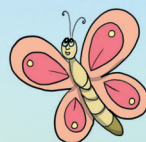




# MATHEMATICS



GRADE 1



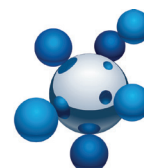
Learner's Book



basic education

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA

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# Mathematics

## Grade I

### Learner's Book



This book was developed with the participation of the Department of Basic Education of South Africa and funding by the Sasol Foundation



## **Mathematics Grade 1 Learner's Book**

This book was developed with the participation of the Department of Basic Education (DBE) of South Africa, Magic Moments Projects and ACP Project Management and Publishing Services; and funded as an ongoing project by the Sasol Foundation.

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# How to use this book

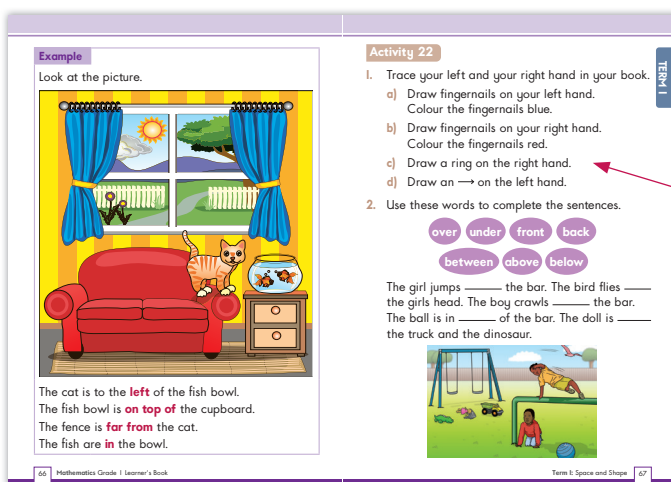
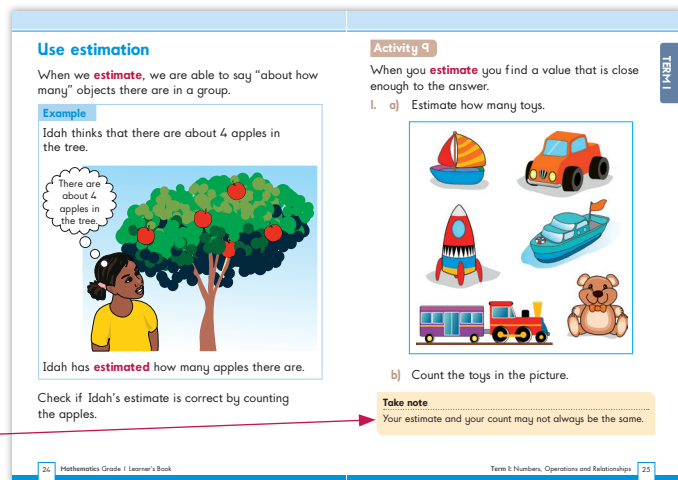
Welcome to the *Mathematics Grade 1 Learner's Book*.

As you work through this book you will see the following features:

- At the start of each term, you will find a map. Your teacher will have some fun activities for you to do with it.
- There are **five topics per term**. Each topic is a different colour to help you find your way around.

**Blue coded pages:**  
Numbers, operations and relationships

Take note boxes



**Purple coded pages:**  
Space and shape

Activities

## Take note

You may not always work through one topic at a time. Your teacher could decide that you will do work from another topic on a particular day.




## Green coded pages: Data handling

Example and answer

**Example**

Look at the leaves.




Describe how the leaves are sorted.

**Answer**

They are all yellow leaves.

**Activity 37**

1. Look at how the leaves are sorted.



a) Give a reason for how the collections of leaves were sorted.


b) Hazel described the sorted group by writing: There are five brown leaves in the group. Do you agree with her?

**Use a table to sort data**

We can use a table to sort data.

**Example**

Look at the collection of boxes.



a) Sort the boxes by colour. Use the table and use a ✓ to show a box.

b) What colour has the most boxes?

**Answer**

a)

4			
3	✓	✓	
2	✓	✓	✓
1	✓		✓

☐ green
 ☐ purple
 ☐ orange

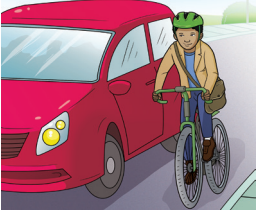
b) purple

**Faster or slower**

We can use the words **faster** and **slower** when we talk about the passing of time.

**Example**

Look at the picture. Can the car drive **faster** or **slower** than the bicycle?




**Answer**


The car can drive **faster** than the bicycle. The bicycle is **slower** than the car.

**Activity 26**

1. a) Which animal is **faster**? Write A or B.  
b) Explain to your friend why you say so.



2. a) Which animal is **faster**? Write A or B.  
b) Explain to your friend why you say so.



## Yellow coded pages: Measurement

Term

## Red coded pages: Patterns, functions and Algebra

**Number patterns**

**Activity 20**

1. Look at the number pattern.

19	18	17	16	15	14	13	12	11	10
----	----	----	----	----	----	----	----	----	----

Describe what happens to each number in the pattern.

2. What number is missing in the number pattern? Tell your partner what the number is.

a)

2	4		8	10
---	---	--	---	----

b)

5	6		8	9
---	---	--	---	---

3. a) Describe this number pattern to your partner.

10	9	8	7	6			
----	---	---	---	---	--	--	--

b) Complete the number pattern.

4. a) Describe this number pattern to your partner.

2	4	6		
---	---	---	--	--

b) Complete the number pattern.

**One more or one less?**

**Example**

a) What number is missing in the number pattern.

1	3		7	9	11
---	---	--	---	---	----

b) Describe the number pattern.

**Answer**


a) 5

a) You skip 2 to get to the next number each time.


**Activity 21**

1. Tell your partner what the missing number is in each pattern.


a)




b)




c)



d)



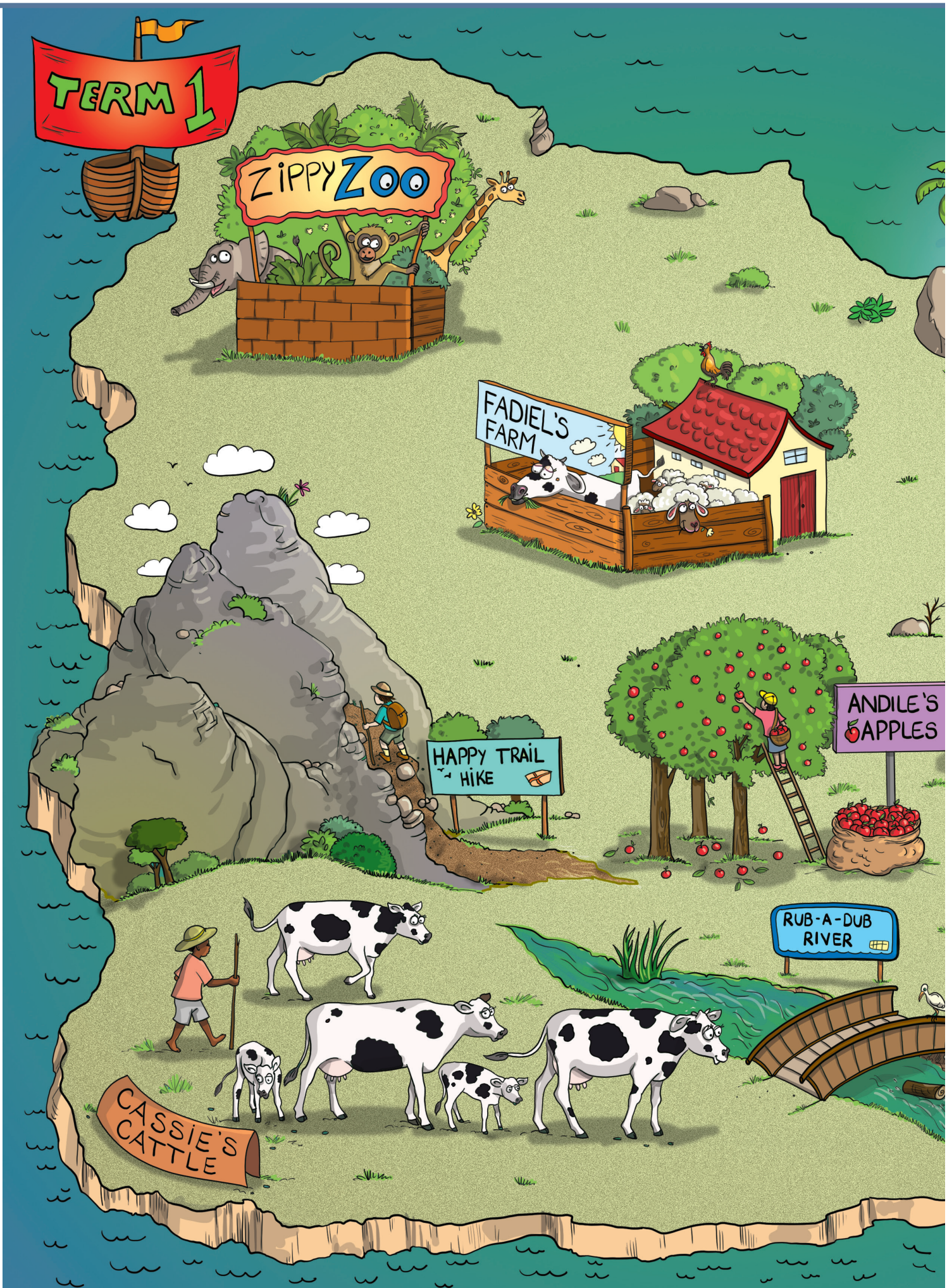
e)



- **New words and terms** have been highlighted in different colours. This indicates an important word or words that you need to know and understand. If you are unsure of what something means, ask your teacher to explain it to you.

We hope that you enjoy working through the activities in this book!







*Journey through a world  
filled with Mathematics until  
we reach Term 2!*

TERM 1



Term 1

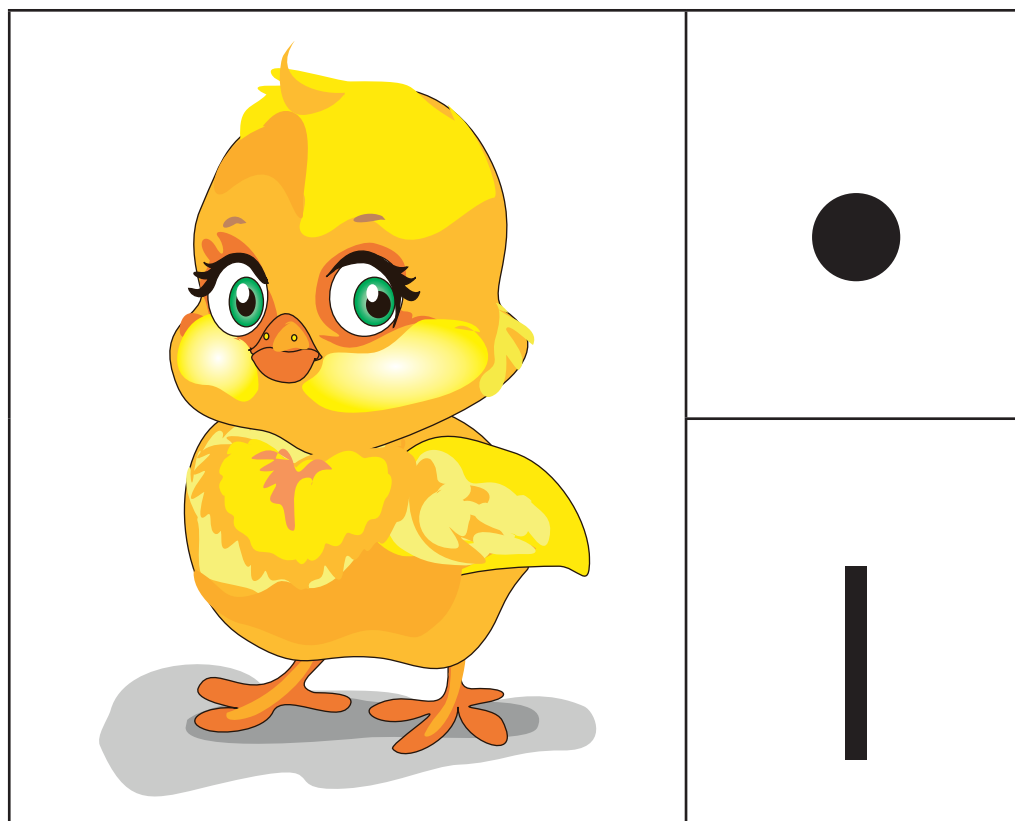
7



# Numerals 1 – 5

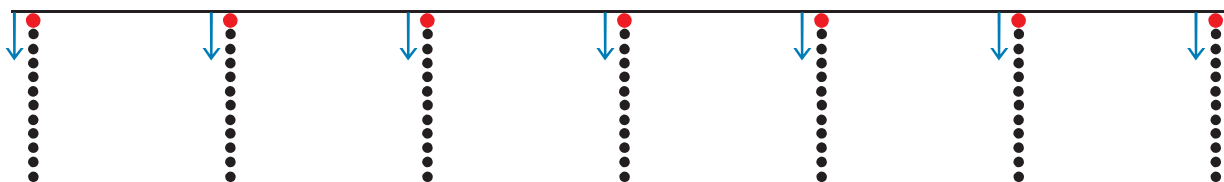
## Learning about the number symbol 1

How many chicks?



### Activity 1

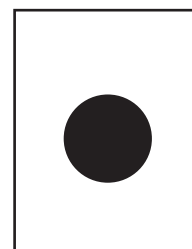
1. Trace the number symbol 1 with your finger.



This is number symbol

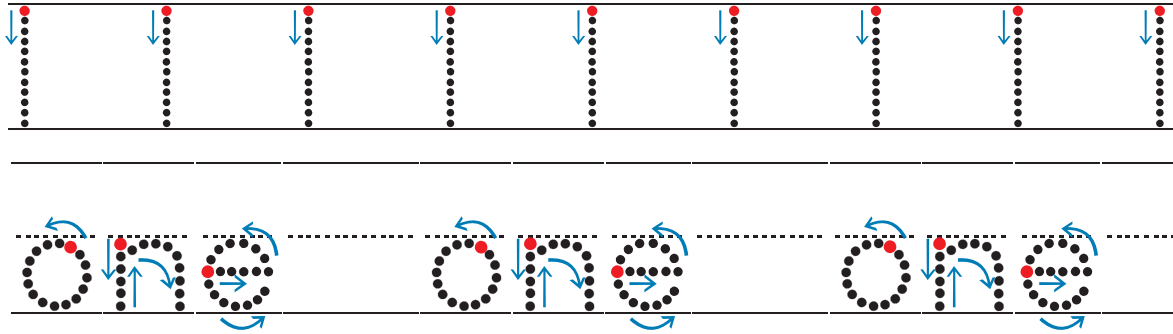


This is number name

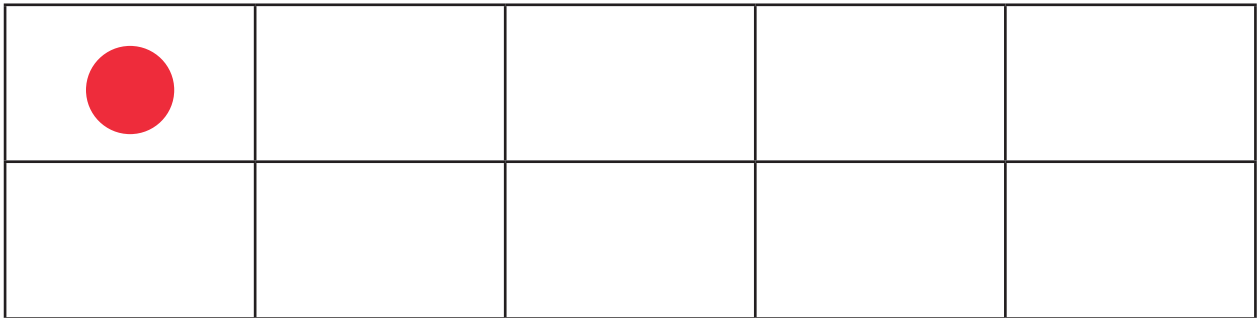




2. Write the number symbol and number name for 1 in your classwork book.



3. How many counters in the tens frame?

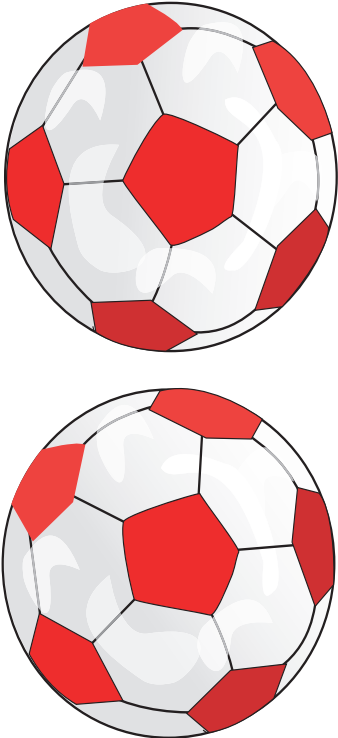




4. How many fingers are being shown?  
Write the number name and number symbol.



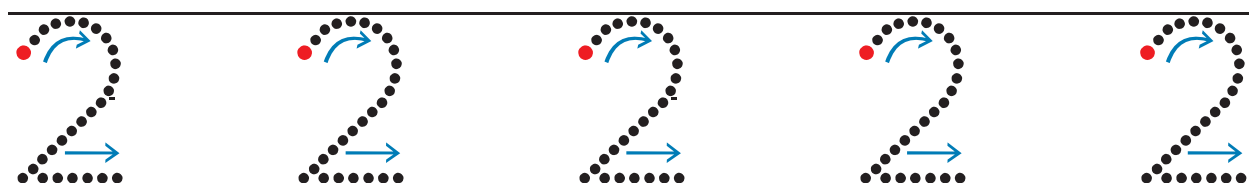
# Learning about the number symbol 2

How many balls?

## Activity 2

- Trace the number symbol 2 with your finger.



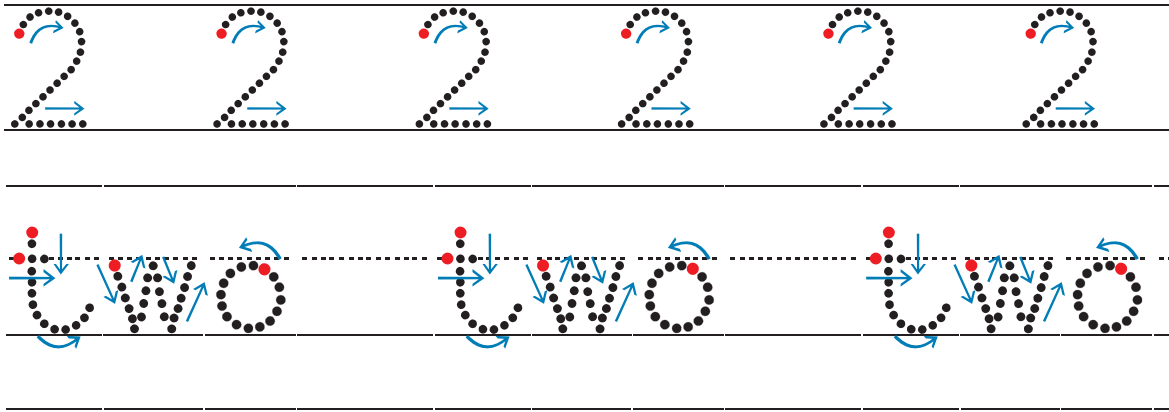
This is number symbol



This is number name



2. Write the number symbol and number name for 2 in your classwork book.

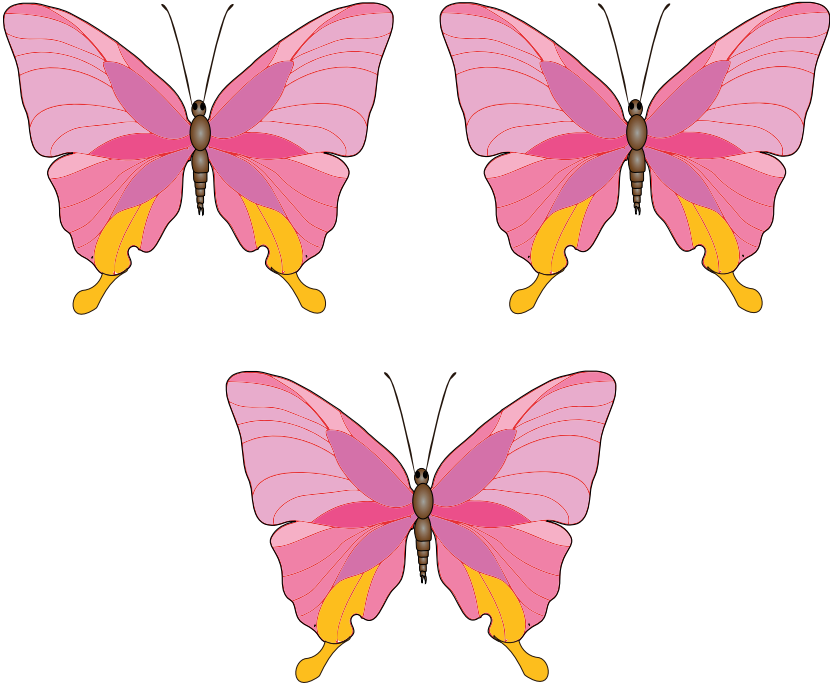
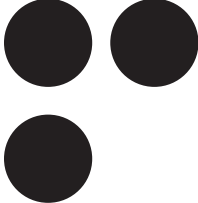


3. Work with your friend.  
Think about all the parts of your body where you have 2. For example, you have 2 eyes.  
Tell your friend how many parts of your body comes in 2s.



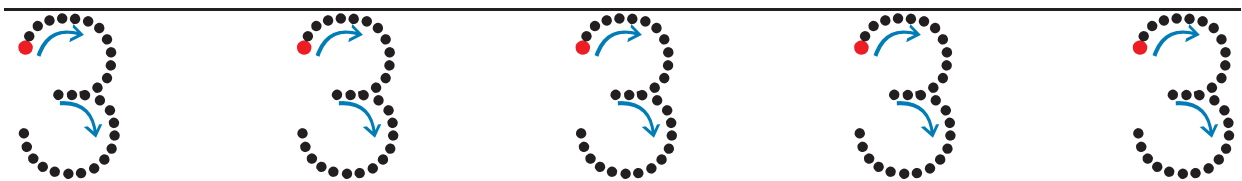
# Learning about the number symbol 3

How many butterflies?

	
	<b>3</b>

## Activity 3

- Trace the number symbol 3 with your finger.

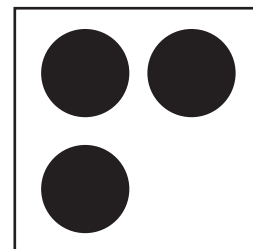


This is number symbol

3

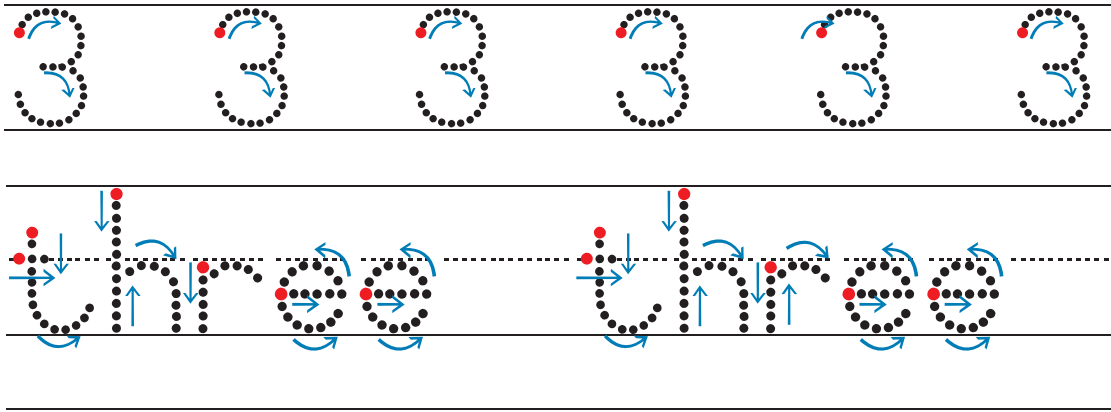
This is number name

three





2. Write the number symbol and number name for 3 in your classwork book.



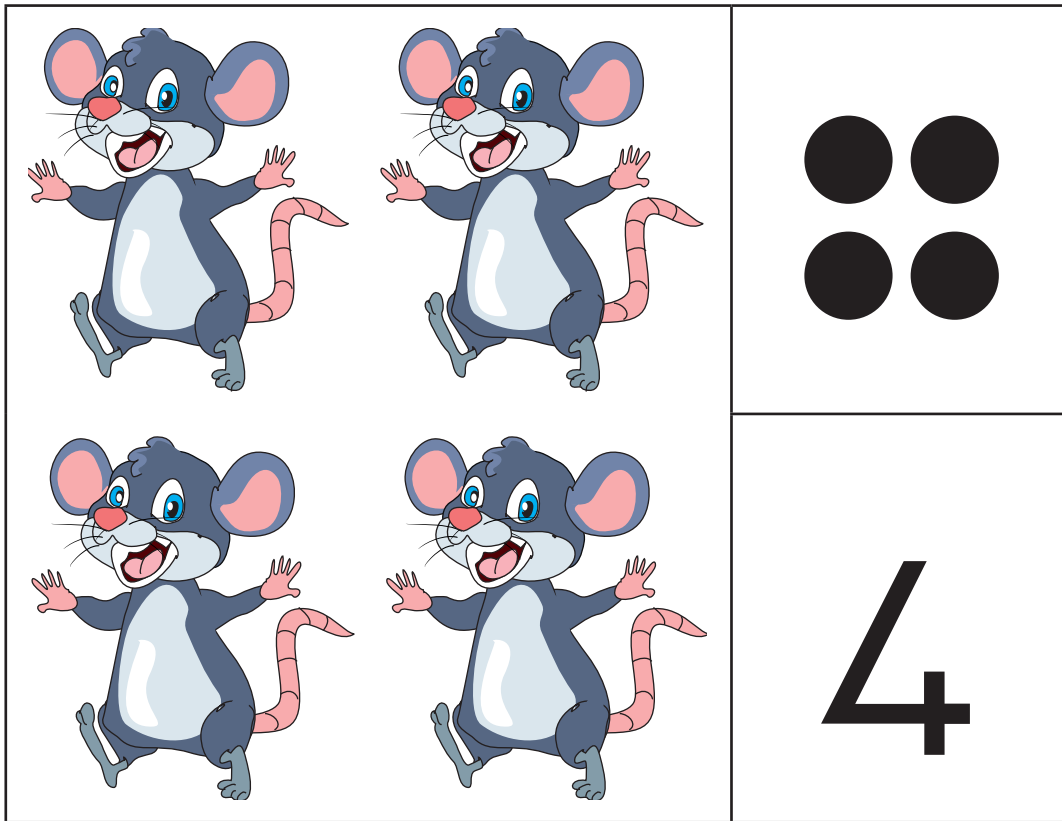
3. How many cupcakes are in this picture?



- a) Write the number name.  
b) Write the number symbol.

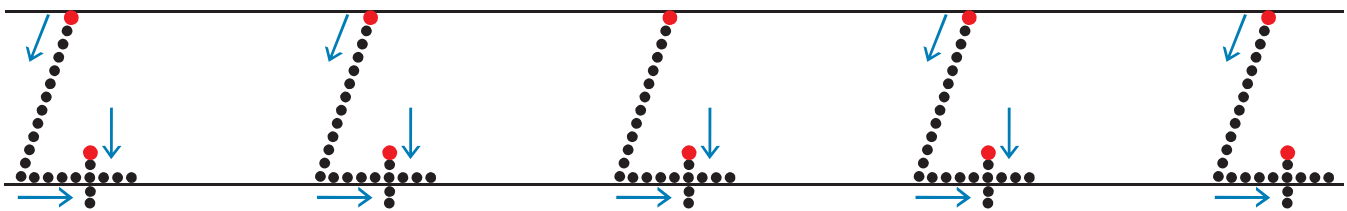
# Learning about the number symbol 4

How many mice?



