

9.
$$\begin{array}{r} 7 \\ - 0 \\ \hline \square \end{array}$$

10.
$$\begin{array}{r} 5 \\ - 0 \\ \hline \square \end{array}$$

11.
$$\begin{array}{r} 9 \\ - 0 \\ \hline \square \end{array}$$







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