## Activity 4

I. Trace the number symbol 4 with your finger.

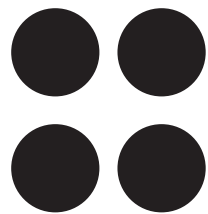


This is number symbol

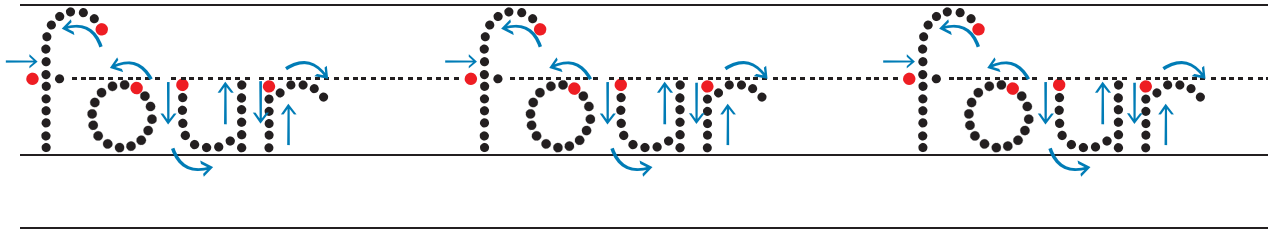
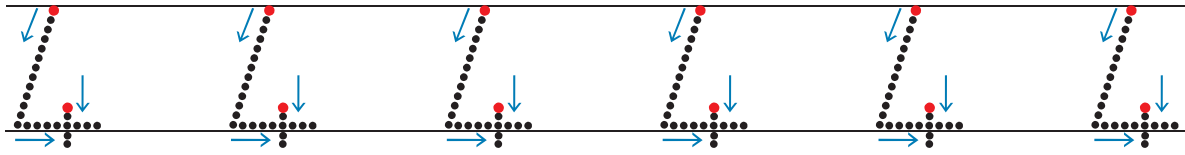
4

This is number name

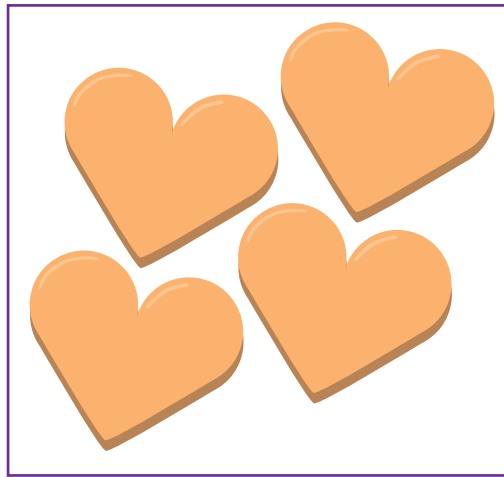
four



2. Write the number symbol and number name for 4 in your classwork book.



3. Here is a picture showing 4 hearts.

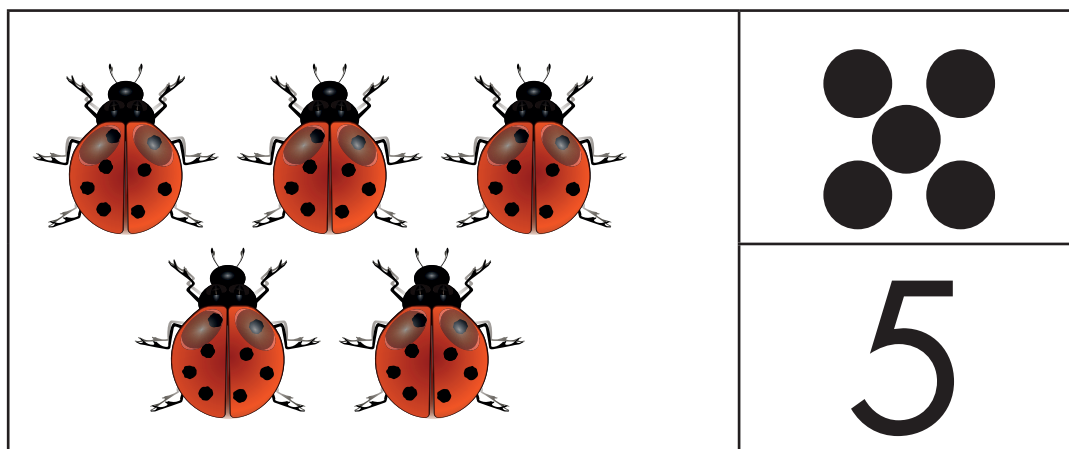


Draw your own picture showing 4 of your favourite things.

- Write the number name.
- Write the number symbol.

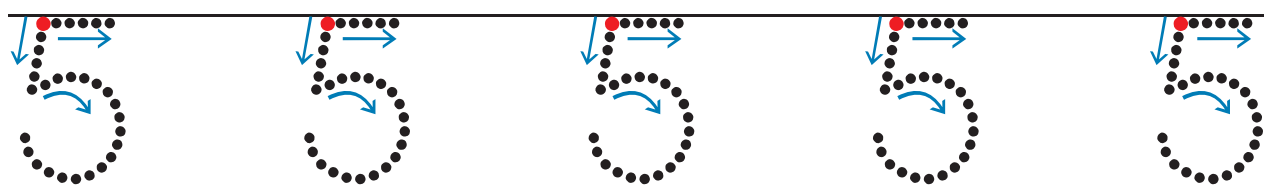
# Learning about the number symbol 5

How many bugs?

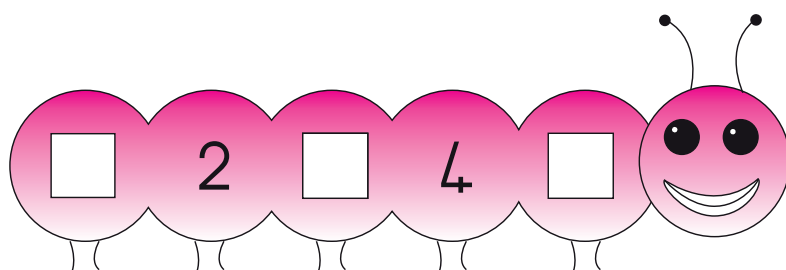


## Activity 5

1. Trace the number symbol 5 with your finger.

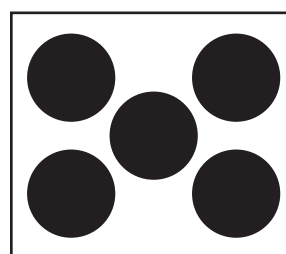


2. What numbers are missing? Tell your friend.



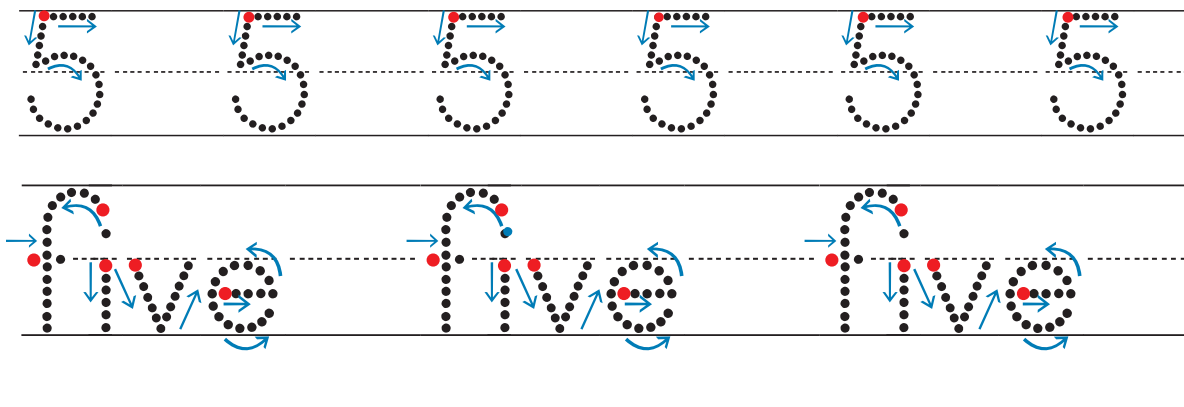
This is number symbol

This is number name





3. Write the number symbol and number name for 5 in your classwork book.



4. Listen to the poem. Write all the number names and number symbols in your classwork book.

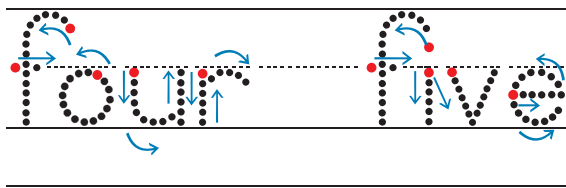
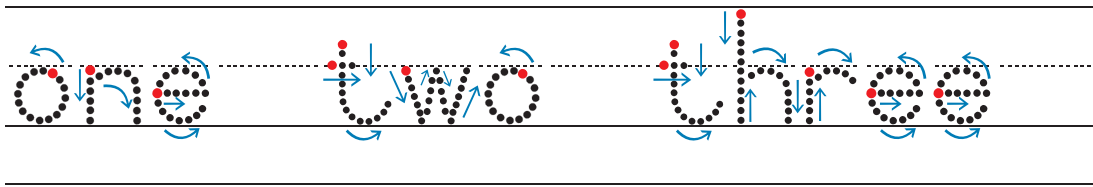
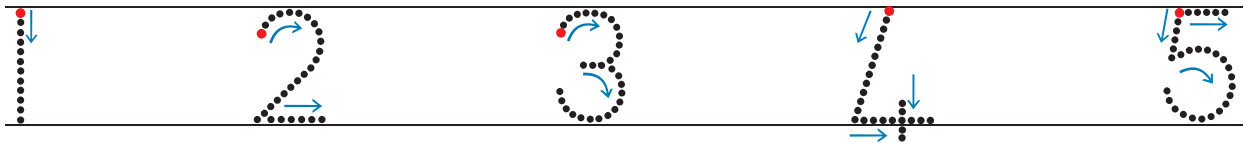
Three thirsty cats, drinking some milk,  
 1, 2, 3 almost up!  
 Thirsty cats want more and more...  
 Four more gulps, please add another cup!  
 Three happy cats, all snore and snore...



# Number names and symbols: 1 – 5

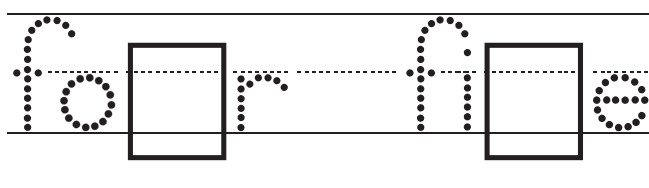
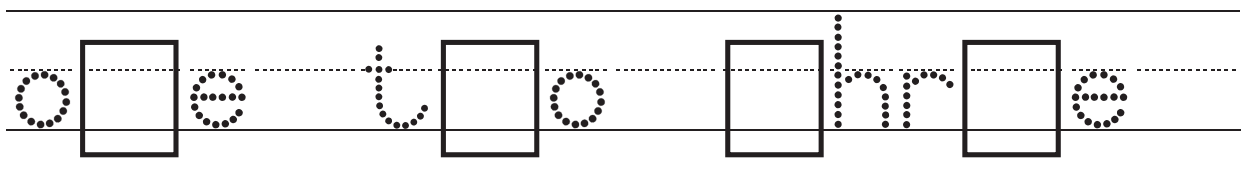
## Activity 6

- Trace over the number symbols and number names using your finger.


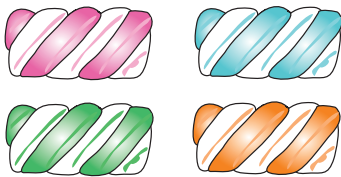
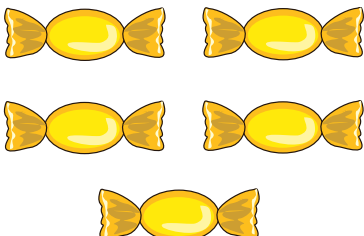
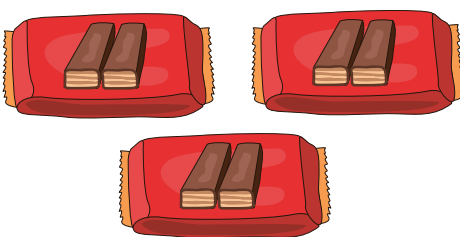



Write the number symbols and number names in your classwork books.

- Copy and complete the number names.



3. Draw then match the number symbol with the correct number name. The first one has been done.




	1	four
	2	five
	3	two
	4	one
	5	three

# Count to 5




Let's practise counting from 1 to 5.

Example

How many faces?

Answer

	1
	2
	3

## Activity 7

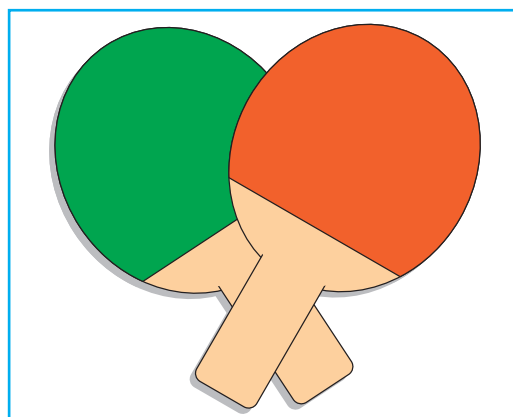
TERM I

1. Count and write how many toys you see.

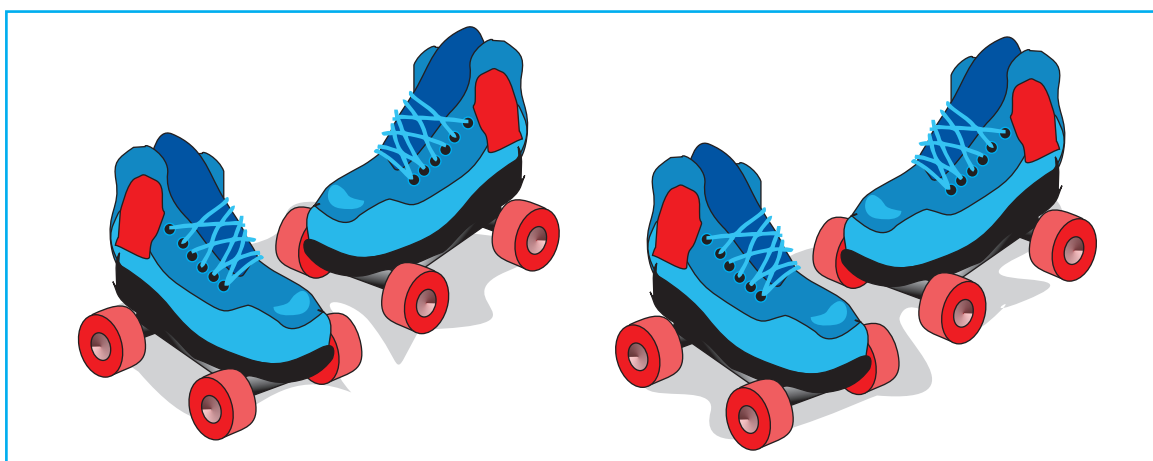
a)



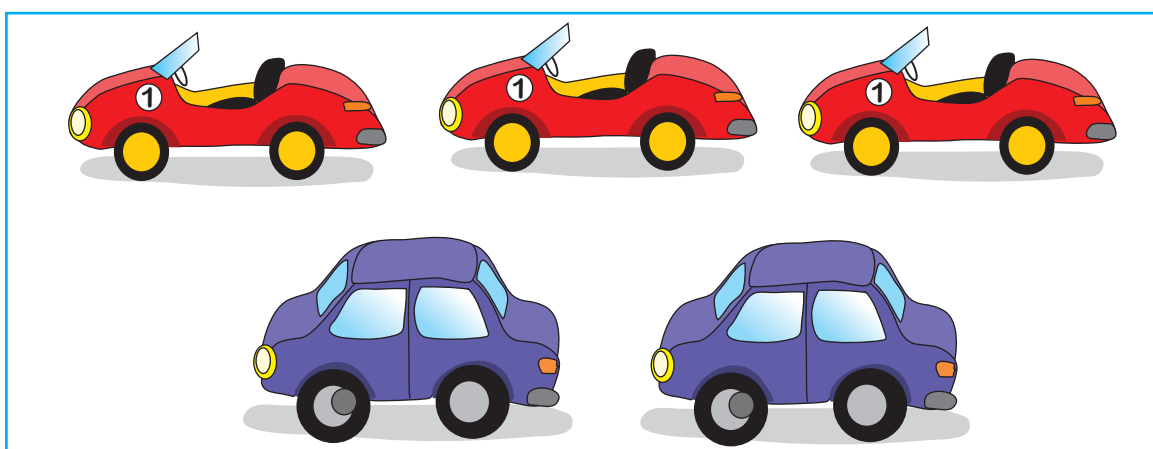
b)



c)



d)



2. In your classwork book, draw:

a) 2 happy faces

b) 4 sad faces

c) 3 apples

d) 3 lollipops



# How many?

Counting will help you when you start using numbers to calculate.

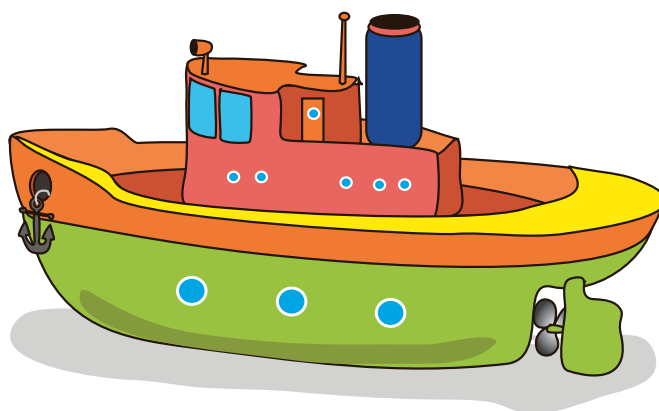
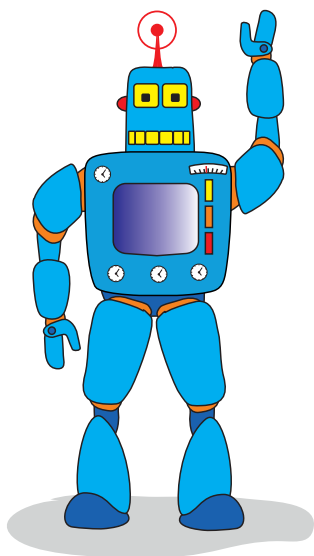
## Activity 8

1. Pam has 2 toys. Count her toys.



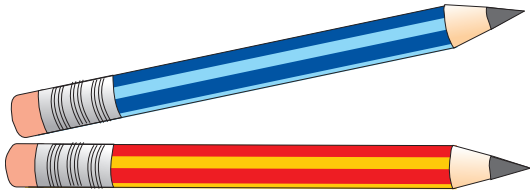
She fetches 2 more toys. How many toys does she have now?

2. Sam has 2 toys. Count his toys.



He fetches 3 more toys. How many toys does he have now?

3. Count the pencils. If you add 3 more pencils, how many pencils will there be?



4. How many fingers is Themba holding up?



If he holds up another finger, how many fingers will he be holding up?

5. Count the number of dots on each domino.



- c) How many dots are there altogether?

## Use estimation

When we **estimate**, we are able to say “about how many” objects there are in a group.

### Example

Idah thinks that there are about 4 apples in the tree.



Idah has **estimated** how many apples there are.

Check if Idah’s estimate is correct by counting the apples.

## Activity 9

TERM I

When you **estimate** you find a value that is close enough to the answer.

1. a) Estimate how many toys.

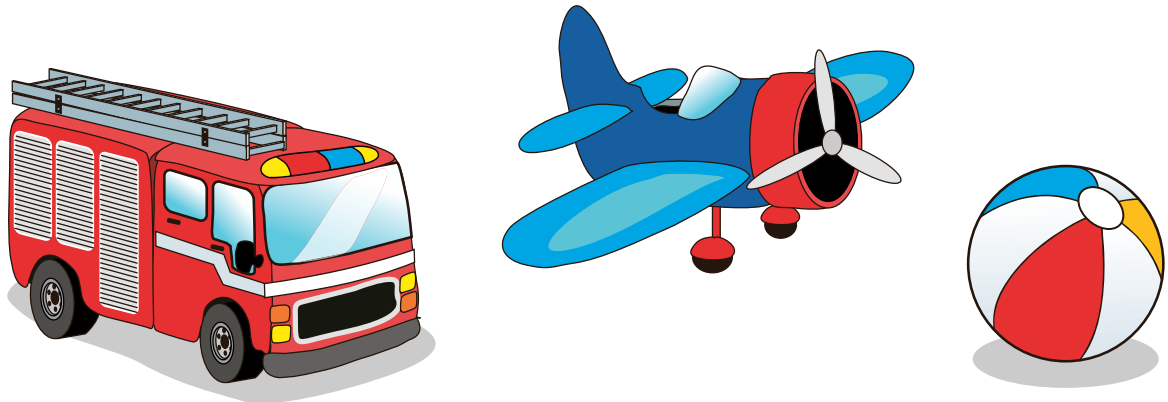


- b) Count the toys in the picture.

### Take note

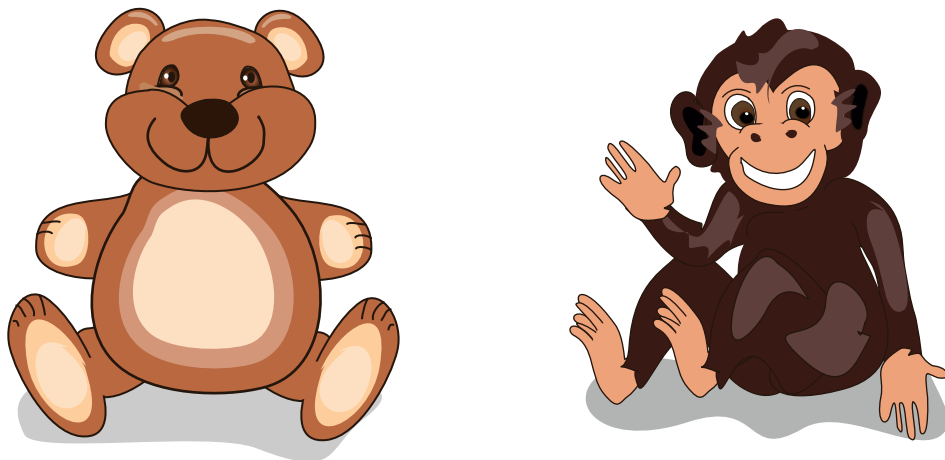
Your estimate and your count may not always be the same.

2. a) Sam has a fire engine, a ball and an aeroplane. Draw dots to show Sam's toys.



How many toys altogether?  
Write the number.

- b) Pam has a teddy bear and a monkey. Draw crosses to show Pam's toys.



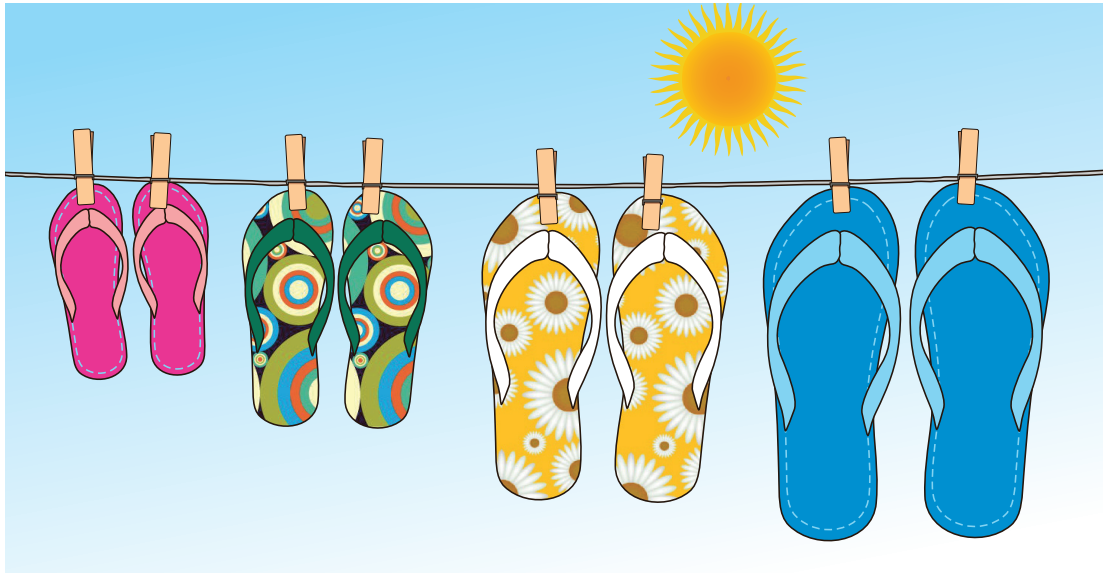
How many toys altogether?  
Write the number.

- d) Count all the dots and crosses.  
How many toys are there altogether?

# Count to 10

## Example

Count the flip flops. How many flip flops?



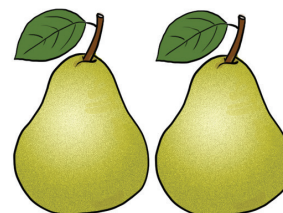
## Answer

There are 8 flip flops altogether.

## Activity 10

Look at the fruit.

1. a) How many bananas? b) How many pears?



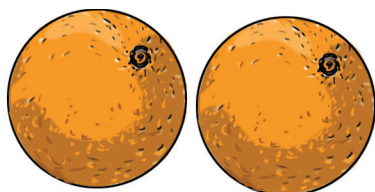
- c) How many bananas and pears altogether?



2. a) How many lemons?



b) How many oranges?



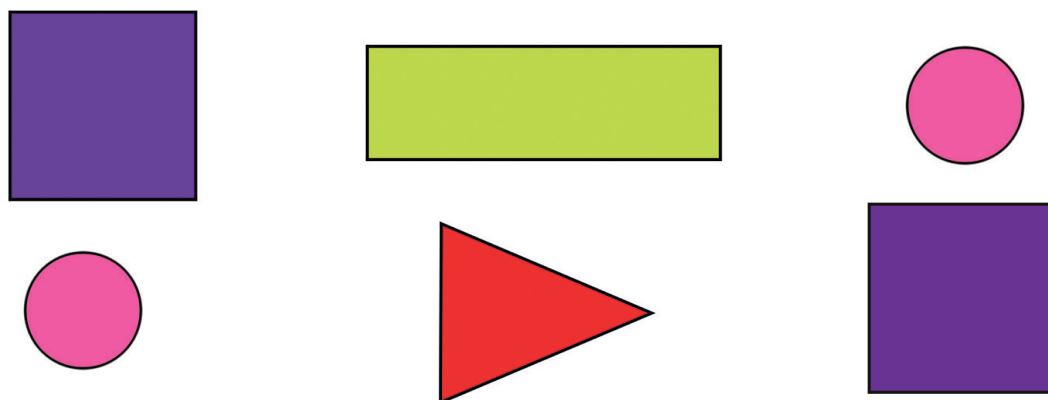
c) How many lemons and oranges altogether?

3. Look at the shapes Sam has:



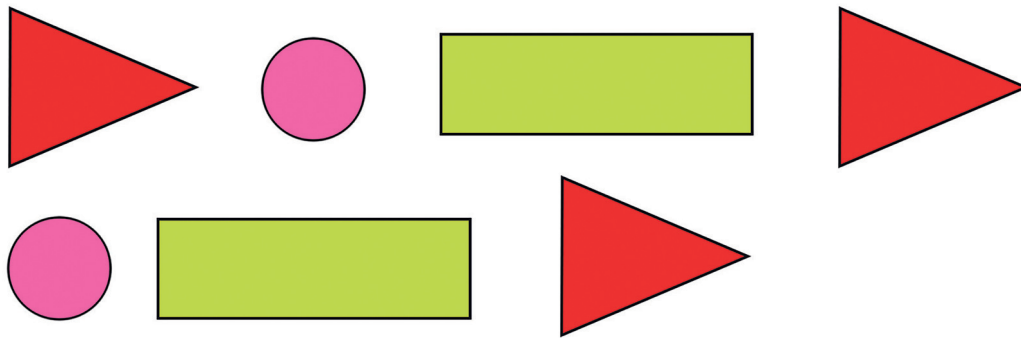
How many shapes does Sam have?

4. Look at the shapes Pam has:



How many shapes does Pam have?



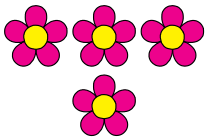
5. Count the shapes below.?





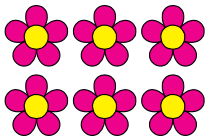
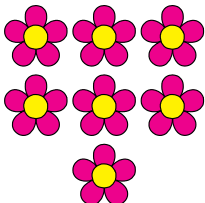

6. Choose a number between 1 and 6 Ask your friend to guess your number. Use these clues:

- My favourite number is before \_\_\_\_.
- My favourite number is between \_\_\_\_ and \_\_\_\_
- My favourite number is after \_\_\_\_.

7. Copy and complete.

				
	2			5

8. Copy and complete. Draw as many  as .

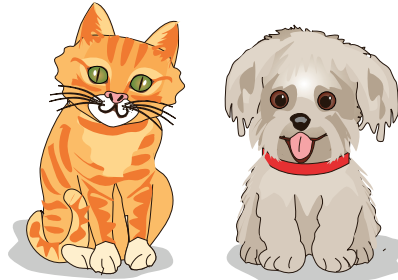
				

# How many?

Instead of starting at one when you are given a number to add, you can **count on**...

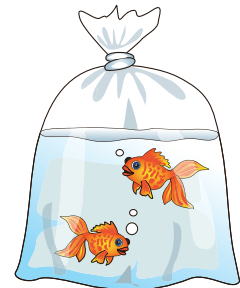
## Example

Lesego has two pets.



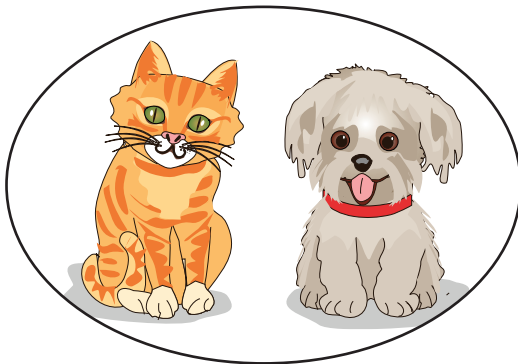
Her dad buys two goldfish.

How many pets does she have now?

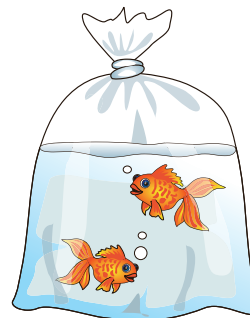


## Answer

When you want to count on from 2, you would say... 3, 4



1 2



3 4

Lesego has 4 pets altogether.

**Counting on** can help us when we need to work out how many of something there is.



## Activity II

1. Nandi has 4 balloons.  
She gets 1 more balloon.  
How many balloons altogether?  
Count on from 4.



2. There are 3 children playing soccer in the park.  
a) If 2 more join them, how many children will there be altogether?



- b) 2 children leave the group.  
Then 1 child joins the group.  
How many children are there now?

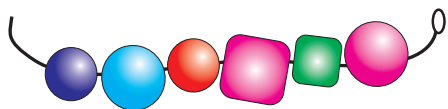
# Count forwards and backwards in ones



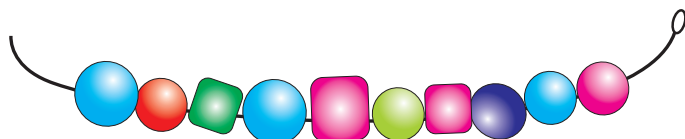
## Activity 12

Look at these bracelets Nandi and her mom have made.

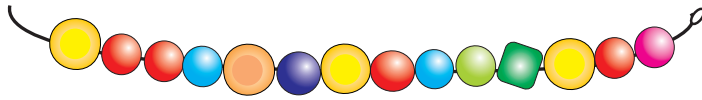
1. Count the beads.  
How many beads?



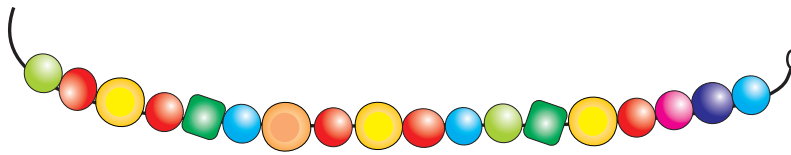
2. Count the beads.  
How many beads?



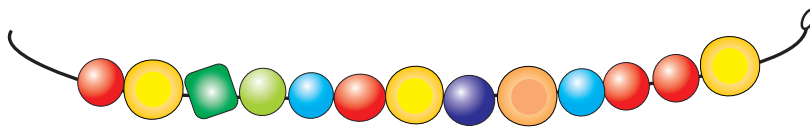
3. Count the beads.  
How many beads?



4. Count the beads.  
How many beads?



5. Nandi's mom wants to make a bracelet with 20 beads. Count the beads.



How many more beads does she need to finish this bracelet?

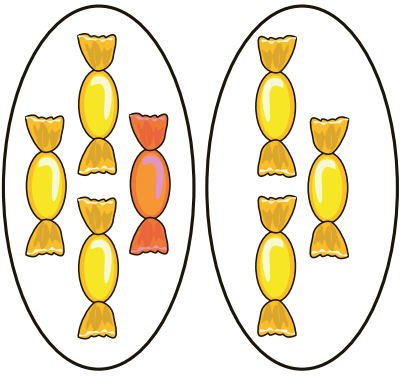
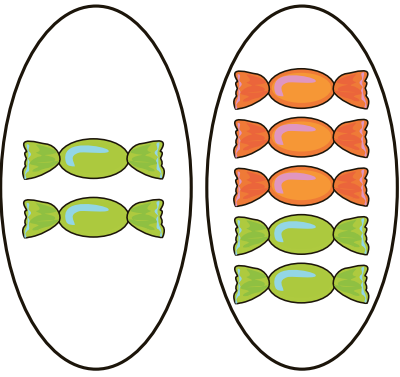
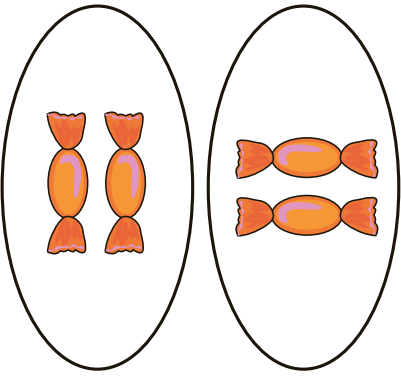
6. Copy and complete. Draw as many ♥ as ●.

a)	b)	c)	d)	e)
● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
● ●	● ● ●	● ●	●	

# Describe, compare and order numbers

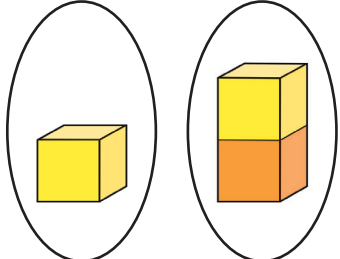
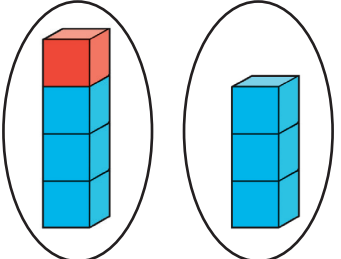
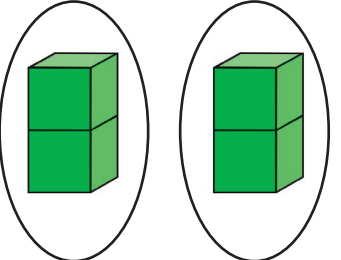
## Compare numbers

We can use these words when we compare numbers.

more than	less than	equal to
		
4      3	2      2	2      2

### Example

Write the number that each group represents. For each group, write **more than**, **less than**, or **equal to**.

a)  b)  c) 

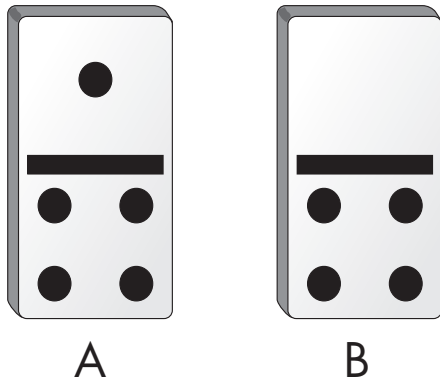
### Answer

- a) 1 is **less than** 2  
b) 4 is **more than** 3  
c) 2 is **equal to** 2

**Example**

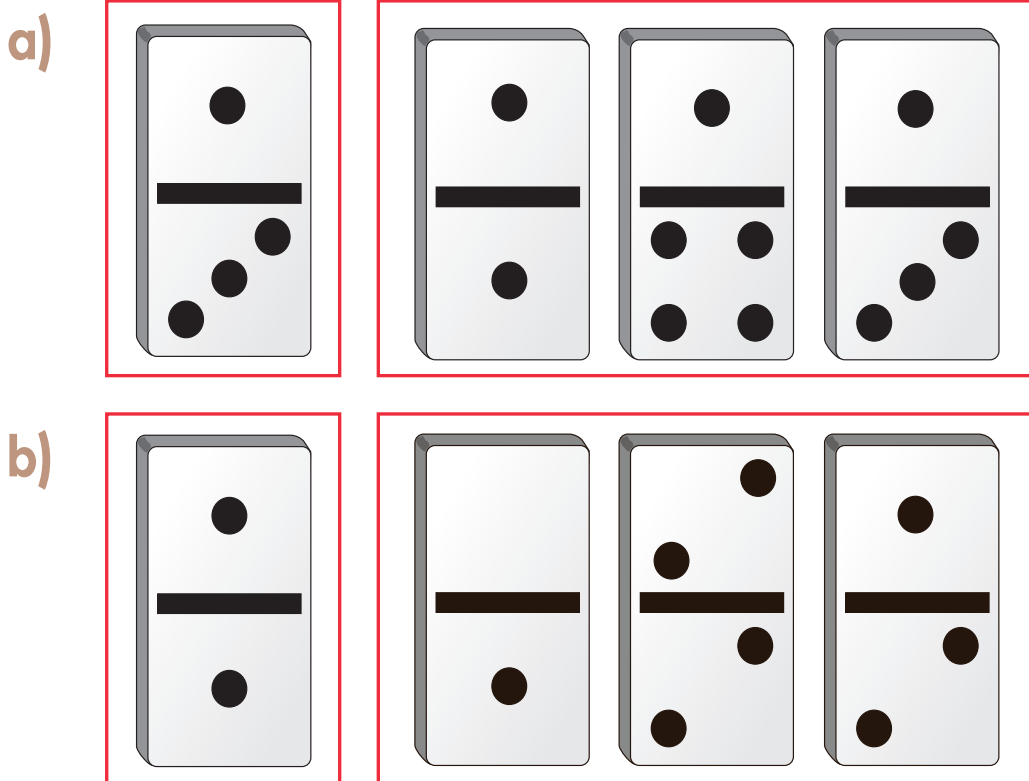
Look at the dominoes.

Domino A has **more** dots **than** domino B.

**Activity I3**

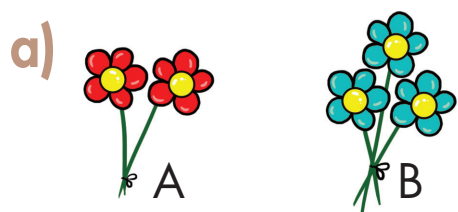
- I. Look at the dominoes on the left.

Choose, then draw the domino on the right that has **less** dots **than** the one on the left.

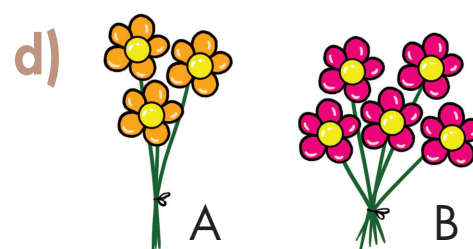
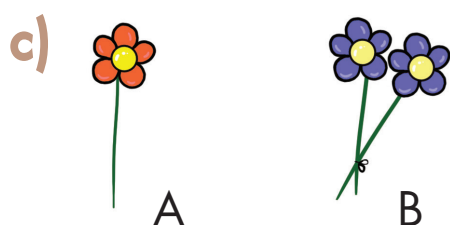
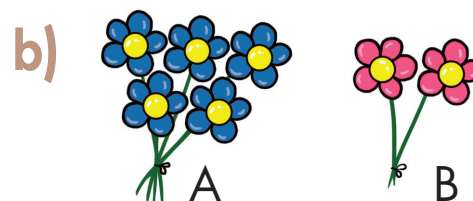




2. Look at each bunch of flowers. Write more than, less than or equal. The first one has been done for you.

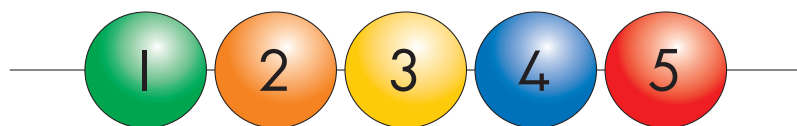


A is less than B



### Example

Look at the beads.



a) Which number comes before 2?

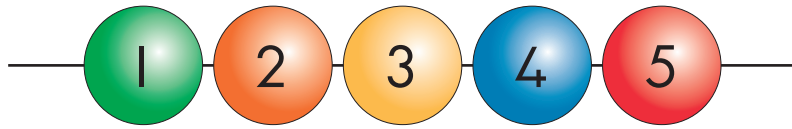
b) Which number is 1 **less than** 2?

### Answer

a) 1 comes before 2

b) 1 is 1 **less than** 2

3. Look at the beads.



- a) Which number comes before 4?  
Which number is 1 **less than** 4?
- b) Which number comes after 4?  
Which number is 1 **more than** 4?
- c) Which number comes after 3?  
Which number is 1 **more than** 3?
- d) Which number comes before 5?  
Which number is 1 **less than** 5?

4. Answer the following questions:

- a) Which number is 1 less than 4?
- b) Which number is 1 more than 4?
- c) Which number is 1 more than 3?
- d) Which number is 1 less than 5?

# Order numbers

We can use these words to compare and order things.

many

few

most

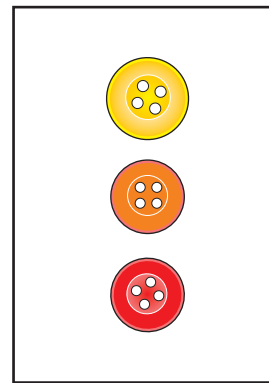
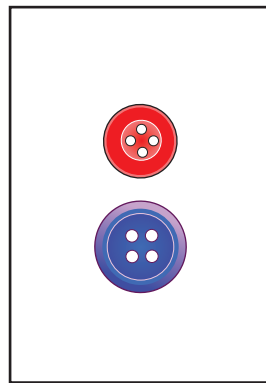
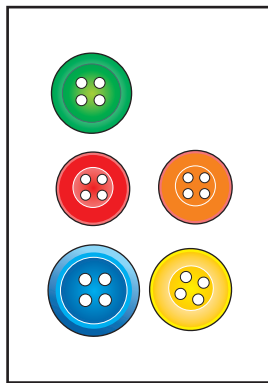
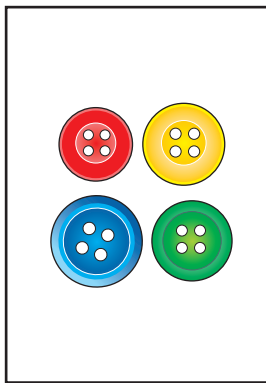
least

just as many

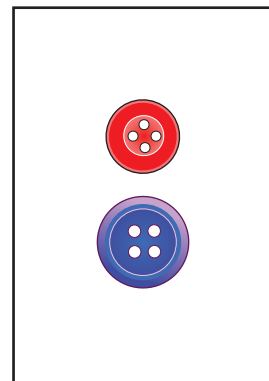
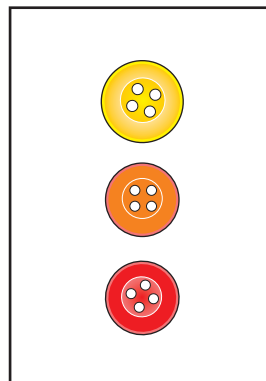
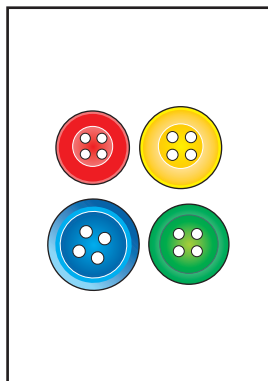
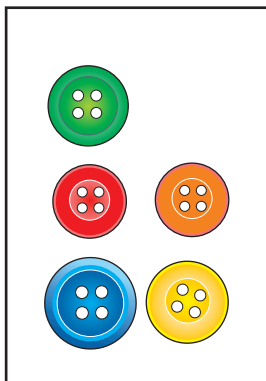
We can arrange items in groups.

## Example

Arrange the items from the **most** to the **least**.



## Answer



**most**

**least**

## Activity 14

TERM 1



The learners are cleaning the playground.

Neo's items

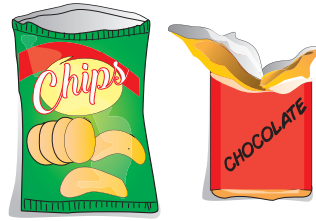


Cindy's items



- I. a) Draw **just as many** dots to show the **most** items.

2. Nathi's items



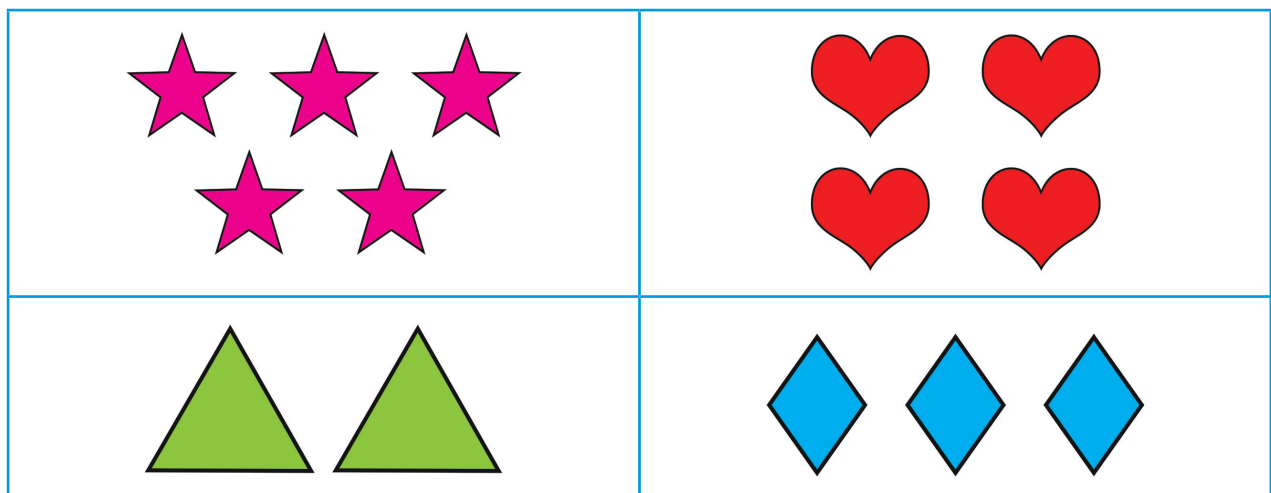
Seshni's items



- a) Who collected the **least** items?  
Seshni or Nathi?
- b) Draw **just as many** dots to show who collected the **least** items.

3. Arrange the children's names in order from who found the **most** items, to who found the **least** items.

4. Use blocks to make each group.

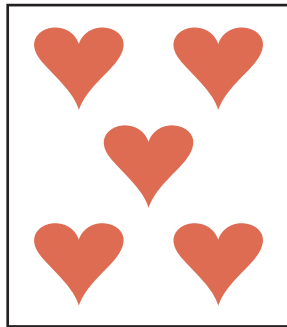


- a) Arrange from most to least.
- b) Write the numbers from smallest to largest.

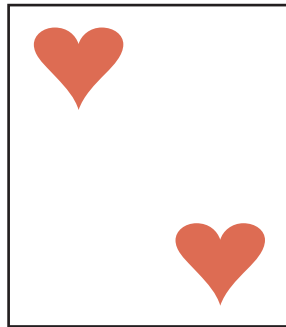


5. Look at these groups of hearts.

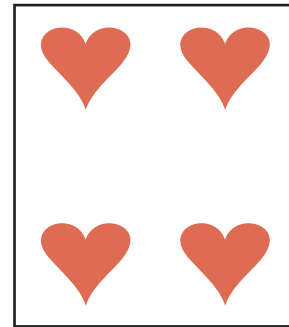
- a) What group has the **most** hearts?  
 b) What group has the **least** hearts?



A



B

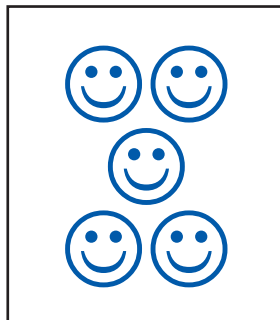


C

6. a) What group has the **least** smiley faces?  
 b) What group has the **most** smiley faces?  
 c) How many smiley faces in the group?



A

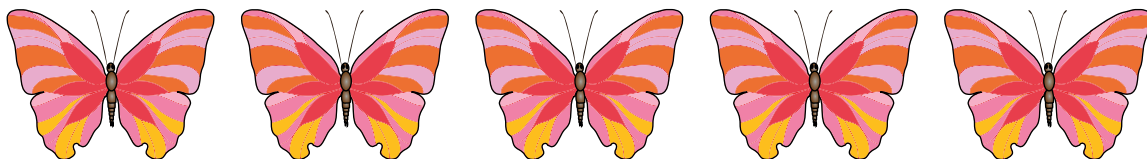


B



C

7. Draw **just as many** hearts as butterflies.



# Use a number line to describe and compare numbers

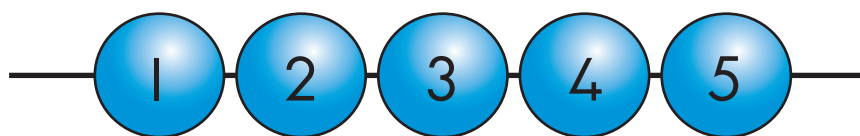
You can use a number line to help you describe and compare numbers. Here is an example of a number line.



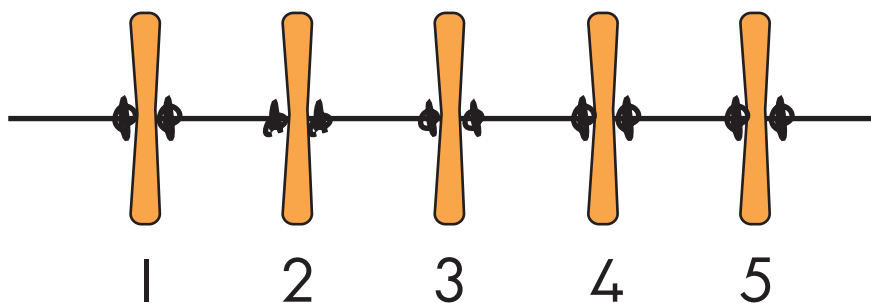
You can use different counters to show numbers, then describe and compare them.

Look at these examples:

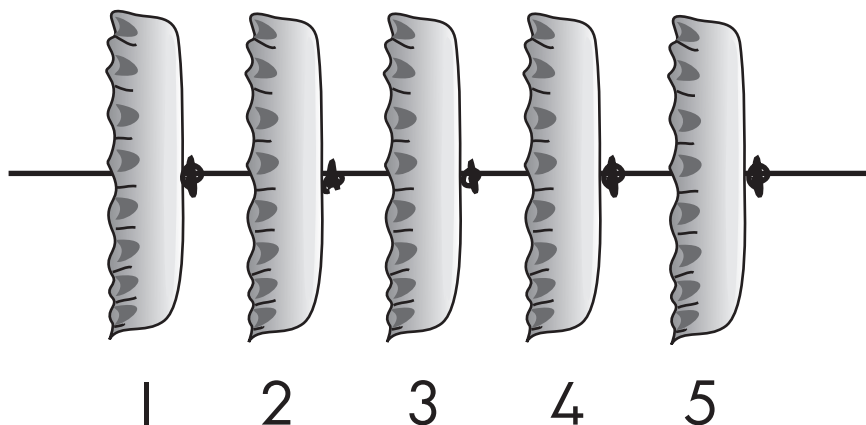
Using beads



Using buttons

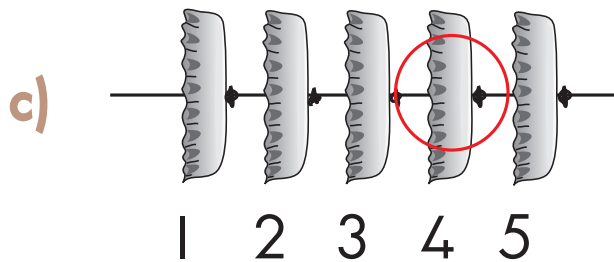
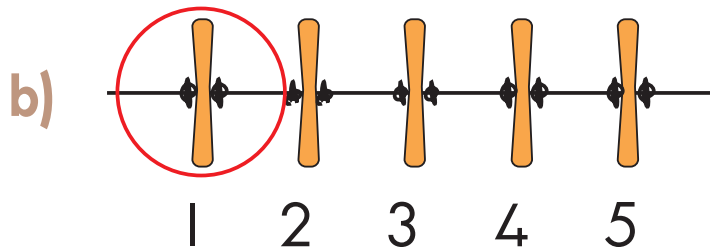
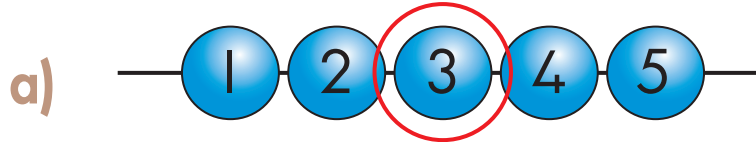


Using bottle tops

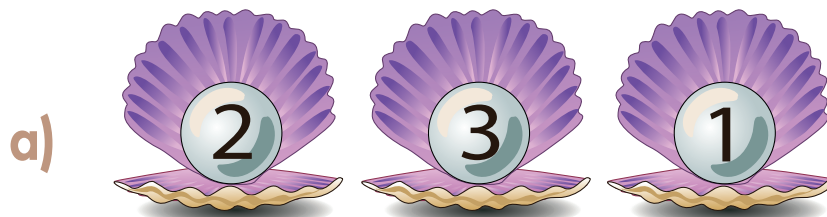


## Activity 15

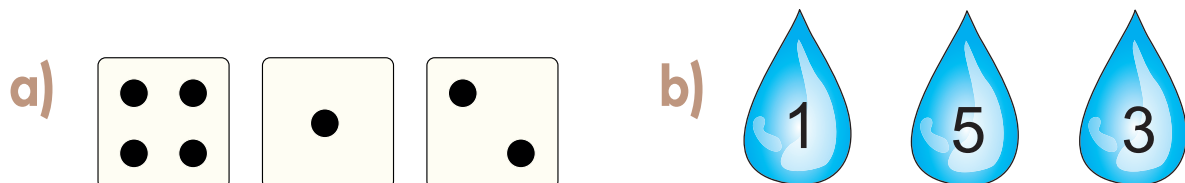
1. Write the number symbol and number name for the circled counter.



2. Arrange the numbers from smallest to biggest.



3. Arrange the numbers from biggest to smallest.



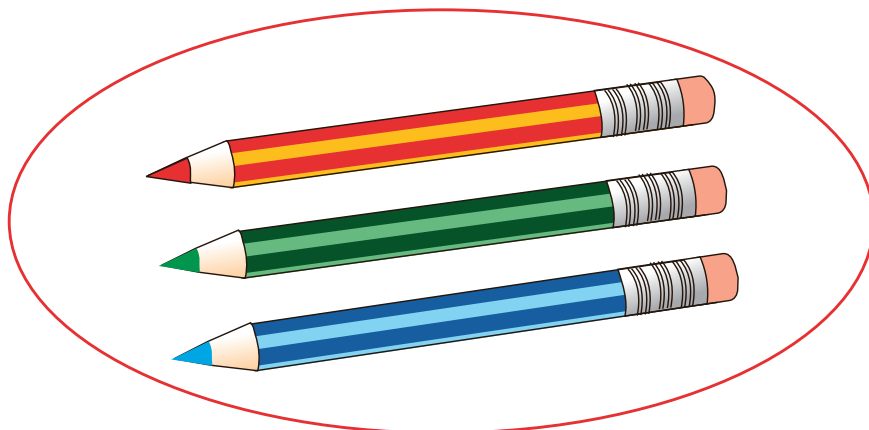
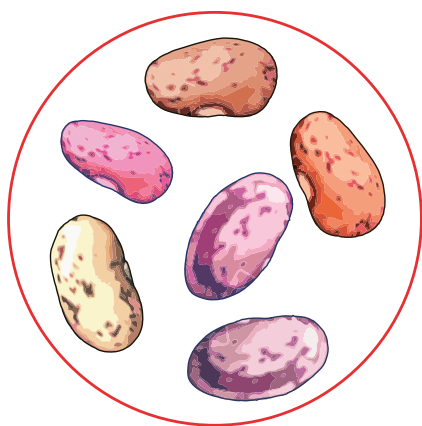
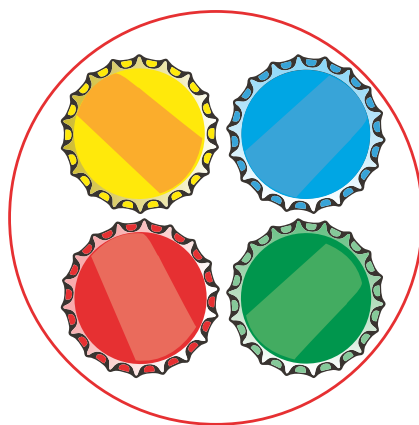
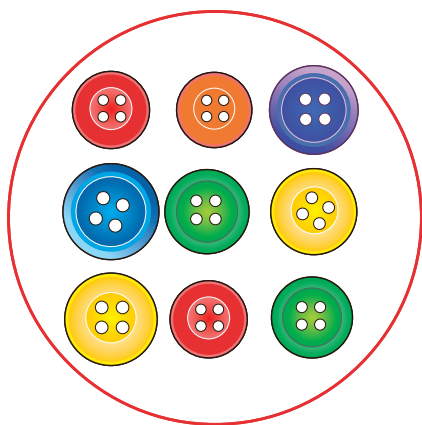
# Problem solving

## Use counters to solve problems

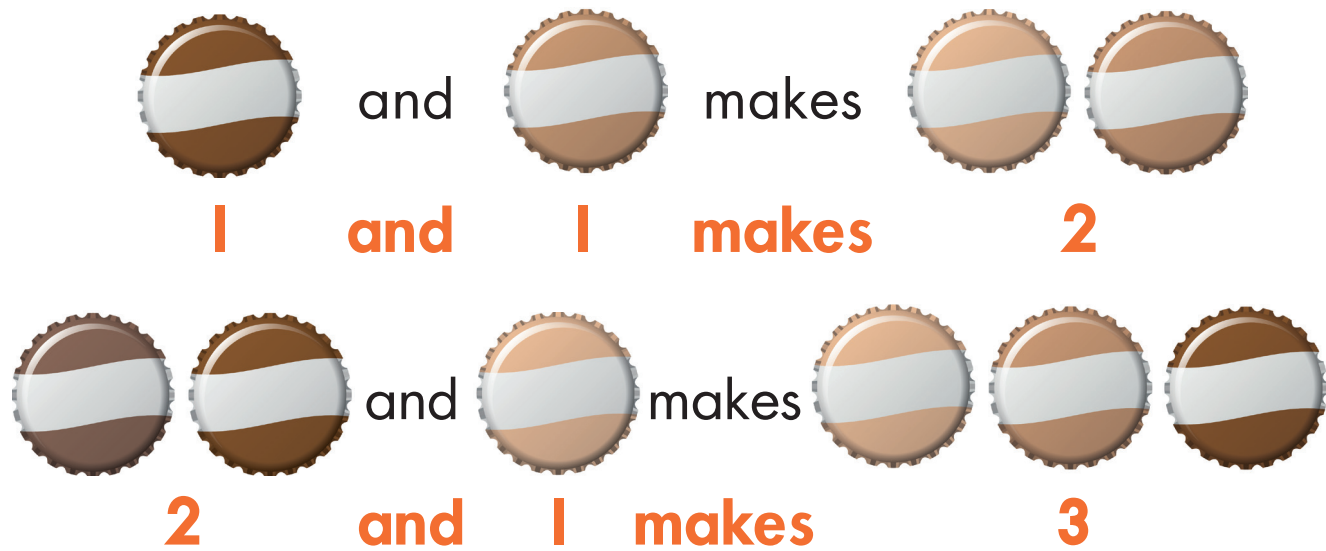
You can use counters to help you count and work with numbers.

We can use **counters** to help us solve problems.

Here are some things we can use as counters.



## Example



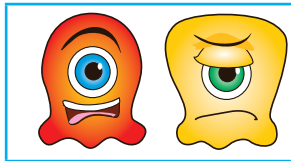
## Activity 16

- I. Look at these pictures.  
Use your counters to make each group.

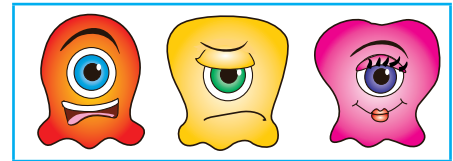
A



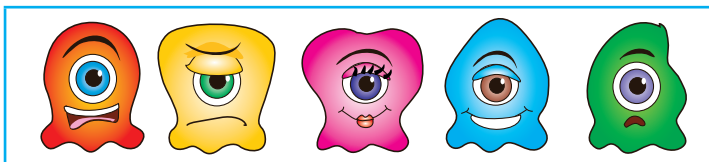
B



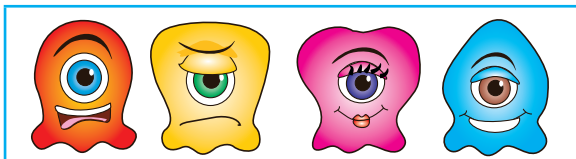
C



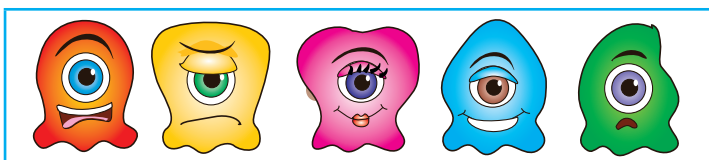
D



E



F



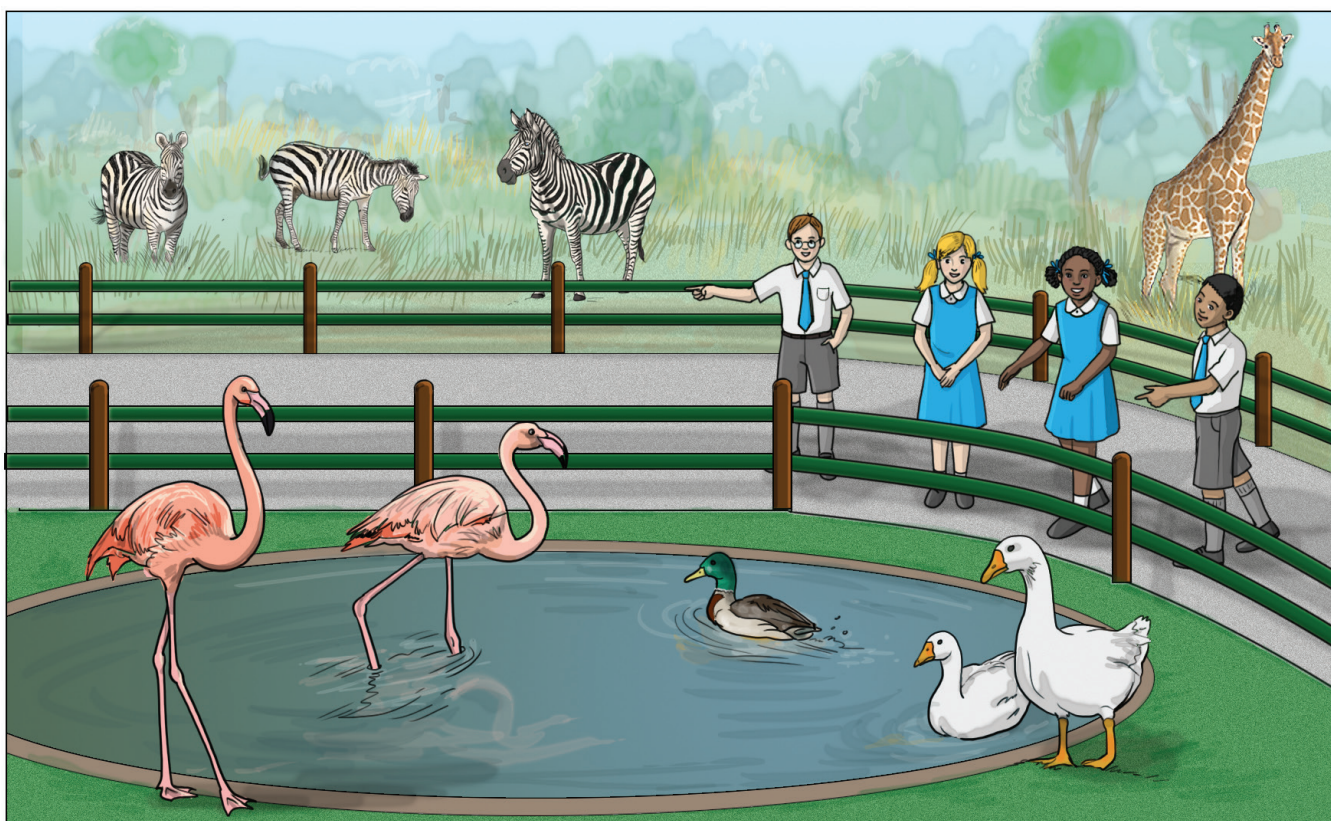


2. Say Yes or No.

- a) There are less counters in A than in B.
- b) There are more counters in C than in B.
- c) There are less counters in B than in C.
- d) There are the same number of counters in D and in F.

3. Discuss with your friend why you said Yes or No for questions 2. a) – d).

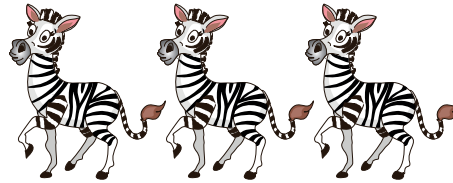
## Use pictures to solve problems



Sometimes you will have to solve word problems.  
You can use drawings and pictures to help you.

**Example**

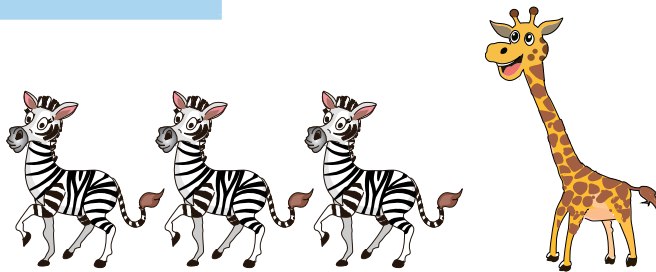
Pam sees three zebras.



Seshni sees one giraffe.

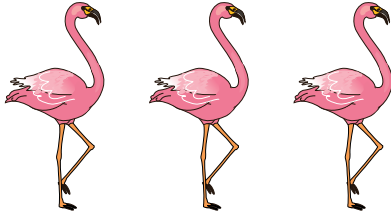


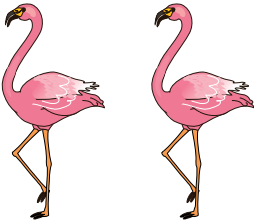
How many animals do they see altogether?

**Answer**

**3 and 1 makes 4**

Solve the word problems.

4. Sam sees  flamingos.

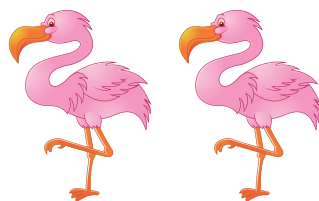
Thabo sees  flamingos.

How many flamingos do they see altogether?

Start by writing a number sentence:

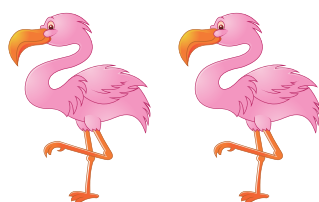
3 and 2 makes

5. Pam sees



flamingos.

Seshni sees



flamingos.

How many flamingos do they see altogether?

Start by writing a number sentence:

2 and 2 makes

6. Sam sees



monkeys.



monkeys disappear into the tree.

How many monkeys are left?

Start by writing a number sentence:

5 take away 2 makes

7. Thabo sees  monkeys.


 more monkeys join the group.

How many monkeys altogether?

Start by writing a number sentence:

2 and 3 makes

8. Pam says she saw  lions.

Thabo says he saw  lions.

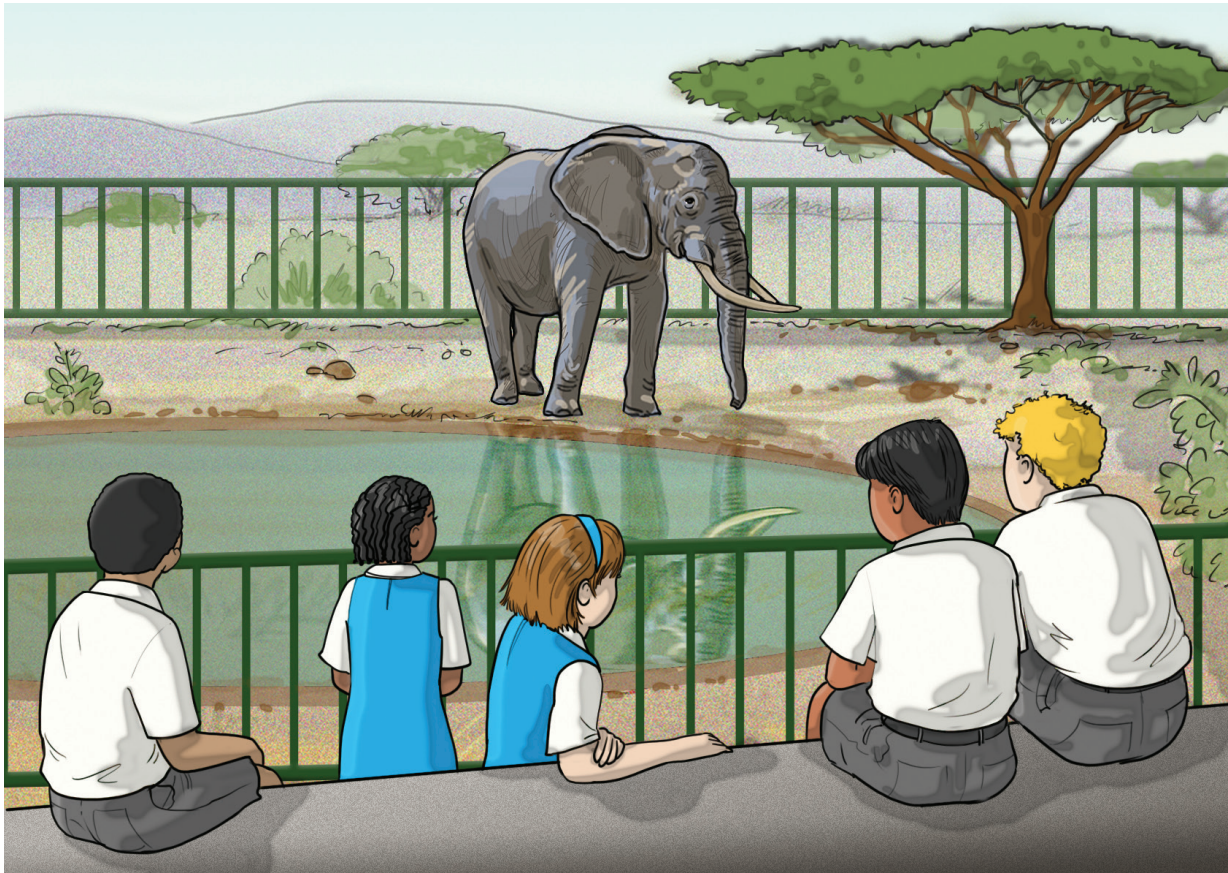
How many more lions did Thabo see than Pam?

Start by writing a number sentence:

5 take away 3 makes



9. Pam sees five learners looking at the elephants.



Two learners are girls and the others are boys.

- a) How many boys are there?

Write: 5 take away 2 makes

- b) How many boys and girls are there altogether?

Write:  and 2 makes

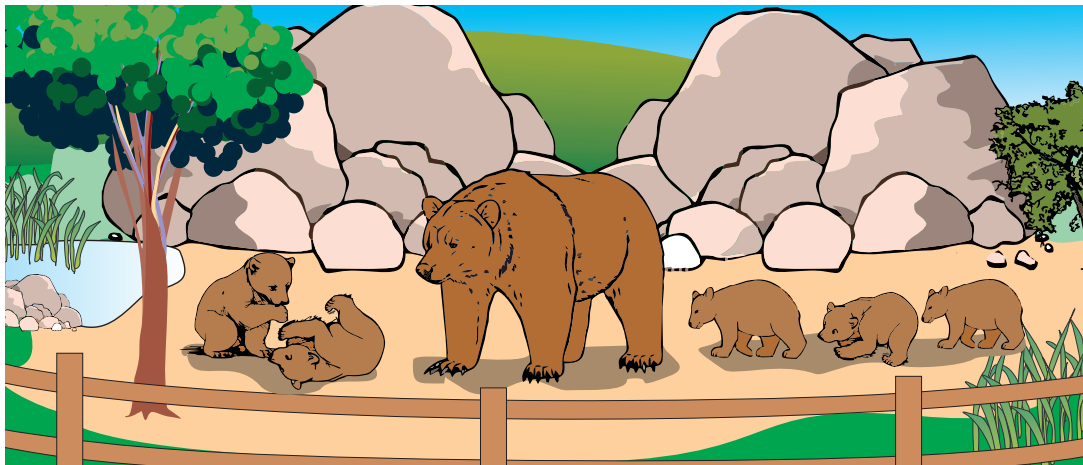


# Use counters to solve problems

Use counters to help you work out the correct answer to each problem.

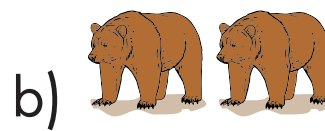
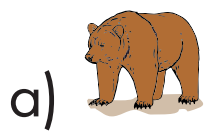
## Example

Look at the bears.



- How many big bears are there?
- If one more big bear joins them, how many big bears are there altogether?

## Answer



10. Look at the bear cubs.

- How many bear cubs are there?
- How many big bears and bear cubs are there altogether?

II. Four learners are watching the bears.

If one more learner joins them, how many learners will there be altogether?

12. Five learners are watching the bears.

If two learners leave, how many learners will be left watching the bears?

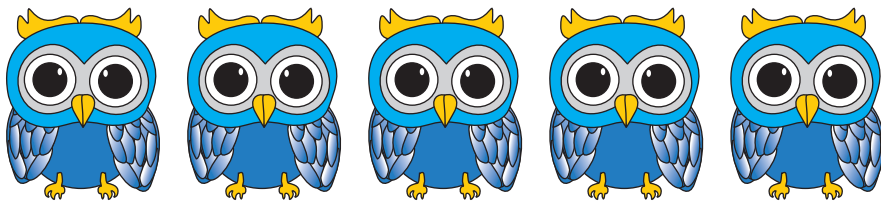
## Use pictures to solve problems

We can also use pictures to help us count.

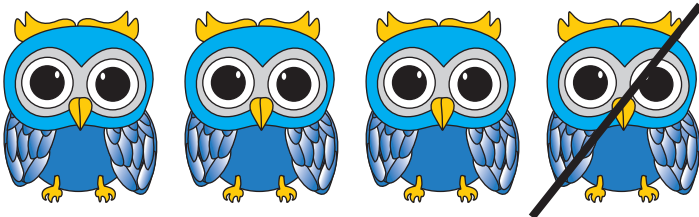
### Example

Look at the owls.

a) How many owls are there?



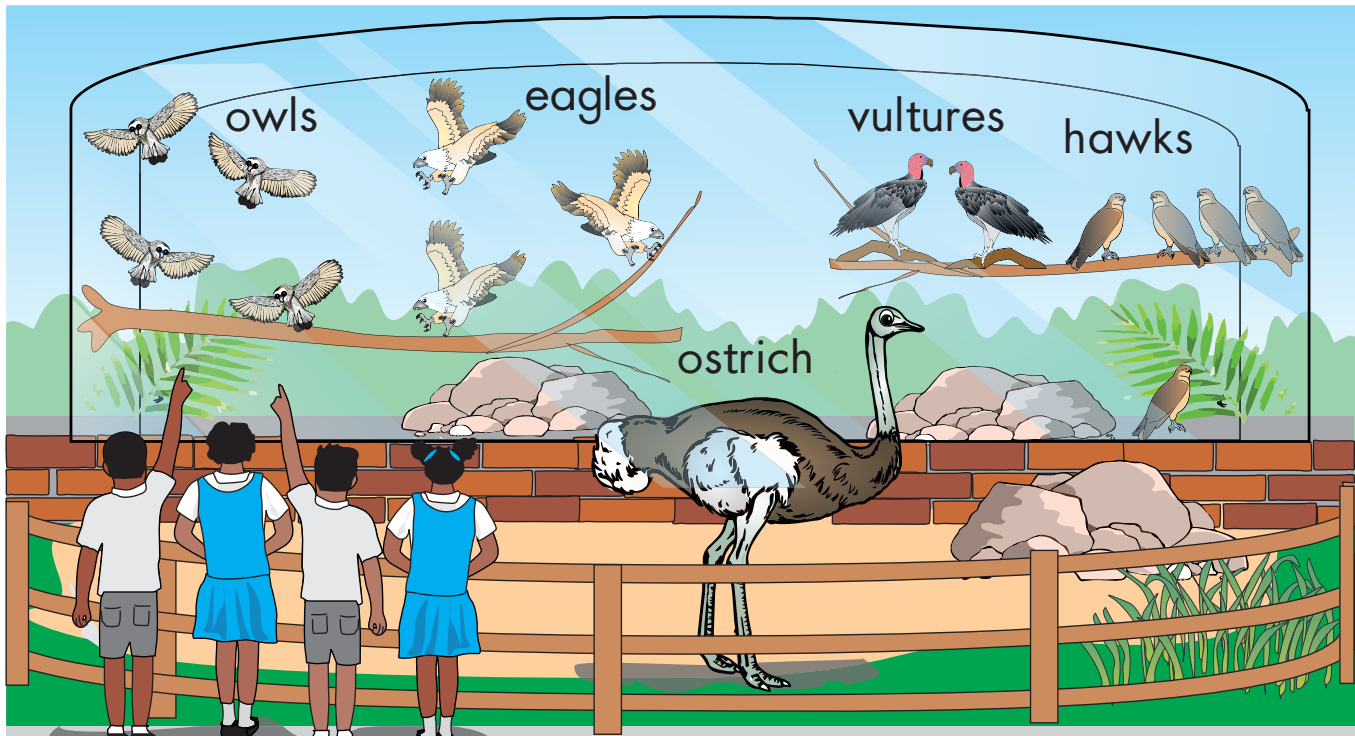
b) If one owl flies into the tree to hide, how many owls will the children see now?



### Answer

a) 5

b) 4



Draw simple pictures to help you solve these problems.

**13.** Look at the ostrich.

If one more ostrich comes into the pen, how many ostriches will there be altogether?

**14.** Look at the vultures.

If two more vultures comes into the cage, how many vultures will there be altogether?

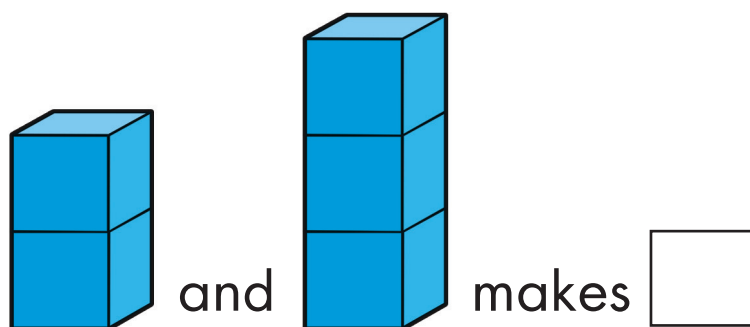
**15.** Look at the eagles.

If two eagles leave the cage, how many eagles will there be?

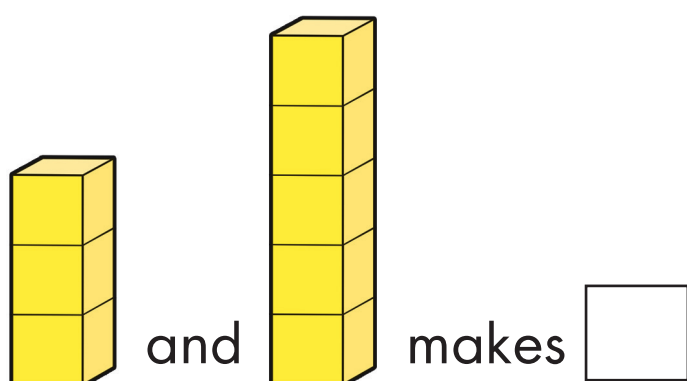
**16.** Look at the hawks.

If three hawks leave the cage, how many hawks will there be?

17. How many blocks.



18. How many blocks?

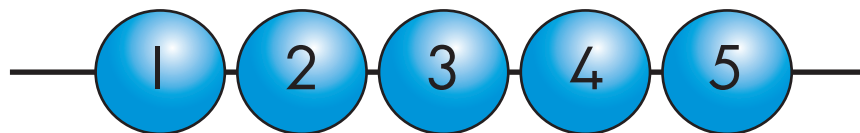


# Use counting bead number lines to solve problems

It is almost time for the learners to leave the zoo. Their teacher asks all the groups to get together and prepare to leave. Some of the learners have wandered off and are trying to find their groups.



We can make a number line like the one you made with beads or buttons.



In Mathematics we use a number line that looks like this:



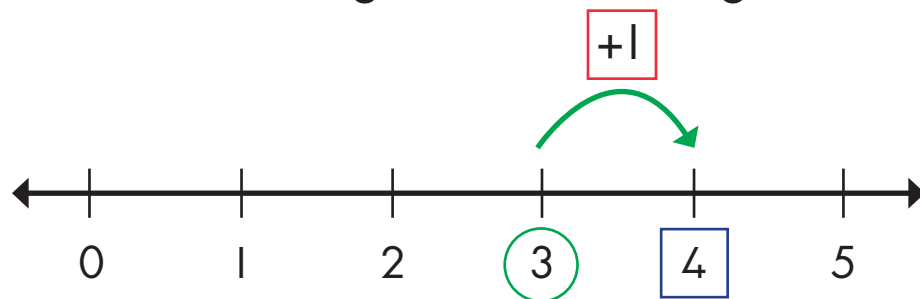
The arrow at the end means that the number line continues. But for now we will use a number line up to 5.



Let's use number lines to solve the following problems.

### Example

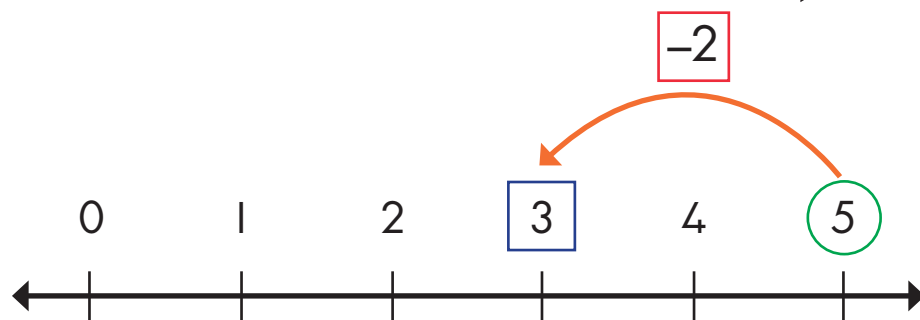
If there are 3 learners in Sam's group, and Ntsako joins them, how many learners altogether?



**3 and 1 makes 4**

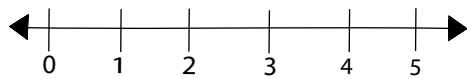
### Example

If 5 learners are writing a Mathematics test and 2 learners answer all the questions in the test, how many learners did not answer all the questions?

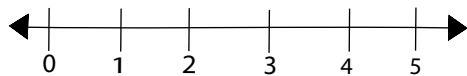


**5 take away 2 makes 3**

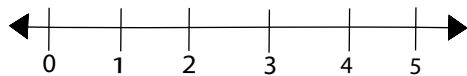
19. There are 2 learners in one group. If 3 more learners join them, how many learners are there altogether?



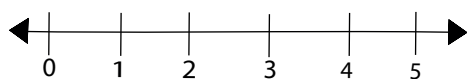
20. There is 1 learner in one group. If 4 more learners join him, how many learners are there altogether?



21. There are 5 learners in one group. If 2 learners leave the group, how many learners are left?



22. There are 4 learners in one group. If 2 learners leave the group, then 3 learners join the group, how many learners are there now?



# Grouping and sharing

We can share objects equally.

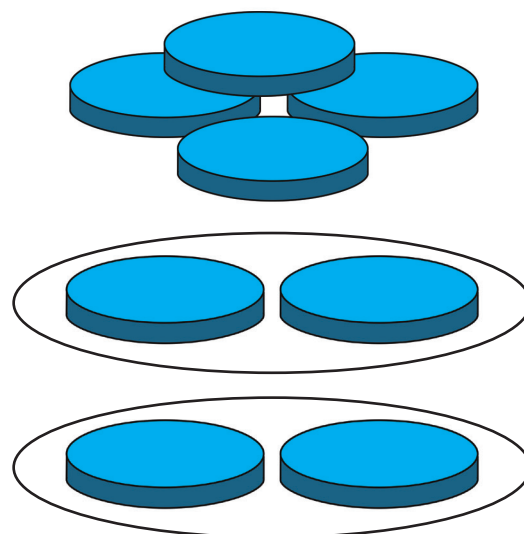
## Example

Share 4 biscuits equally between 2 children.

## Answer

Use counters to show the number of biscuits

Share the counters (biscuits) out one by one until there is none remaining.

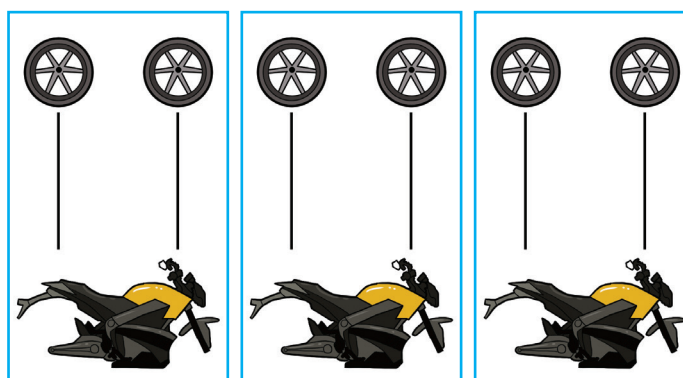


Each child will get 2 biscuits each.

When we group objects equally, we subtract until there is none left.

## Example

If one bike uses 2 wheels, how many bikes can you make with 6 wheels?



## Answer

2 wheels are fitted to one bike.

Therefore, 3 bikes can be made with 6 wheels.

## Activity 17

- a) If one ostrich has 2 legs, how many ostriches are there if you can see 6 legs altogether?
  - b) If one zebra has 4 legs, how many zebras are there if you can see 8 legs altogether?
2. Look at the picture. The teacher has 8 apples, 6 juice boxes and 8 chicken rolls.



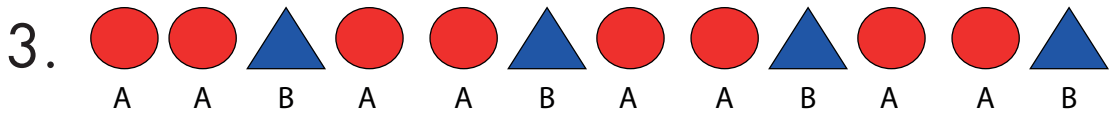
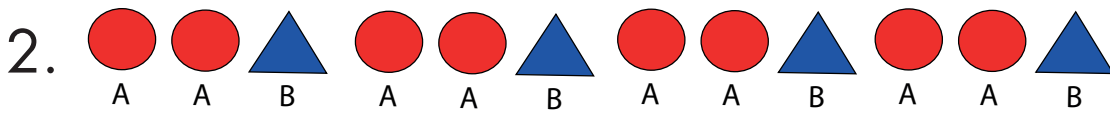
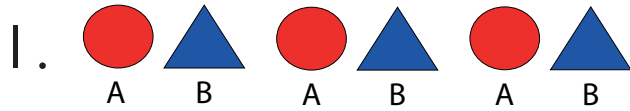
- a) How many apples will each child get?
- b) If each child in the group has to get 1 box of juice, will there be any juice boxes left?
- c) The group finds 5 chicken rolls in their lunch packet. If each child gets 1 chicken roll, how many chicken rolls do they hand back to their teacher?
- d) Sam and Thabo are still hungry. Their teacher has 3 chicken rolls left. If she gives Sam and Thabo 1 chicken roll each, how many will be left?

# Patterns with objects

You can find patterns all around you.

## Example

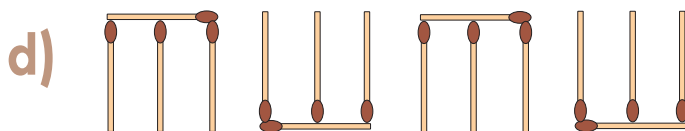
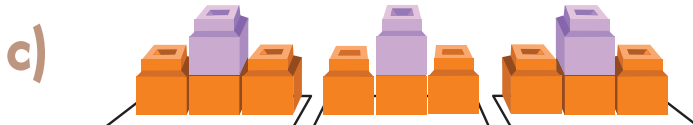
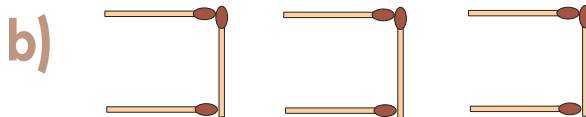
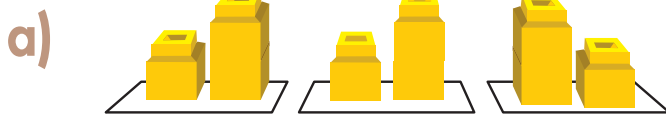
Look at these patterns.



Let's build our own patterns.

## Activity 18

1. Use objects and extend the patterns.



2. Build your own pattern and describe your pattern to the class.

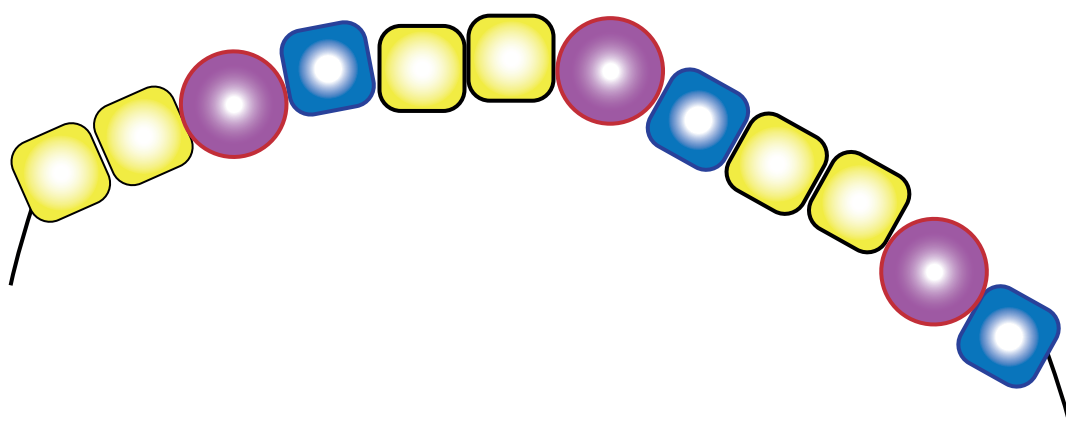
# Patterns with beads

Use beads to make your own pattern.

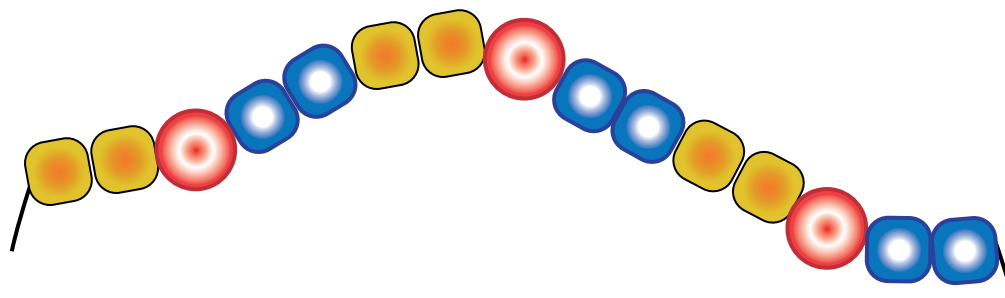
## Activity 19

1. Thandi and Bongi thread some beads.

a) Here is Thandi's pattern:



b) Here is Bongi's pattern:



2. Continue their patterns by adding 2 more groups.

3. Make your own pattern using counters or beads.



# Number patterns

## Activity 20

1. Look at the number pattern.

19	18	17	16	15	14	13	12	11	10
----	----	----	----	----	----	----	----	----	----

Describe what happens to each number in the pattern.

2. What number is missing in the number pattern?  
Tell your partner what the number is.

a)

2	4		8	10
---	---	--	---	----

b)

5	6		8	9
---	---	--	---	---

3. a) Describe this number pattern to your partner.

10	9	8	7	6					
----	---	---	---	---	--	--	--	--	--

- b) Complete the number pattern.

4. a) Describe this number pattern to your partner.

2	4	6		
---	---	---	--	--

- b) Complete the number pattern.

# One more or one less?

## Example

a) What number is missing in the number pattern.

1	3		7	9	11
---	---	--	---	---	----

b) Describe the number pattern.

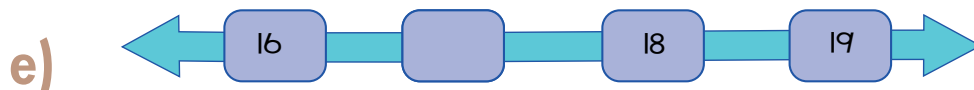
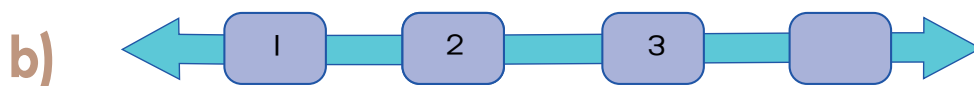
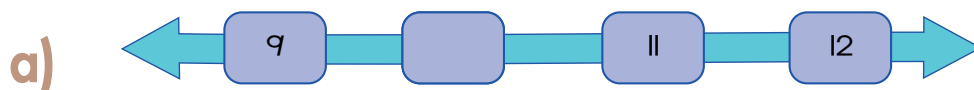
## Answer

a) 5

a) You skip 2 to get to the next number each time.





## Activity 21

1. Tell your partner what the missing number is in each pattern.



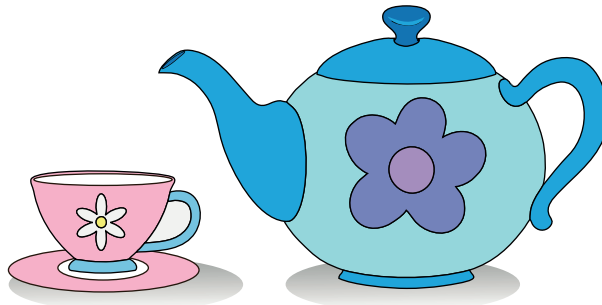
# Position

You can use these words to describe position:

left 	right 
up 	down 

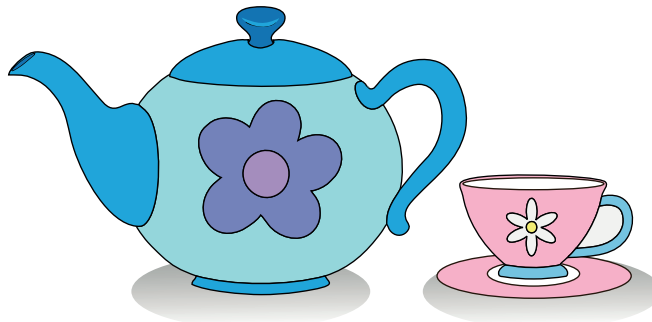
## Example

The cup is to the **left** of the teapot.




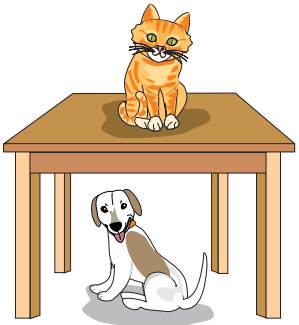

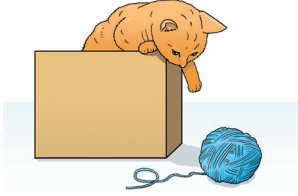
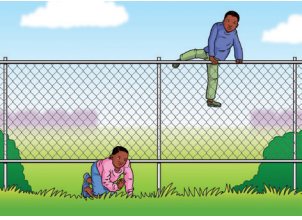

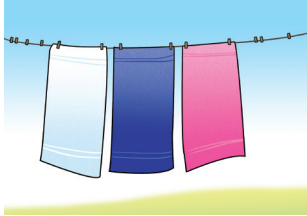


## Example

The cup is to the **right** of the teapot.



We can also use these words to describe the position of one object in relation to another:

<p>The dog is <b>in front of</b> the door.</p> 	<p>He peeks out from <b>behind</b> the door.</p> 	<p>The apple is <b>on top of</b> the books.</p> 
<p>The cat is <b>on top of</b> the table.</p> 	<p>The boy wearing the green jersey is at the <b>back</b> of the line.</p> 	<p>The cat is <b>in</b> the box. The ball of wool is <b>out</b> of the box.</p> 
<p>The boy jumps <b>over</b> the fence. The girl crawls <b>under</b> the fence.</p> 	<p>Keenan raised his arms <b>above</b> his head.</p> 	<p>The blue towel is hanging <b>between</b> the white towel and the pink towel.</p> 

## Example

Look at the picture.



The cat is to the **left** of the fish bowl.

The fish bowl is **on top of** the cupboard.

The fence is **far from** the cat.

The fish are **in** the bowl.

## Activity 22

1. Trace your left and your right hand in your book.
  - a) Draw fingernails on your left hand.  
Colour the fingernails blue.
  - b) Draw fingernails on your right hand.  
Colour the fingernails red.
  - c) Draw a ring on the right hand.
  - d) Draw an  $\rightarrow$  on the left hand.
2. Use these words to complete the sentences.

over

under

front

back

between

above

below

The girl jumps \_\_\_\_\_ the bar. The bird flies \_\_\_\_\_  
the girls head. The boy crawls \_\_\_\_\_ the bar.  
The ball is in \_\_\_\_\_ of the bar. The doll is \_\_\_\_\_  
the truck and the dinosaur.

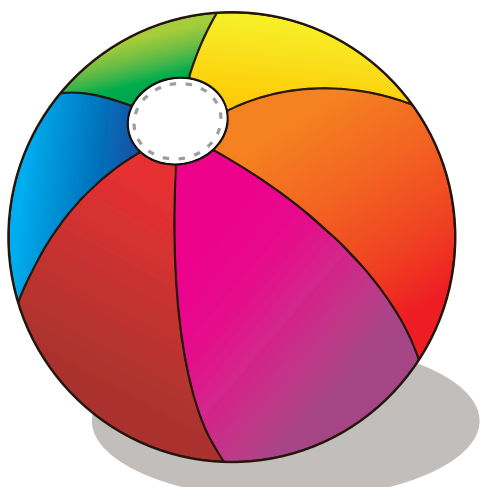




# Learn about 3-D objects

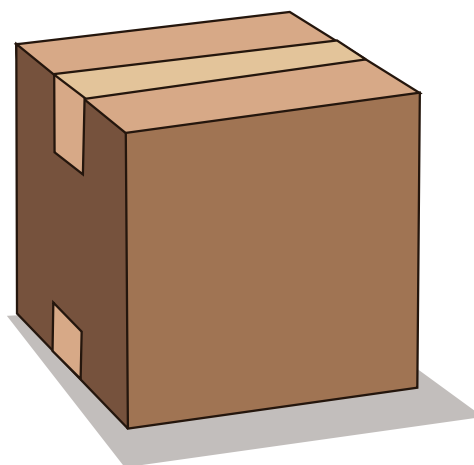
A 3-D object is not flat. Look at these examples of 3-D objects:

**Ball**



A ball is an example of a **sphere**.

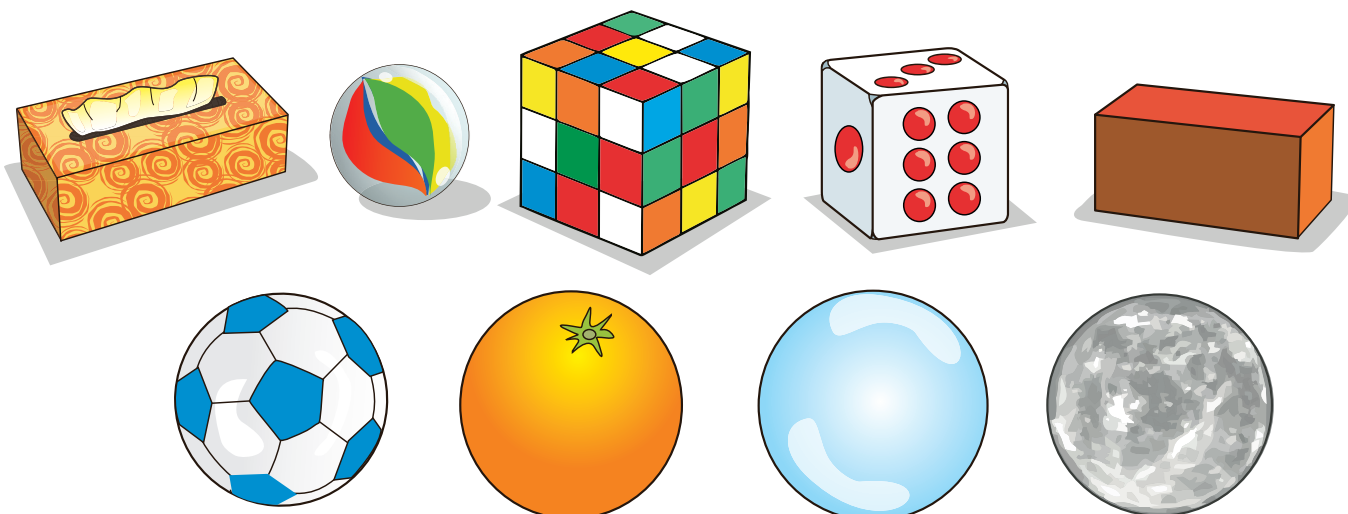
**Box**



A box is an example of a **prism**.

## Practical activity

Tell your friend what object is shaped like a ball, and what object is shaped like a box.

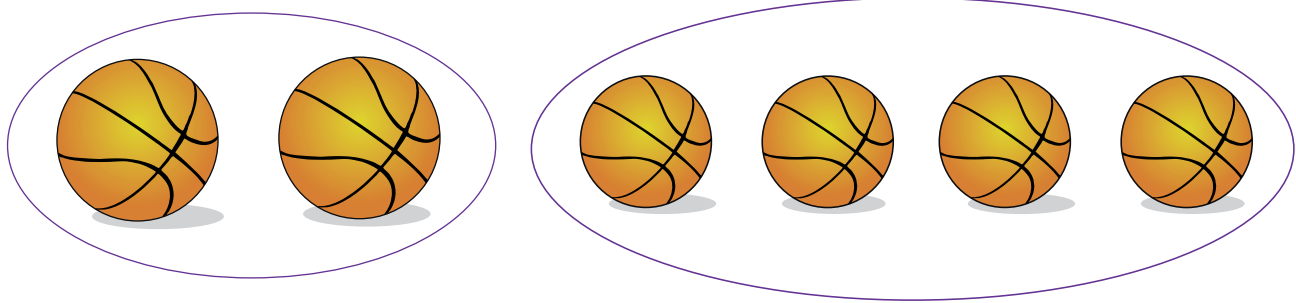


We can sort 3-D objects by size.

### Example

Look at the balls.

How were they sorted?



### Take note

To sort means that you put things together that are the same.

### Answer

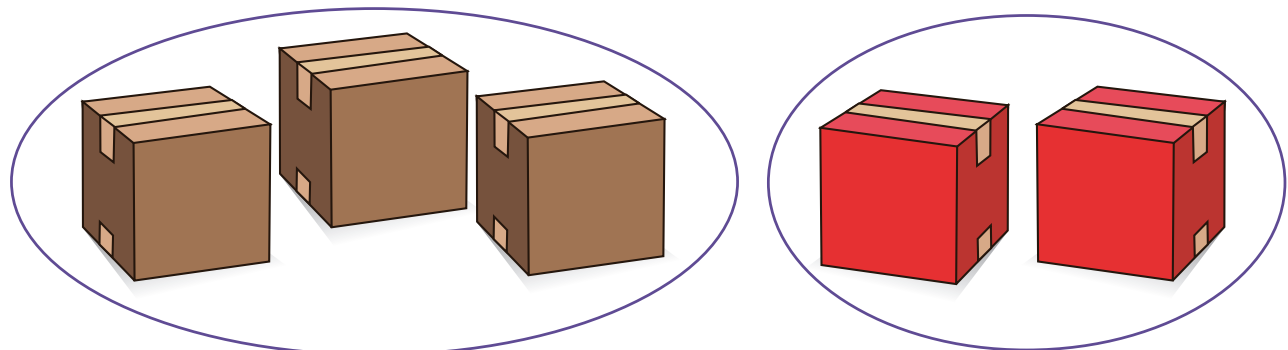
By size

We can sort 3-D objects by colour.

### Example

Look at the boxes.

How were they sorted?



### Answer

By colour

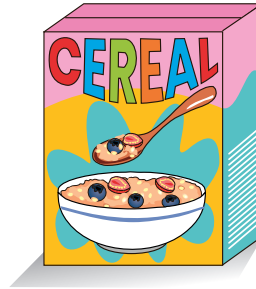
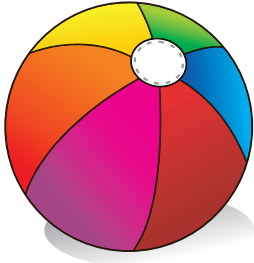
## Activity 23

1. Copy and complete the sentences.

Use these words.

**ball**

**box**



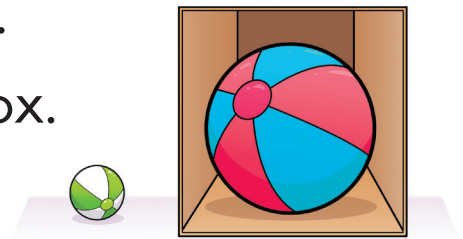
This is a \_\_\_\_\_.

This is a \_\_\_\_\_.

2. Complete the sentences using **inside** and **outside**.

a) The big ball is \_\_\_\_\_ the box.

b) The small ball is \_\_\_\_\_ the box.

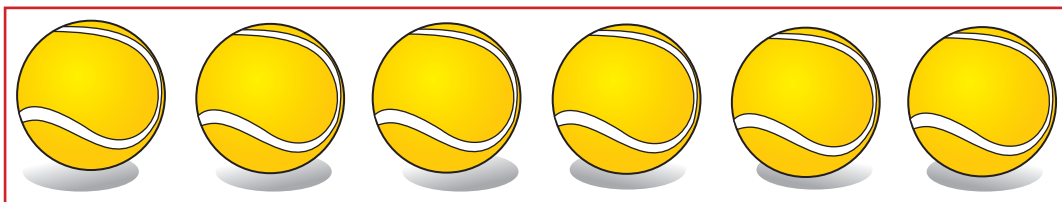
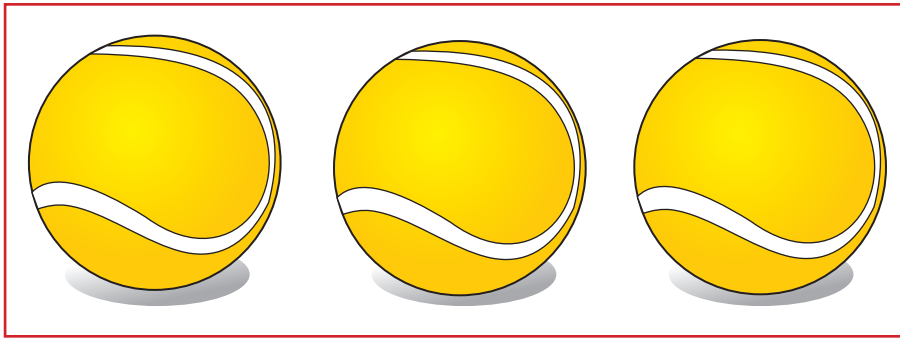


3. Complete the sentences using **under**, **over** and **next to**.

The girl jumps \_\_\_\_\_ the boy. The dog is lying \_\_\_\_\_ the tree. The ball is lying \_\_\_\_\_ the dog.



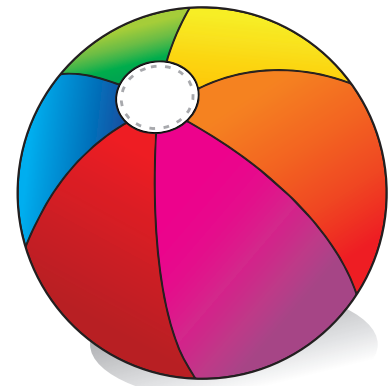
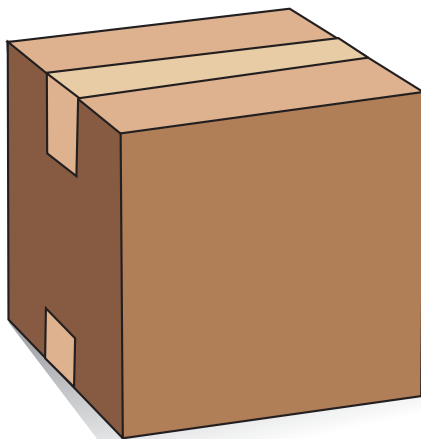
4. Look at the balls. How were they sorted?



5. Answer the questions. Use these words:

**box**

**ball**



- What object is to the **left** of the books?
- What object is to the **right** of the books?
- What is **between** the box and the ball?

# Order events

Every day you do things in a certain order.

## Example

Look at the pictures.



A



B

Are the things being done in the correct order?

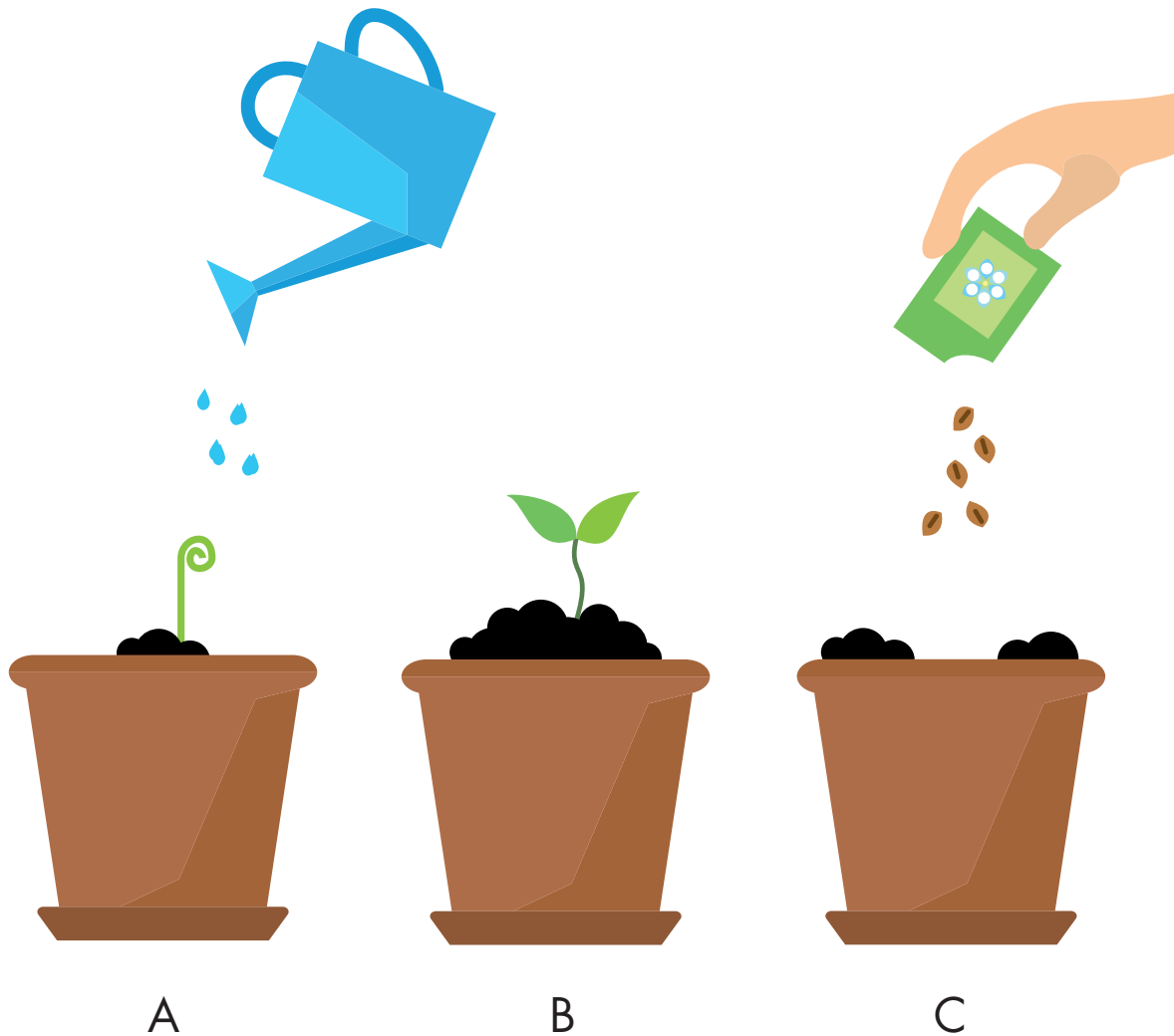
## Answer

No, the correct order is B, then A.

You wash your hands after using the toilet.

**Example**

Look at the pictures.



Are the things being done in the correct order?

**Answer**

No, the correct order is C, A, then B.

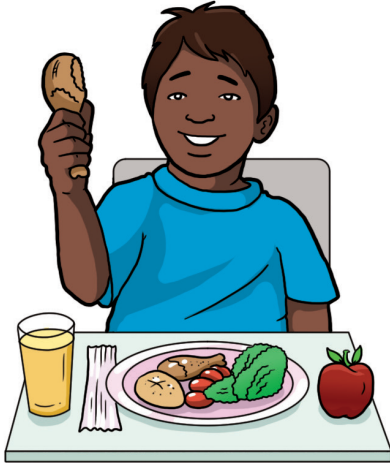
You plant a seed, water it, and then it grows.



## Activity 24

Put these activities in the correct order.

1.



A



B

2.



A



B

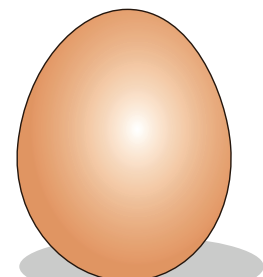
3.



A



B



C

# Lengths of time

We can use the words **longer** and **shorter** when we talk about the passing of time.

## Example

Some things take a **longer** time to do than others. To eat your cereal takes **longer** than to brush your teeth.



shorter time



longer time

## Example

Drinking a glass of water takes a **shorter** time than cleaning your room.



shorter time



longer time

## Activity 25

1. a) What activity takes **longer**? Write A or B.



A



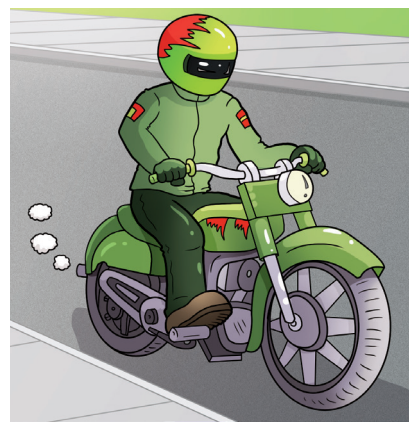
B

- b) Tell your friend why you think so.

2. a) Mojaki is riding his scooter from his house to the shop. His father rides his motorbike from the house to the shop. What activity takes **longer**? Write A or B.



A



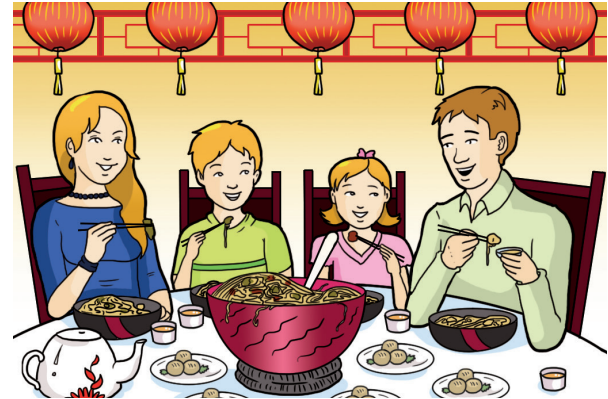
B

- b) Tell your friend why you think so.

3. a) Lee is cutting up a cucumber. The family are enjoying dinner together. What activity takes a shorter time to do? Write A or B.



A



B

- b) Tell your friend why you think so.

4. a) Leon walks from one end of the park to the other end. Samantha jogs from one end of the park to the other end. What activity takes a shorter time to do? Write A or B.



A



B

- b) Tell your friend why you think so.

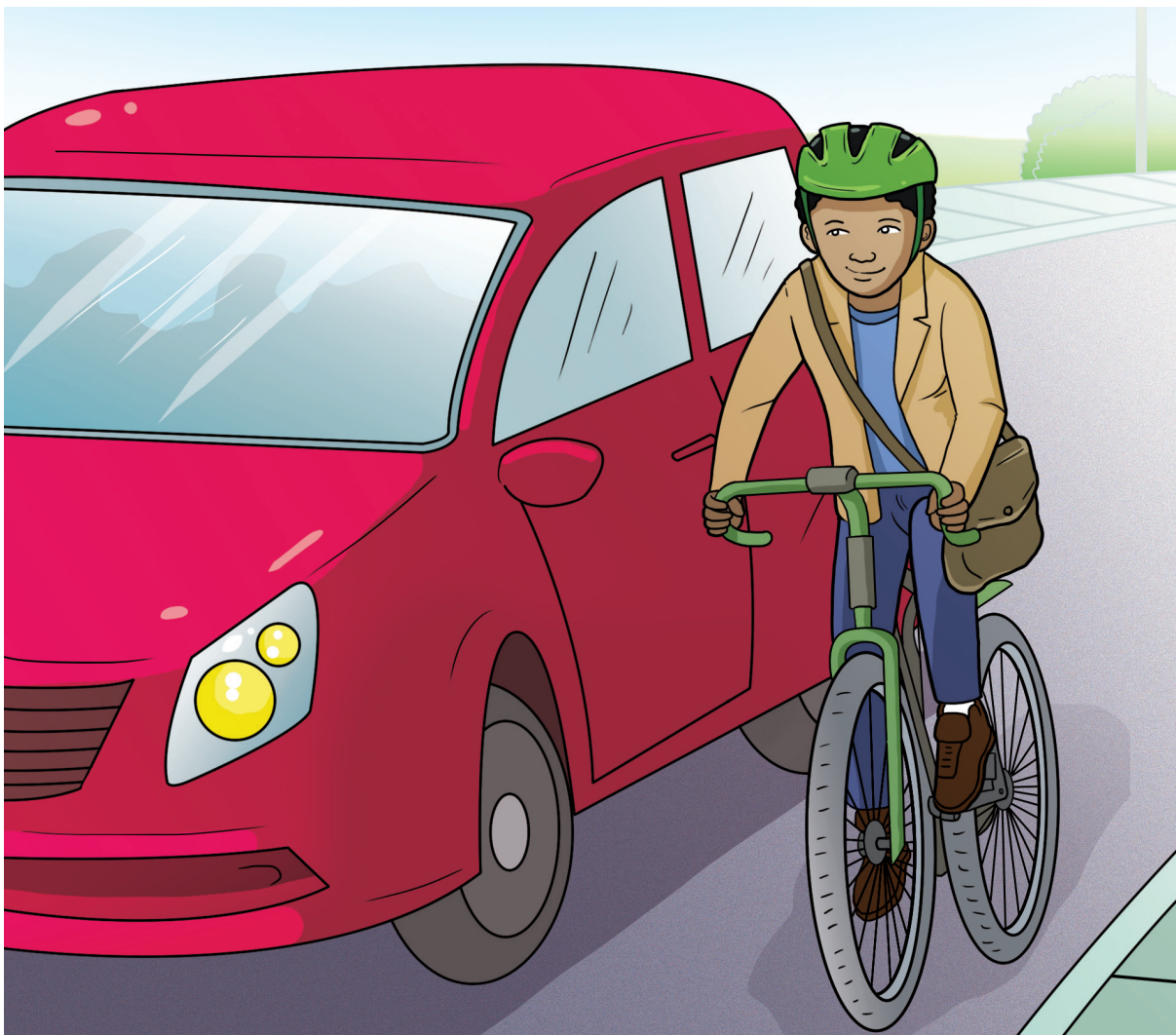


# Faster or slower

We can use the words **faster** and **slower** when we talk about the passing of time.

## Example

Look at the picture. Can the car drive **faster** or **slower** than the bicycle?



## Answer

The car can drive **faster** than the bicycle.  
The bicycle is **slower** than the car.

## Activity 26

1. a) Which animal is **faster**? Write A or B.  
b) Explain to your friend why you say so.



A

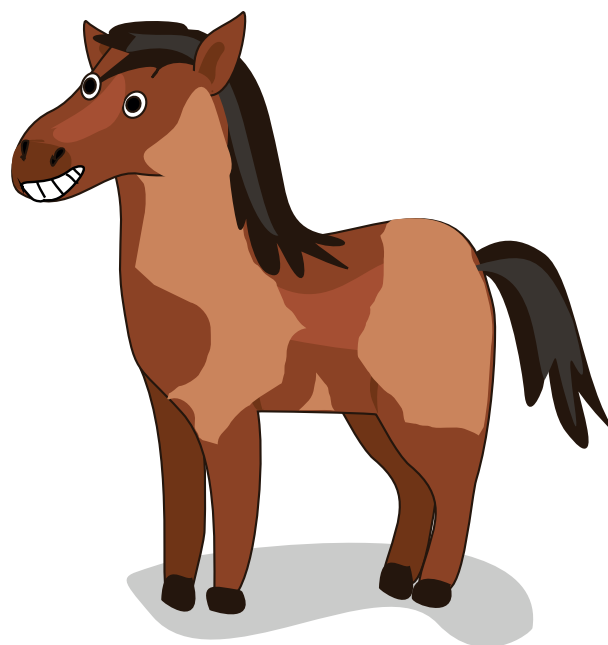


B

2. a) Which animal is **faster**? Write A or B.  
b) Explain to your friend why you say so.



A



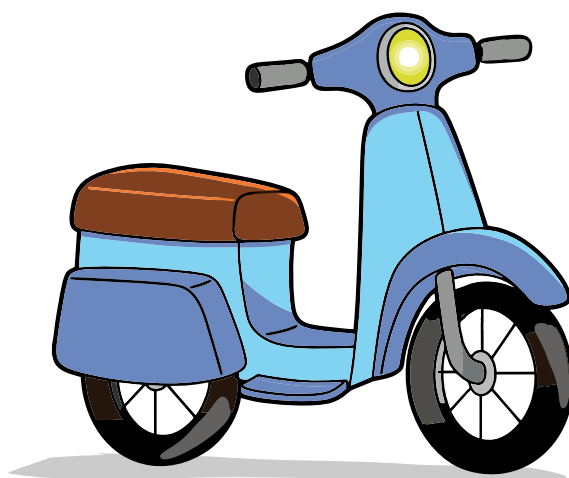
B



3. a) What is **slower**? Write A or B.



A



B

b) Explain to your friend why you say so.

4. a) Which animal is **slower**? Write A or B.



A



B

b) Explain to your friend why you say so.

# What time of day is it?

We use these words to say what time of day it is:

morning

afternoon

evening

## Example

Look at each picture.

There are things we do during each part of the day.



In the **morning** we wake up.



In the **afternoon** we go home after school.



In the **evening** the sky is dark.

## Example

Look at the picture.  
When do you usually go to bed?



## Answer

You usually go to bed in the **evening**.

## Activity 27

1. Look at each picture.
2. Copy the word that says when you usually do these things.

morning

afternoon

evening



A



B



C

# Days of the week

There are **7** days in a week.

**Sunday**

1

**Monday**

2

**Tuesday**

3

**Wednesday**

4

**Thursday**

5

**Friday**

6

**Saturday**

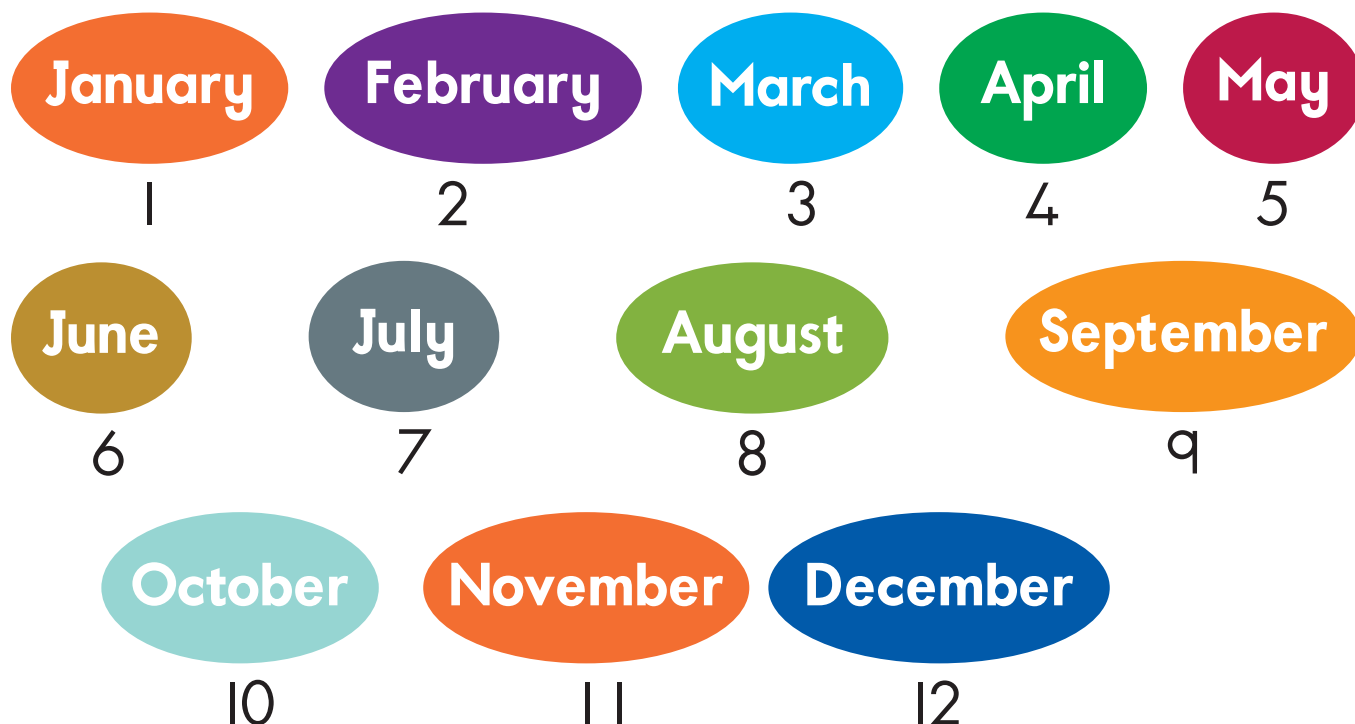
7

## Activity 28

1.
  - a) What is the first day of the week?
  - b) What is the last day of the week?
  - c) What day is after Wednesday?
  - d) What day is before Saturday?
  - e) On which days are you at school?
  - f) On which days are you not at school?
2. If today is Wednesday, what day will it be tomorrow?
3. If yesterday was Friday, what day is it today?
4. Choose the correct answer from the list above.
  - a) The day before Monday is \_\_\_\_\_.
  - b) The day between Tuesday and Thursday is \_\_\_\_\_.

# Months of the year

There are **12** months in a year.



## Activity 29

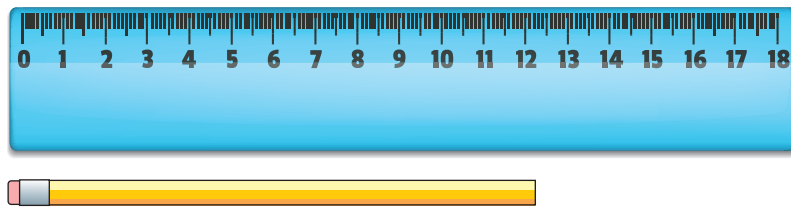
1.
  - a) What is the first month of the year?
  - b) What is the second month of the year?
  - c) What is the last month of the year?
  - d) Which month comes after February?
  - e) Which month comes before December?
2. My birthday is in June. What month is before my birthday month?
3. Saskia's birthday was last month. If this month is November, in what month was her birthday?

# Compare lengths

To compare objects, we look at how long or short they are.

## Example

Which one is longer? The pencil or the ruler?



## Answer

The ruler is **longer** than the pencil.

## Example

Look at the two strips. Which is shorter?

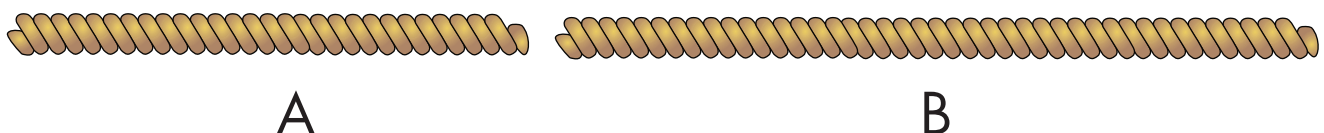


## Answer

The blue strip is **shorter** than the red strip.

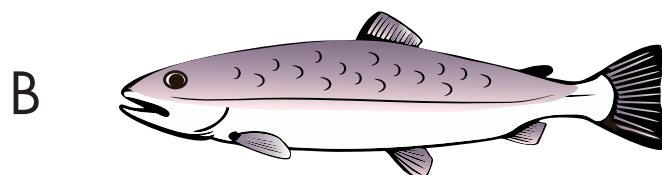
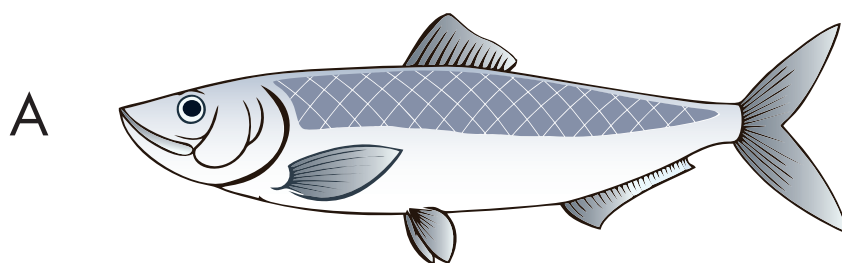
## Activity 30

I. Which rope is **longer**?

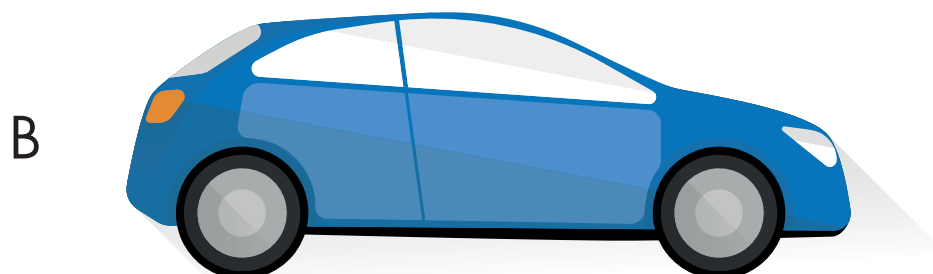




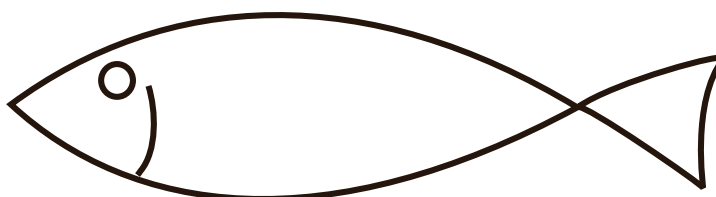
2. Which fish is **shorter**?



3. Which one is longer? The green car or the blue car?



4. a) Copy this fish.



b) Draw another fish longer than your fish.

# Compare heights

When we compare heights, we use the words **tall** or **short**.

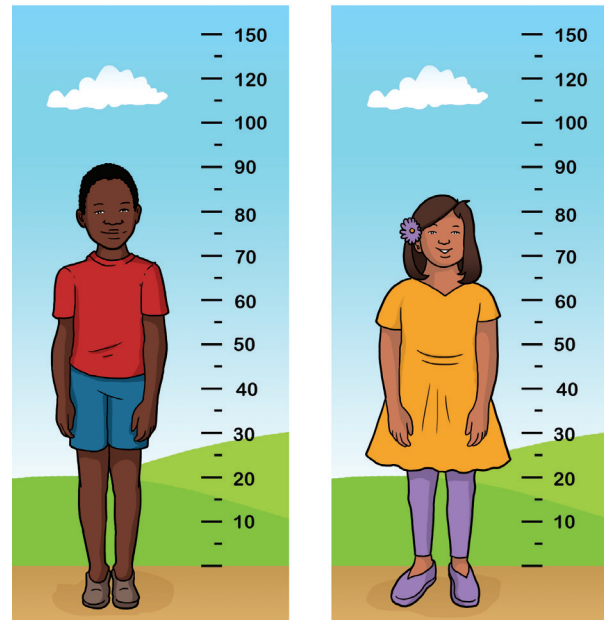
## Example

Sipho and Asha are comparing their heights.

Who is taller?

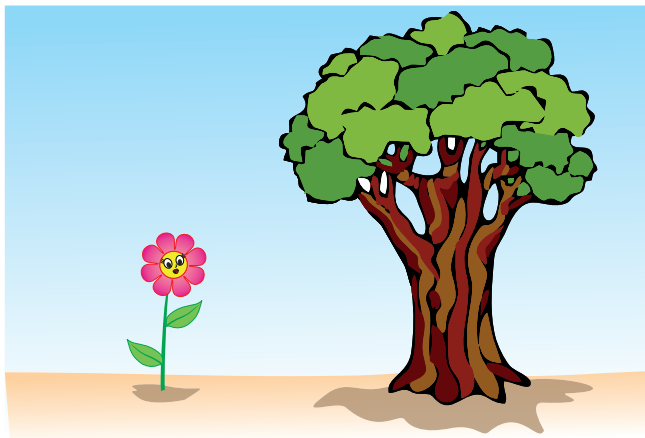
## Answer

Sipho is **taller** than Asha.



## Example

Which one is **shorter**, the flower or the tree?

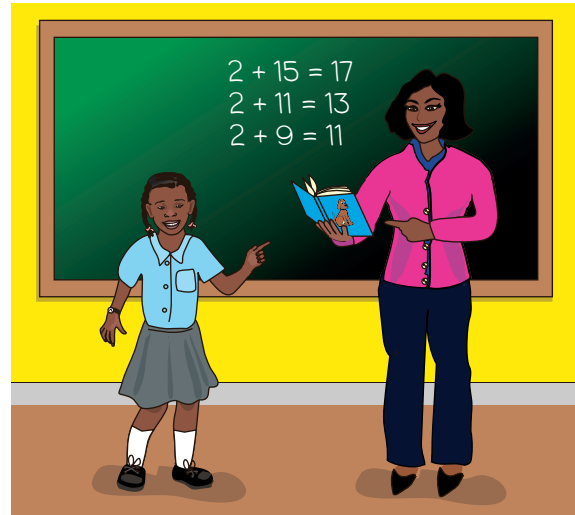


## Answer

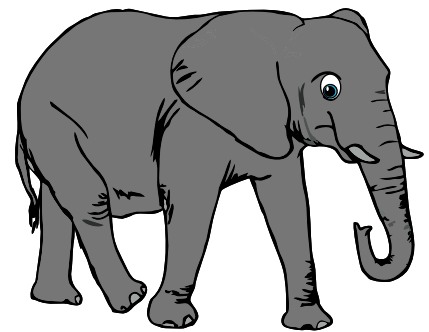
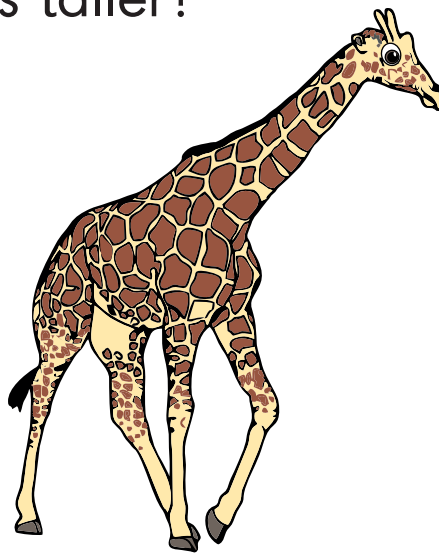
The flower is **shorter** than the tree.

## Activity 3I

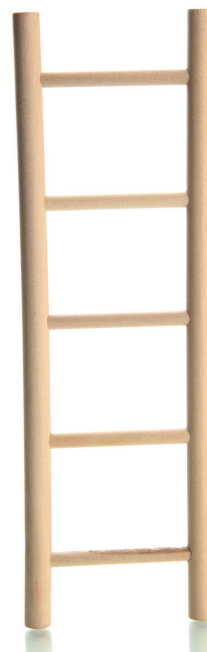
1. Who is taller?  
The teacher or the girl?



2. Which animal is taller?  
The giraffe or the elephant?



3. Copy this ladder.  
Draw a ladder that is shorter than this one.

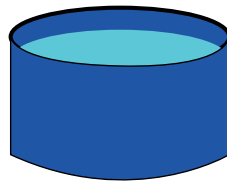
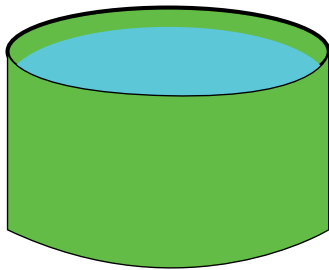


# Compare widths

When we compare widths, we use the words **wide** or **wider**.

## Example

Which tank is wider?

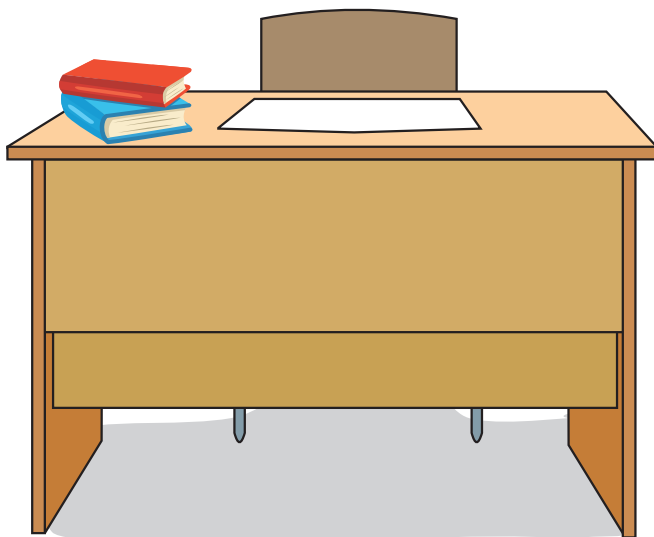


## Answer

The green tank is **wider** than the blue tank.

## Activity 32

1. Which desk is wider?  
The teacher's desk or the learner's desk?

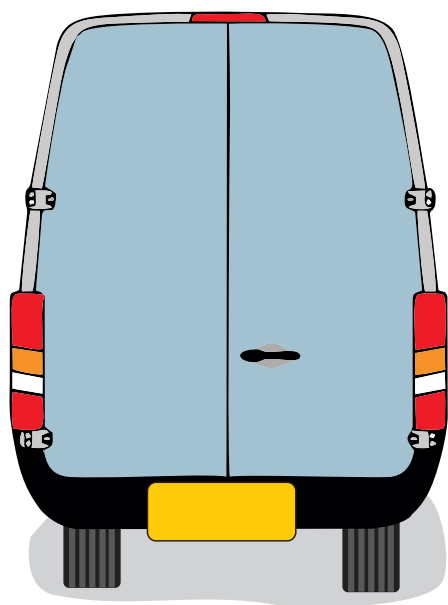


A

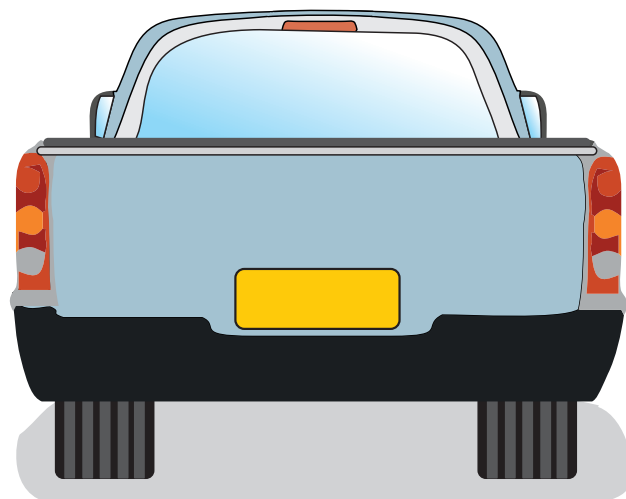


B

2. Which truck is wider? A or B?



A



B

How can you tell?

3. Which crayon is wider? A or B?



A



B

How can you tell?

# Comparing mass

We can compare the mass of objects by lifting them.

## Example

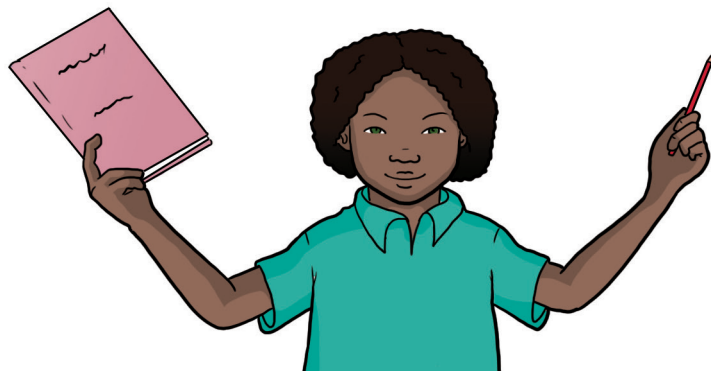


It is more difficult to lift up a brick than it is to pick up a small stone.

We say the brick is **heavy** but the stone is **light**.

We can also compare the mass of objects by holding them both in our hands.

## Example



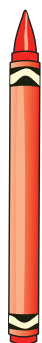
The textbook is **heavier** than the pencil.



## Activity 33

1. Which is lighter?

a)

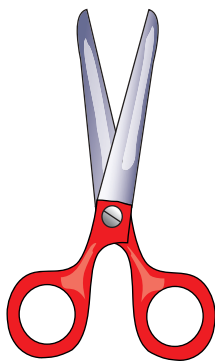


A

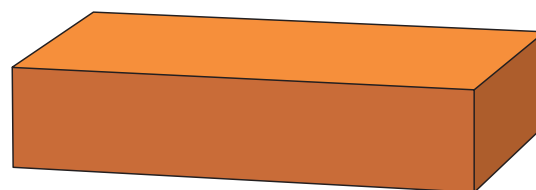


B

b)

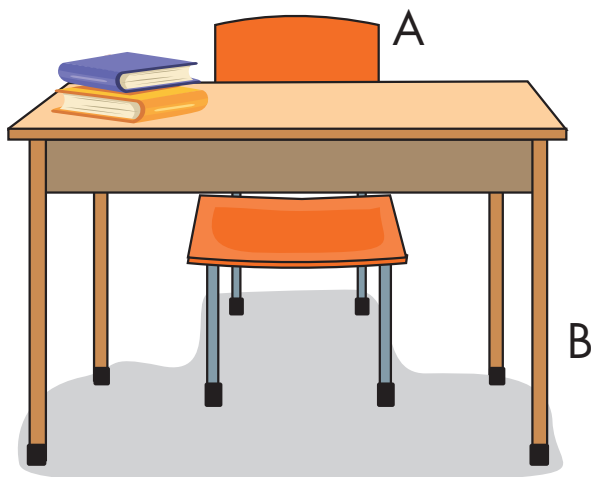


A



B

c)

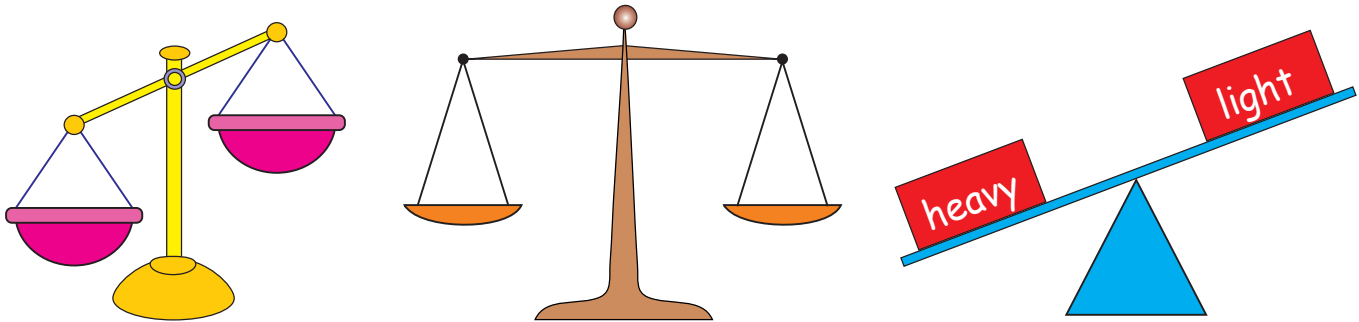


2. Explain to your partner why you chose the objects.

# Use a balancing scale

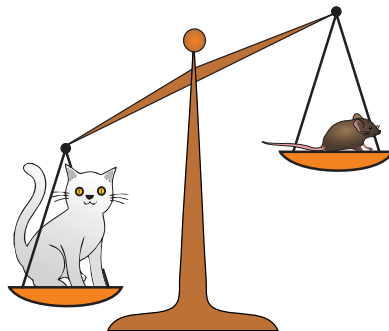
We can measure the mass of an object by using a balancing scale.

Here are examples showing different balancing scales.



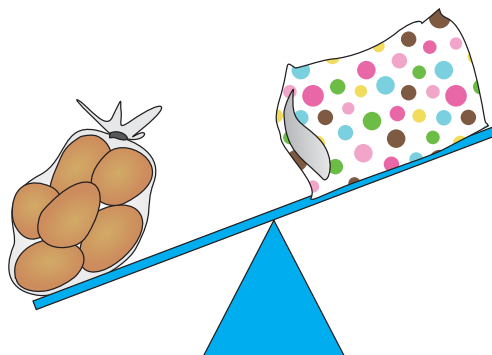
## Example

The mouse is lighter than the cat.



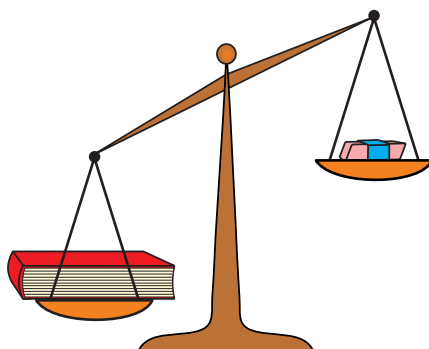
## Example

A bag of potatoes is heavier than a pillow.

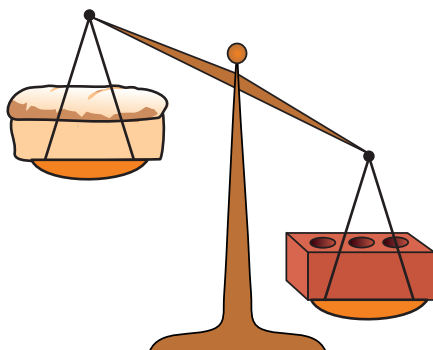


## Activity 34

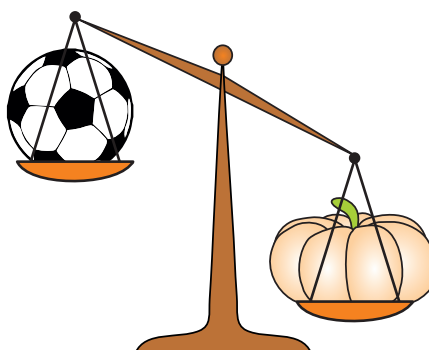
1. Which is heavier? The book or the eraser?



2. Which is heavier? The bread or the brick?



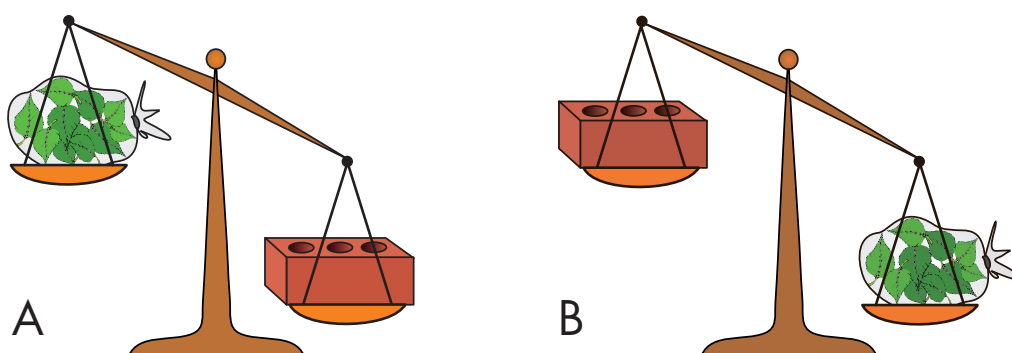
3. Which is heavier? The soccer ball or the pumpkin?



4. Which is heavier? An apple or a feather?

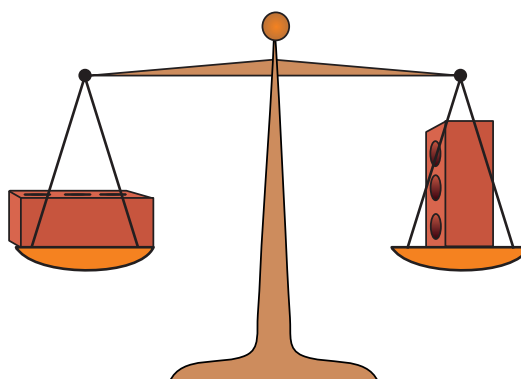


5. Look at the bag of leaves and the brick.



- Which balancing scale is correct?
- Explain your choice to your partner.

6. Look at the balancing scale.



- Is the left side heavier than the right side?
- Can you explain why?

Sometimes we estimate the mass of something. We can use a balancing scale to check if our estimate was correct.

- 7. Work in groups to do the following activity.
  - a) Estimate and then check using a balancing scale.
  - b) Record your findings as a group.

8. Which is heavier?

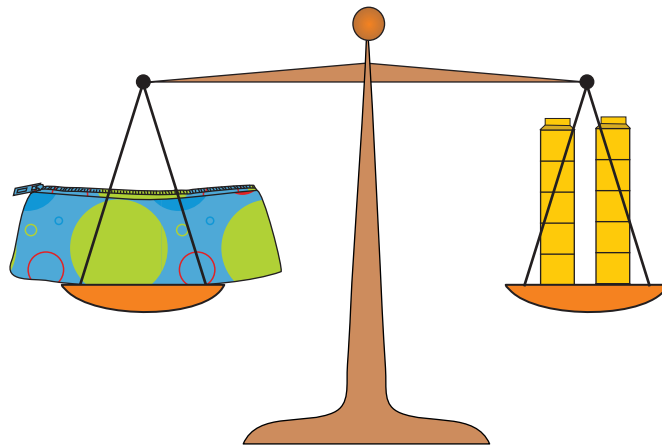
	Objects	Estimate	Check
a)	1 pencil or 2 crayons		
b)	2 crayons or 5 erasers		
c)	5 erasers or 1 glue stick		
d)	1 glue stick or 4 crayons		
e)	1 pair of scissors or 1 pencil		

# Use non-standard measures

We can also use non-standard measures to measure mass.

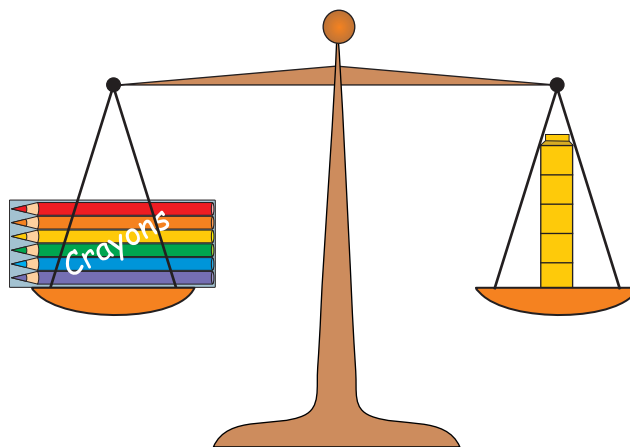
## Example

We will use  as our unit for measuring mass.



The mass of the pencil case is 10 .

## Example

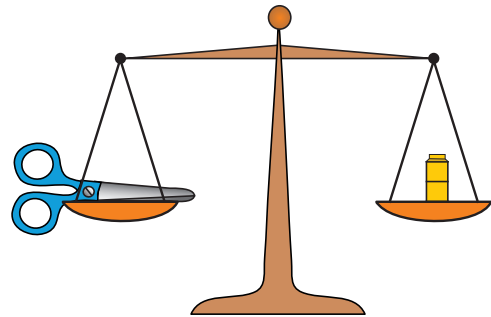


The mass of a pack of crayons is 5 .

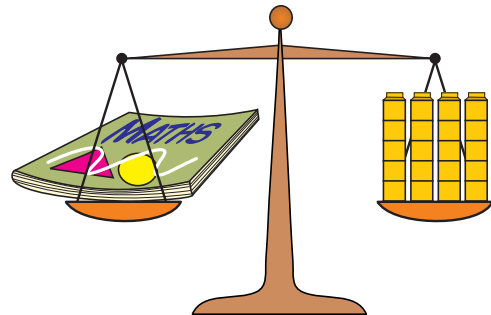


## Activity 35

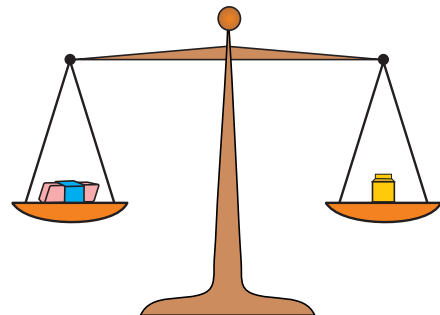
- I. What is the mass:
- a) of a pair of scissors?



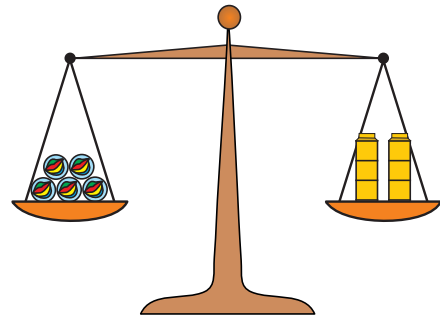
- b) of the textbook?



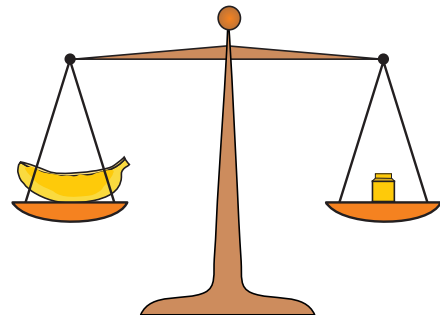
- c) of the eraser?



- d) of 5 marbles?



- e) of a banana?

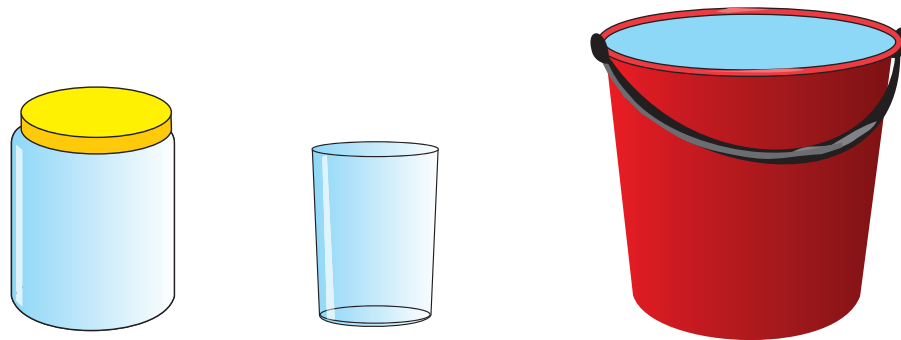


# Empty or full

The glass, the bottle and the bucket are empty.  
There is nothing inside.



We can fill the glass, the bottle and the bucket with water.



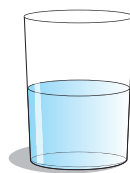
We say these containers are full. They cannot be filled with more water.

## Activity 36

1. Which container is full? A, B or C



A

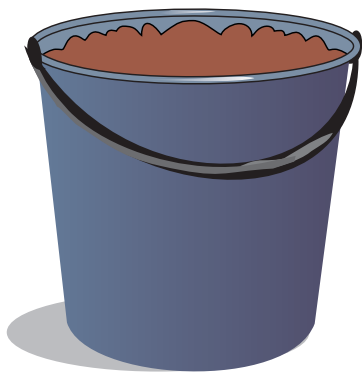


B

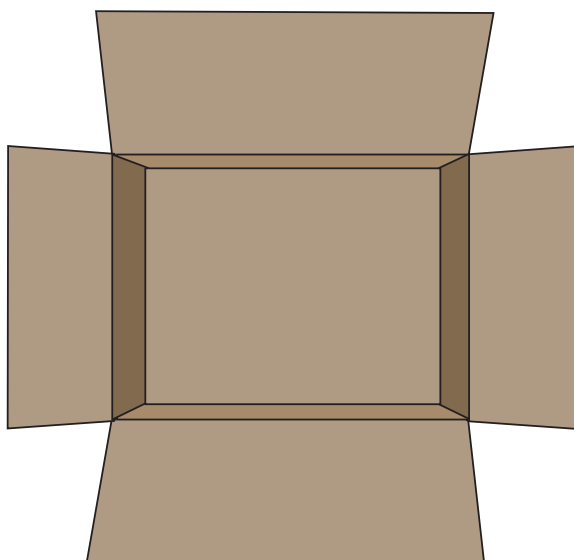


C

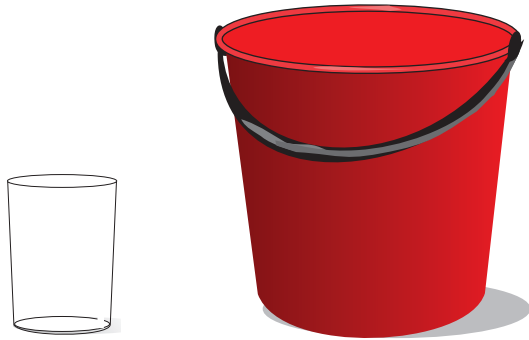
2. Is this bucket empty or full?



3. Is this box empty or full?

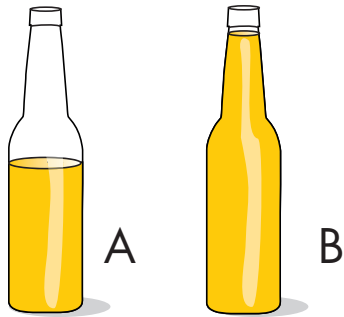


4. Which containers between the glass and the bucket will you use to water the garden? Explain why?

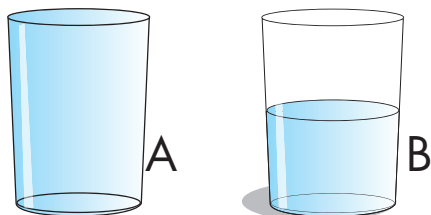


5. Which one (A or B) has more in it?

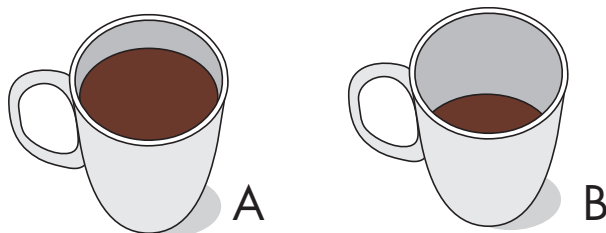
a)



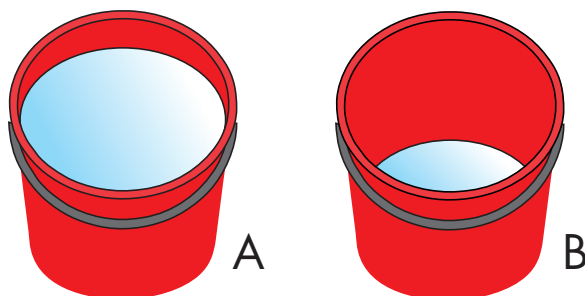
b)



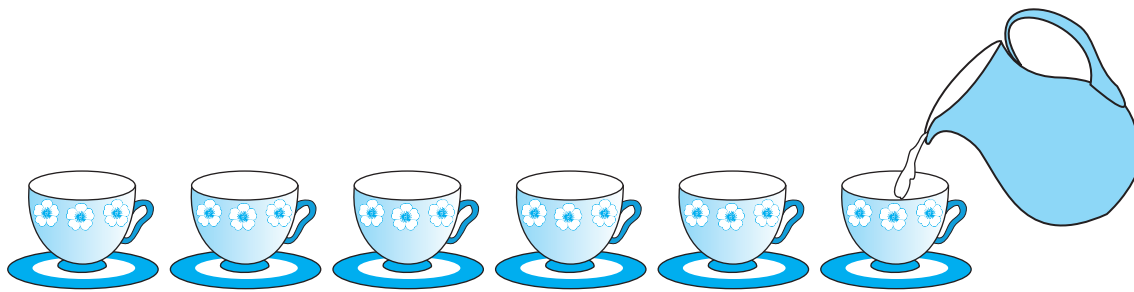
c)



d)

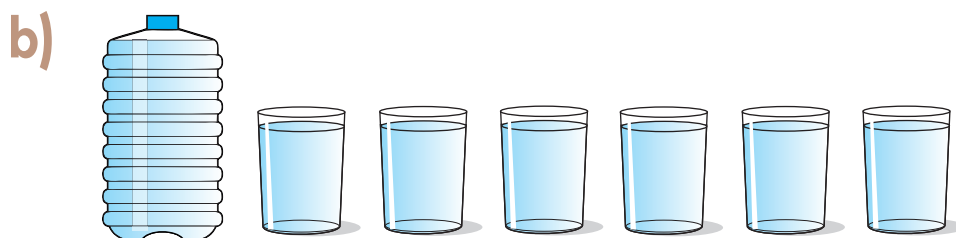
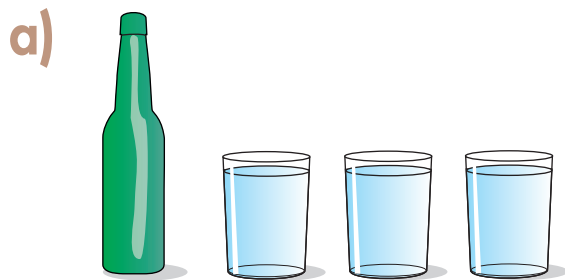


6. Look at the pictures below.



- a) How many cups can the jug fill?
- b) How many cups can the bottle fill?
- c) Which has a larger capacity? The jug or the bottle?

7. Which container has a larger capacity? a) or b)?

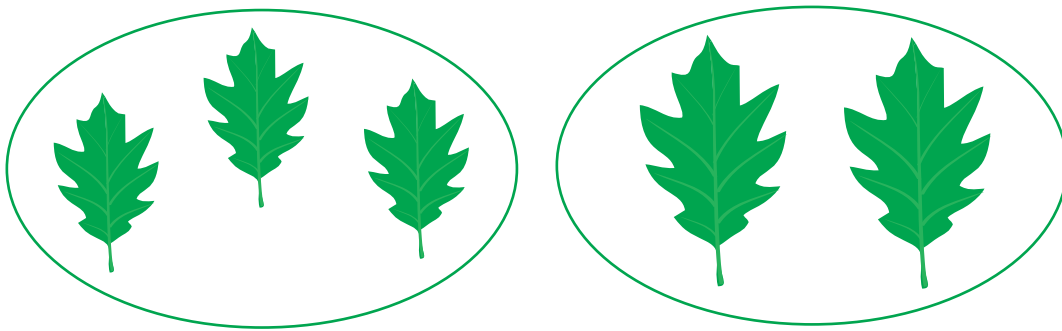


# Collect and sort objects

We can collect and sort data.

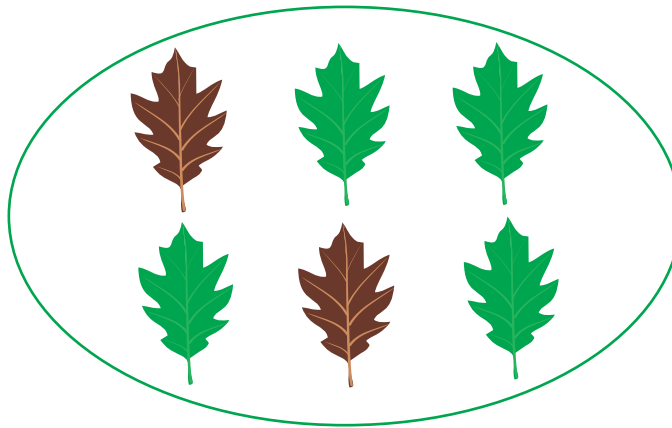
## Example

The leaves are sorted as small leaves and large leaves.



## Example

Look at the leaves.



- a) How many green leaves?
- b) How many brown leaves?

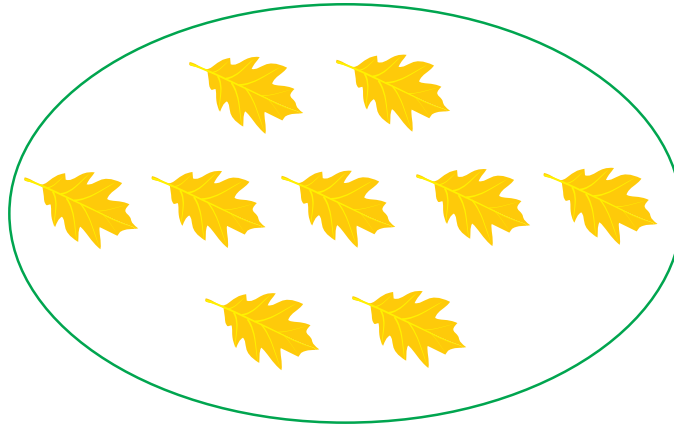
## Answer

- a) 4
- b) 2



## Example

Look at the leaves.



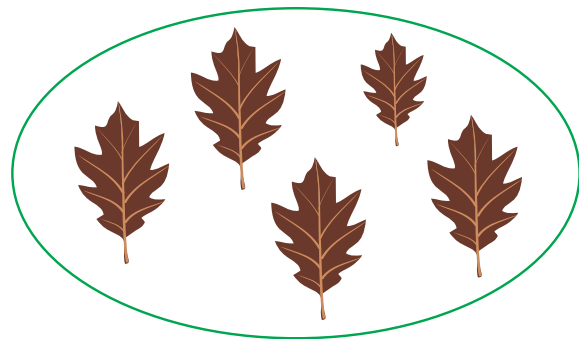
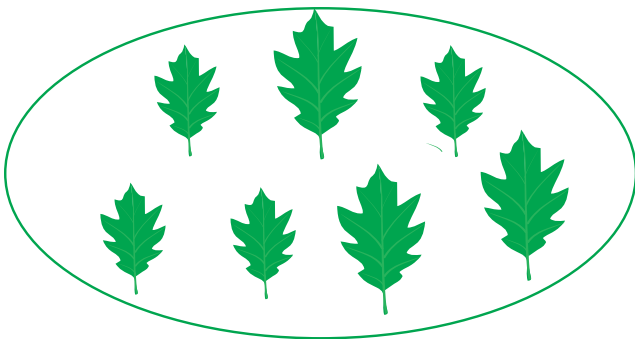
Describe how the leaves are sorted.

## Answer

They are all yellow leaves.

## Activity 37

1. Look at how the leaves are sorted.



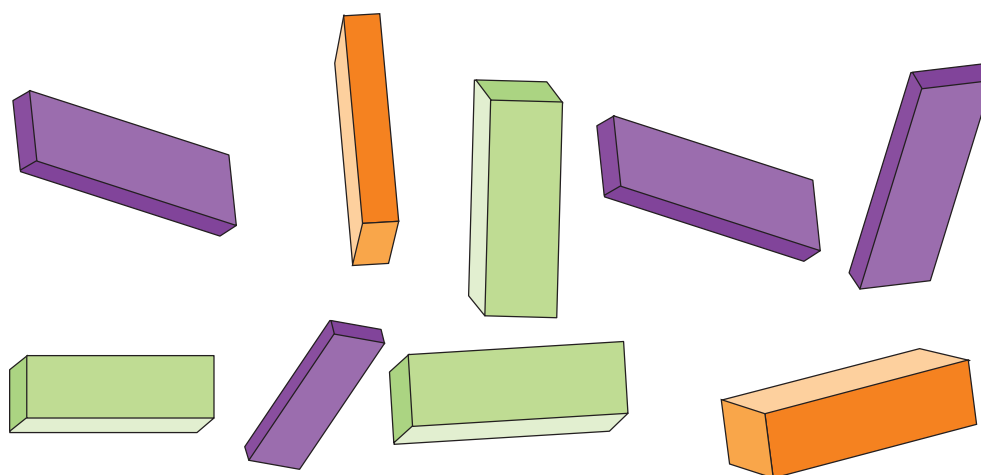
- Give a reason for how the collections of leaves were sorted.
- Hazel described the sorted group by writing:  
There are five brown leaves in the group.  
Do you agree with her?

# Use a table to sort data

We can use a table to sort data.

## Example





Look at the collection of boxes.



- Sort the boxes by colour. Use the table and use a ✓ to show a box.
- What colour has the most boxes?

## Answer

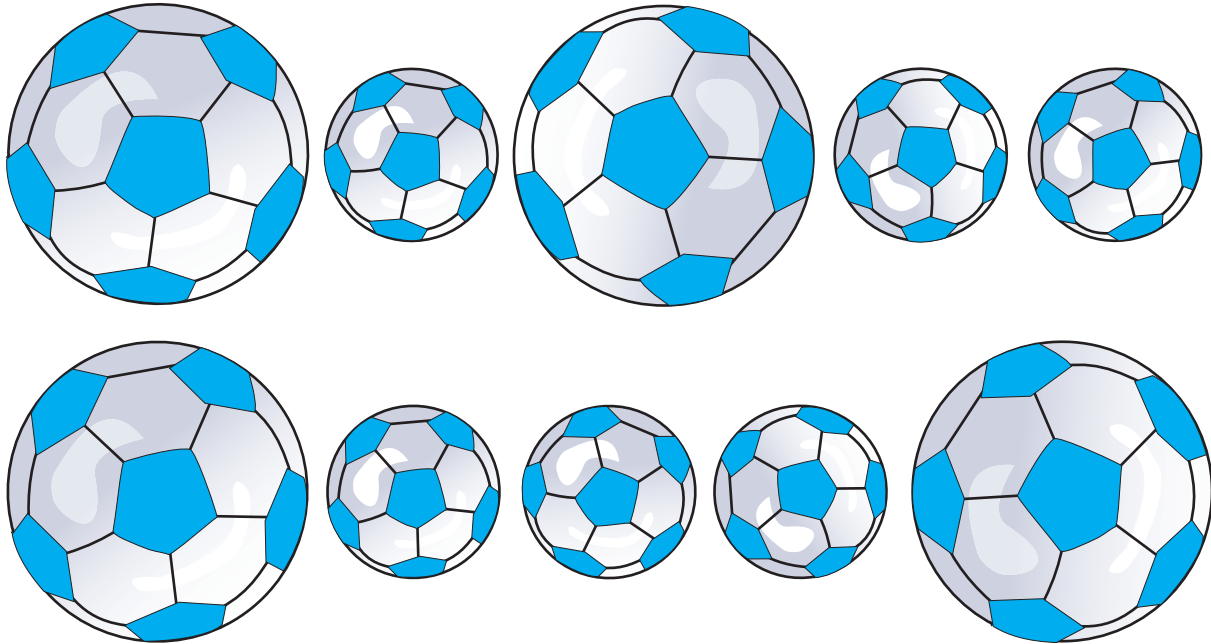
a)

4		✓	
3	✓	✓	
2	✓	✓	✓
1	✓	✓	✓
	 green	 purple	 orange

b) purple

## Activity 38

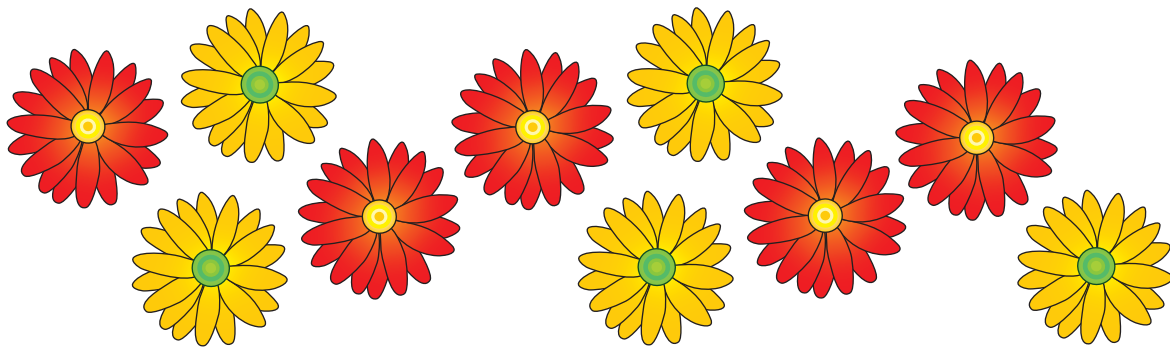
I. Look at these soccer balls.



- Copy and complete the table.
- Sort the soccer balls by size.
- Use a ● to show a ball.

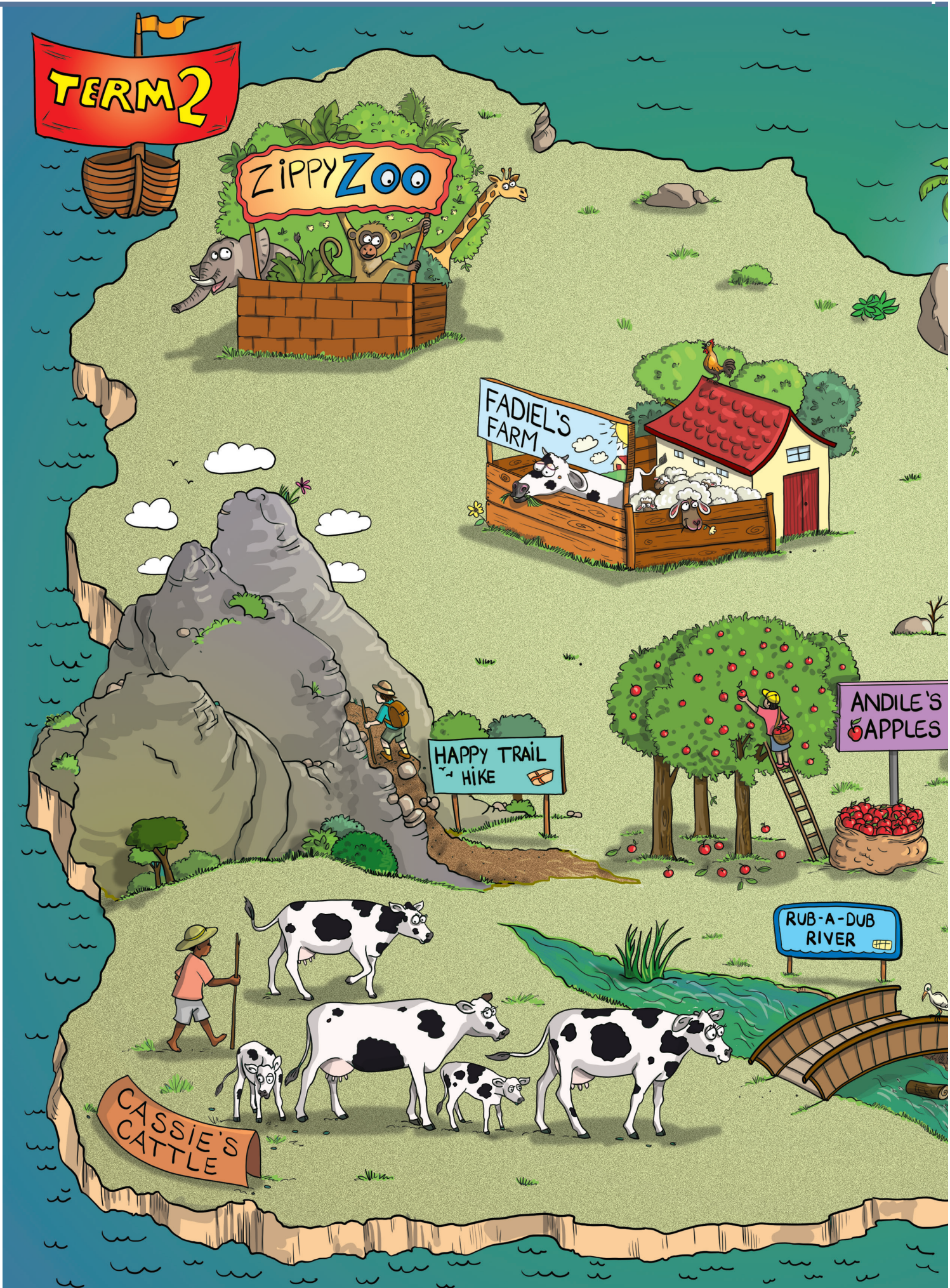
6		
5		
4		
3		
2		
1		
	Large soccer balls	Small soccer balls

- d) Tell a partner about how you sorted your data.
- 2. Collect 20 different leaves. Sort the leaves into 2 groups.
  - a) Explain how the sorting was done.
  - b) Describe the sorted collection.
- 3. You collected these flowers.



- a) Sort them into two groups and describe the groups.
- b) Describe the sorted collection.







Mathematics all around us. Open your imagination and join us all the way to Term 3!

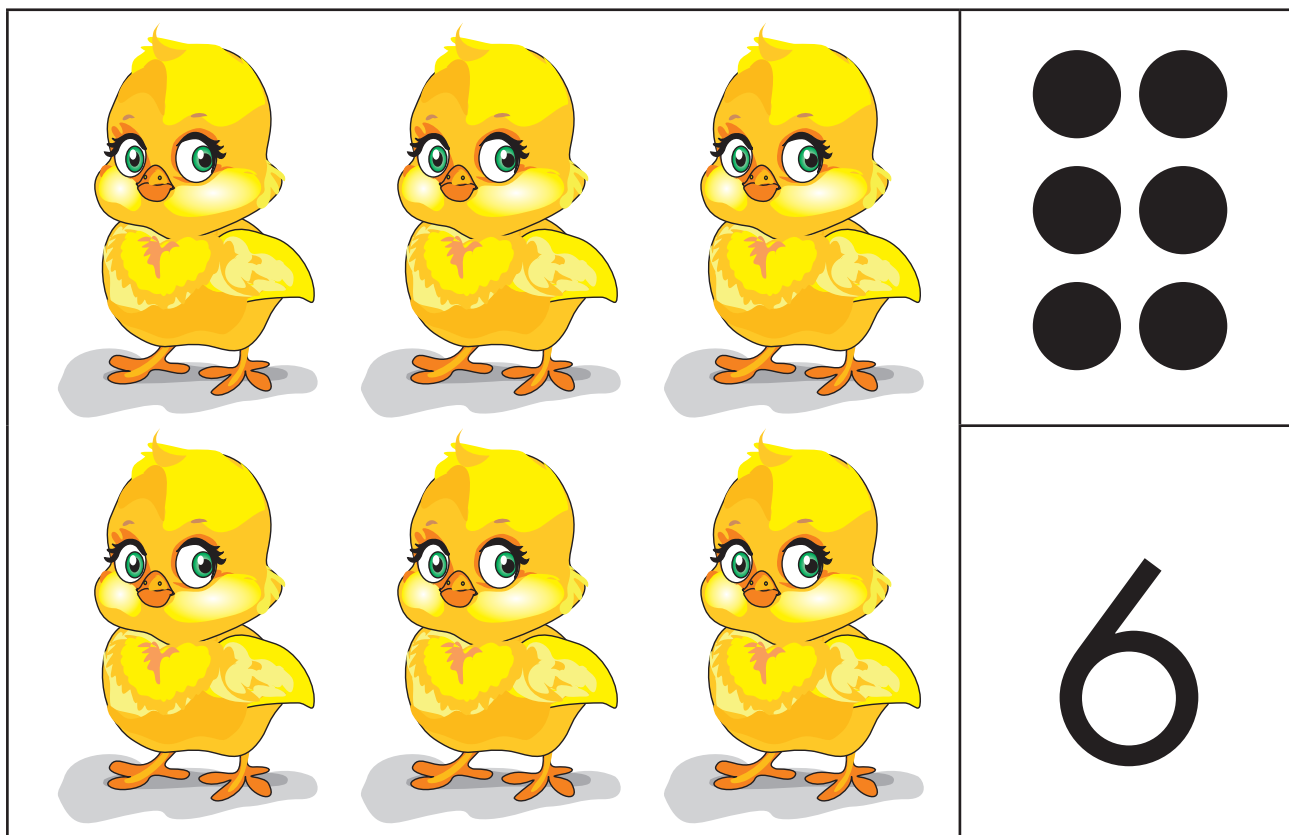




# Numerals 6 – 10

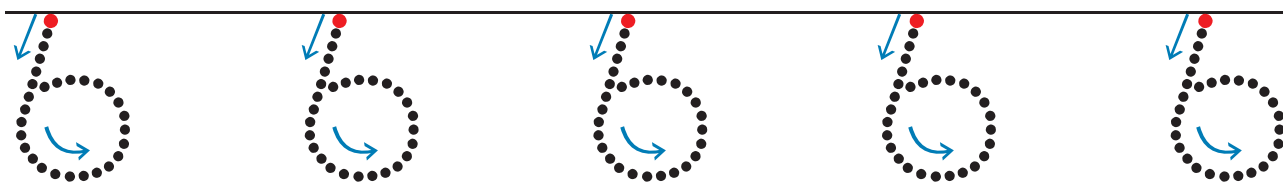
## Learning about the number symbol 6

How many chicks?



### Activity I

- Trace the number symbol 6 with your finger.

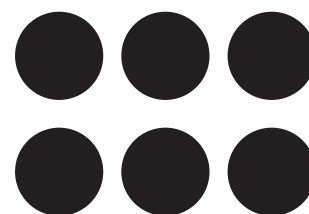


This is number symbol

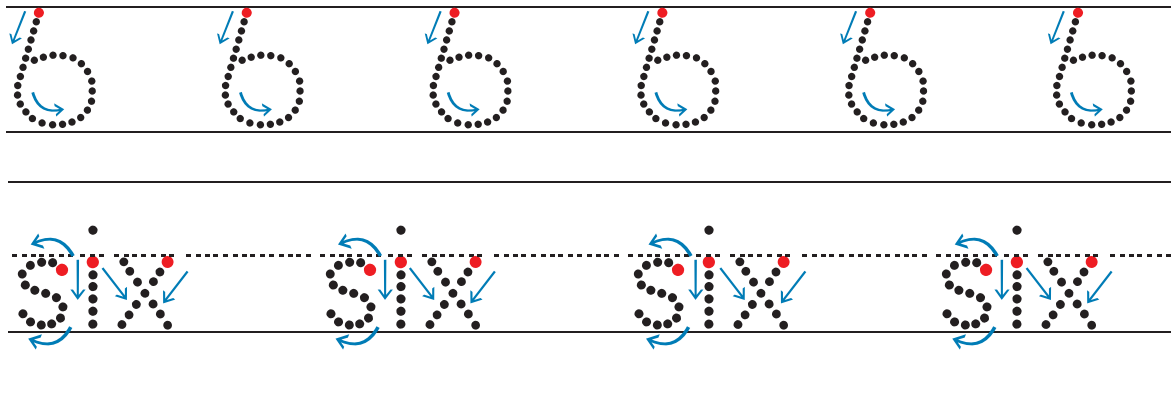
6

This is number name

six



2. Write the number symbol and number name for 6 in your classwork book.

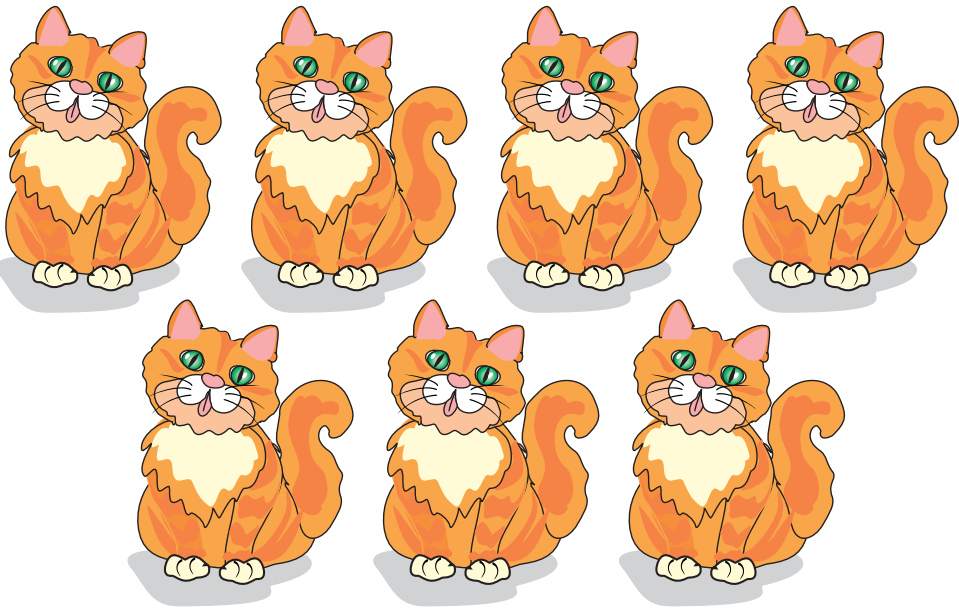
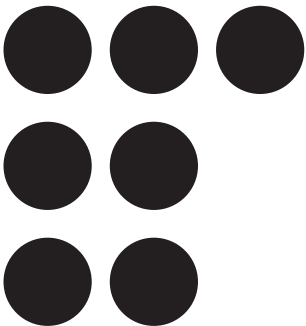



3. Work with your friend. Find and write down all the number names and number symbols in your classwork book.

One and one makes two...  
 But how much does 1 and 2 make?  
 Such easy sums, you say... but  
 learn them now, then you're  
 A for Away!  
 On your way to bigger and better  
 – not 1 and 1, but 10 and 10...  
 And bigger and bigger you'll go!

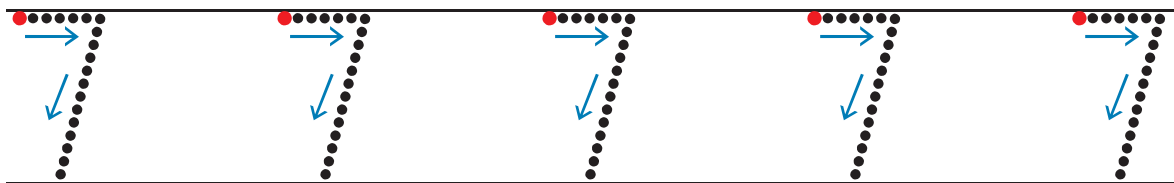
# Learning about the number symbol 7

How many cats?

## Activity 2

- I. Trace the number symbol 7 with your finger.

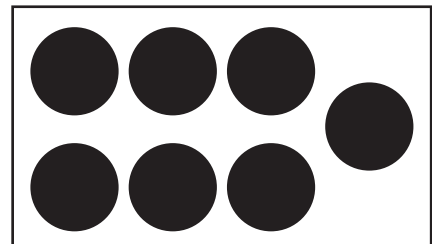


This is number symbol

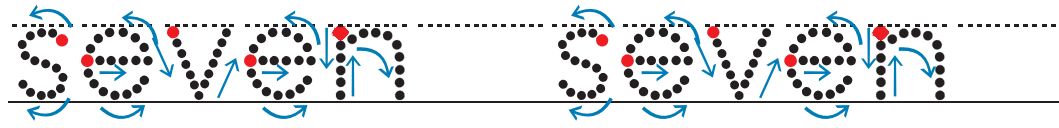
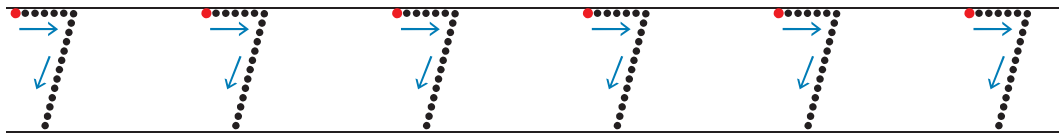
7

This is number name

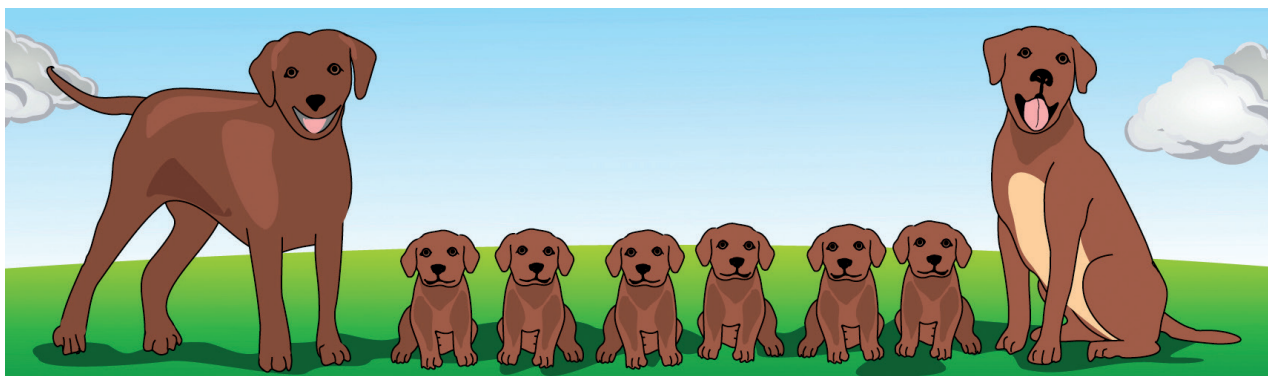
seven



2. Write the number symbol and number name for 7 in your classwork book.

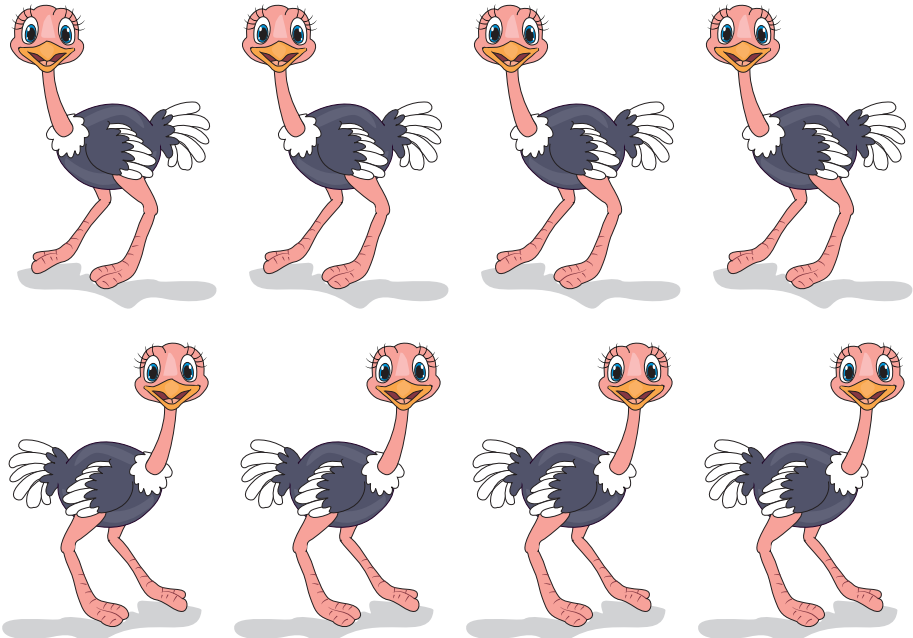
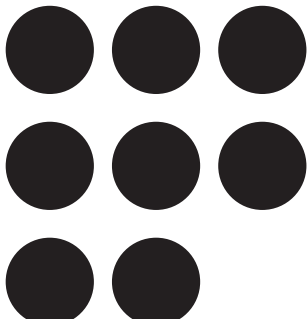



3. a) Count how many dogs and puppies there are altogether.
- b) If one puppy is sold, how many dogs and puppies are left?
- c) Write the number name and number symbol in your classwork book three times.



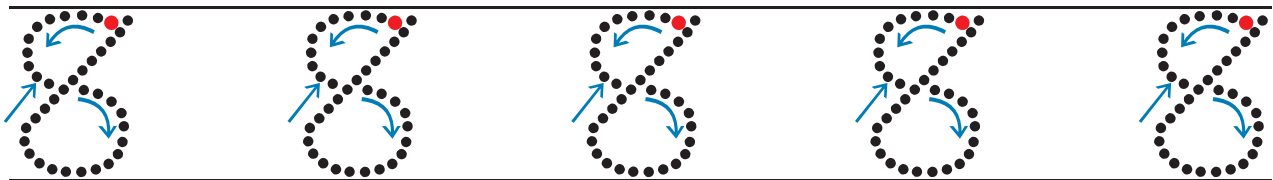
# Learning about the number symbol 8

How many ostriches?

## Activity 3

- I. Trace the number symbol 8 with your finger.

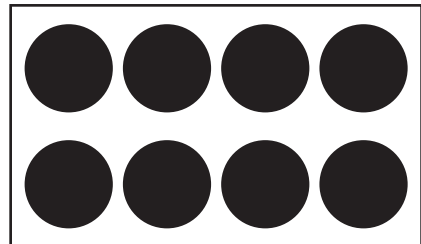


This is number symbol

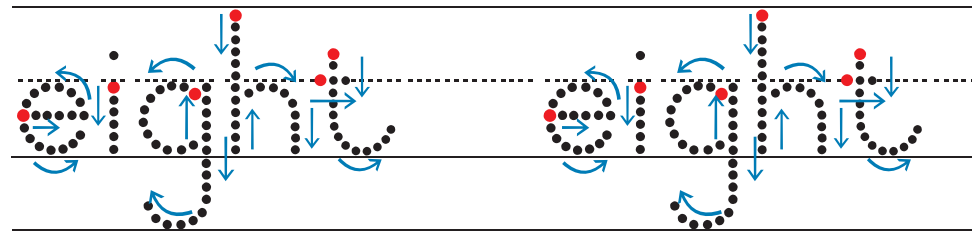
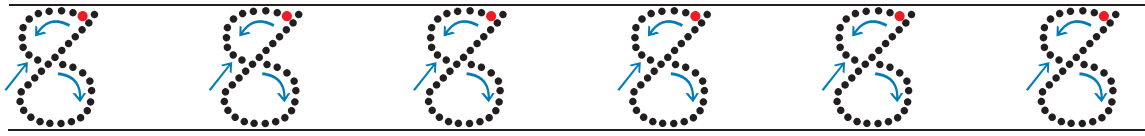
8

This is number name

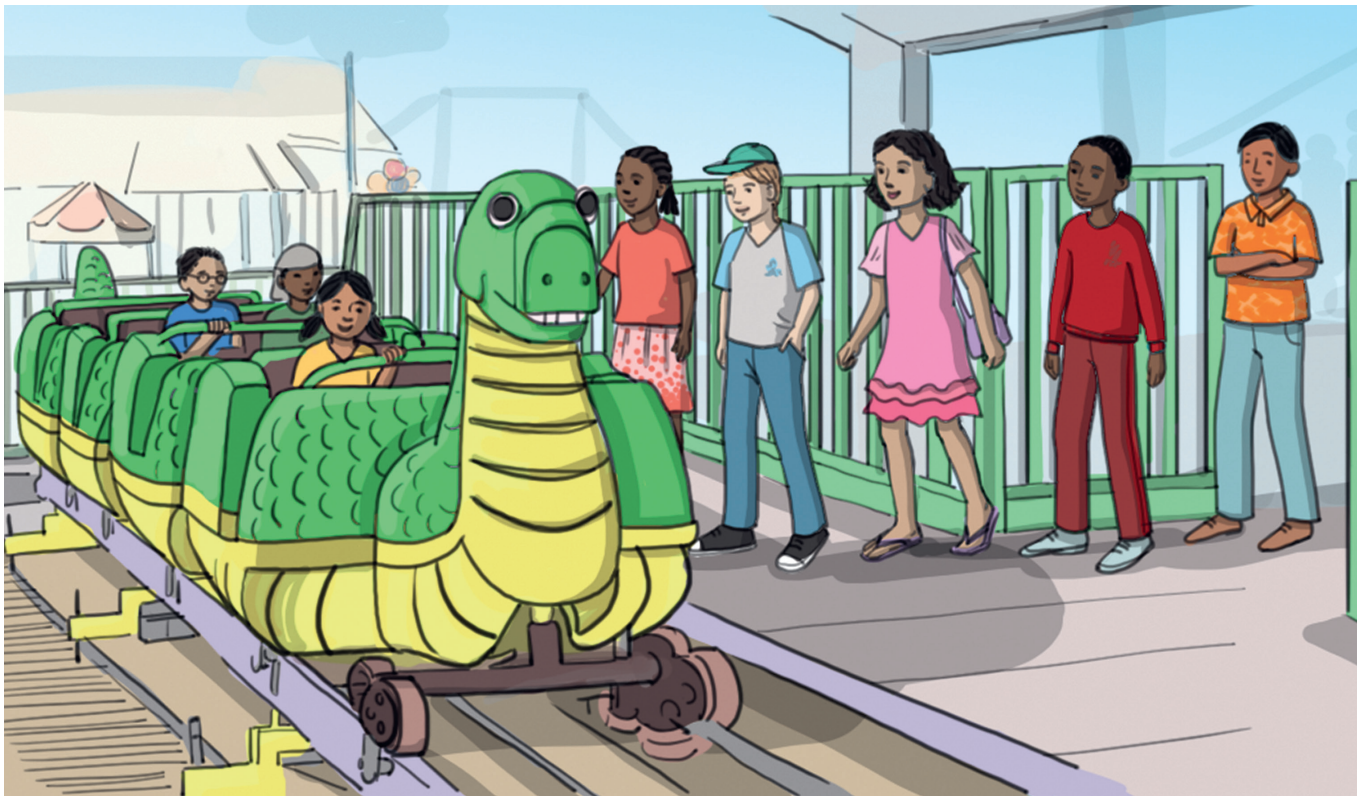
eight



2. Write the number symbol and number name for 8 in your classwork book.



3. Count the number of children.

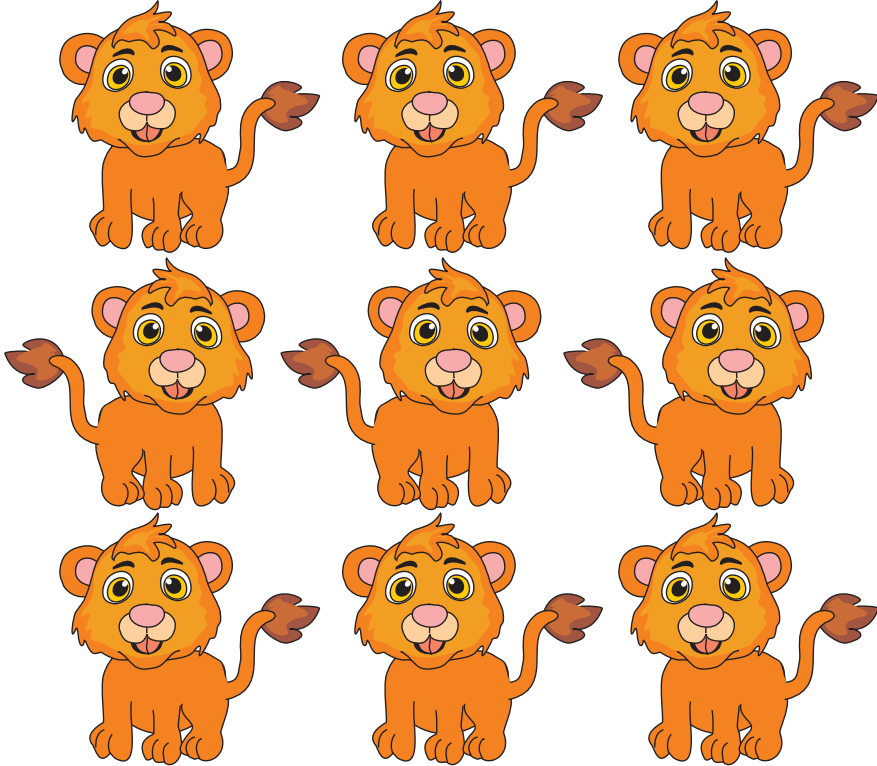
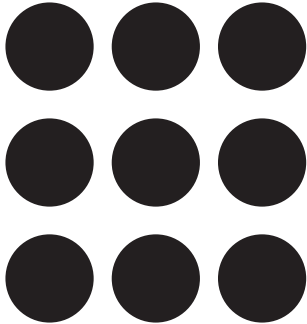



- How many children altogether?
- Write the number symbol and the number name in your classwork book.



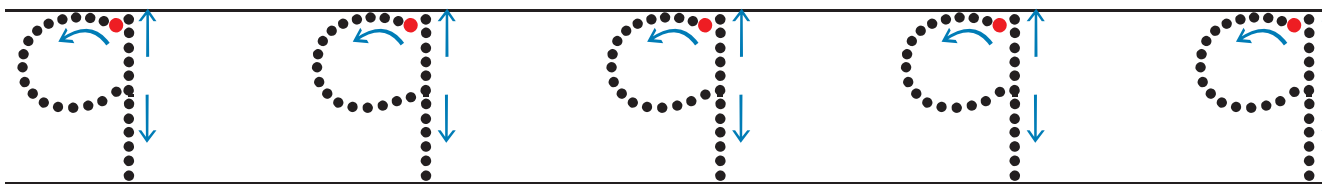
# Learning about the number symbol 9

How many cubs?

## Activity 4

I. Trace the number symbol 9 with your finger.

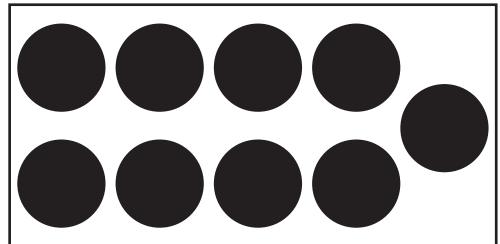


This is number symbol

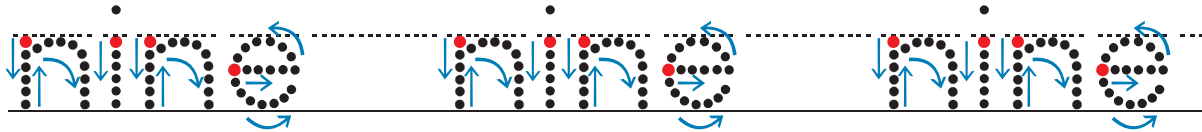
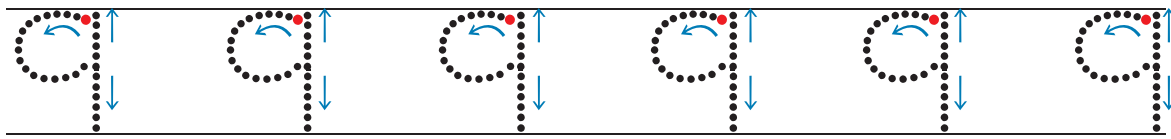
9

This is number name

nine



2. Write the number symbol and number name for 9 in your classwork book.



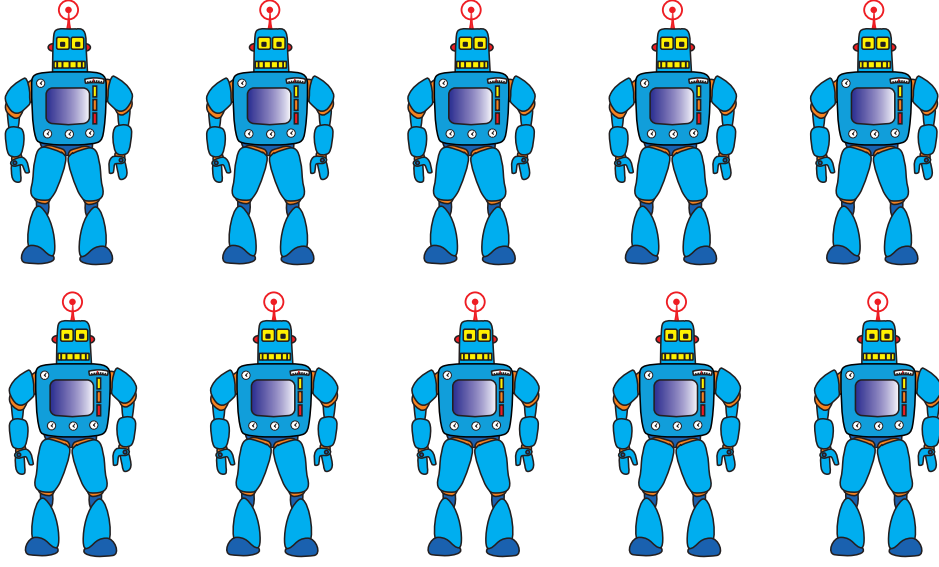
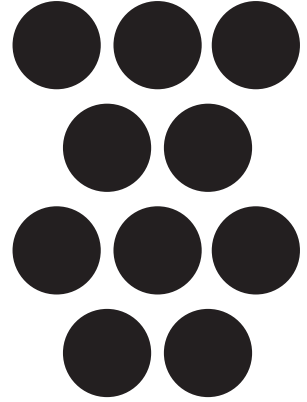

3. Work with a friend. How many trees are there?



4. Write the number symbol and the number name in your classwork books.

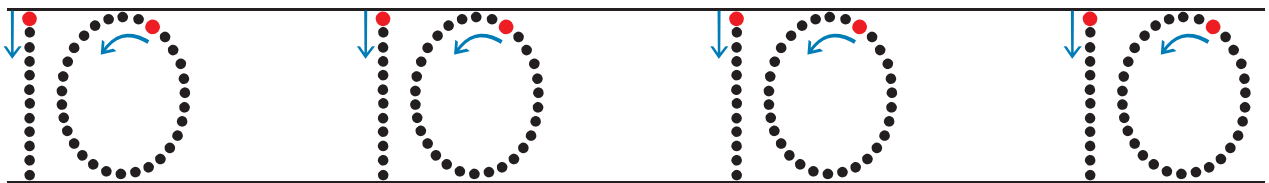
# Learning about the number symbol 10

How many robots?

## Activity 5

1. Trace the number symbol 10 with your finger.

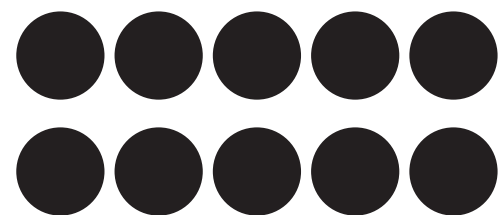


This is number symbol

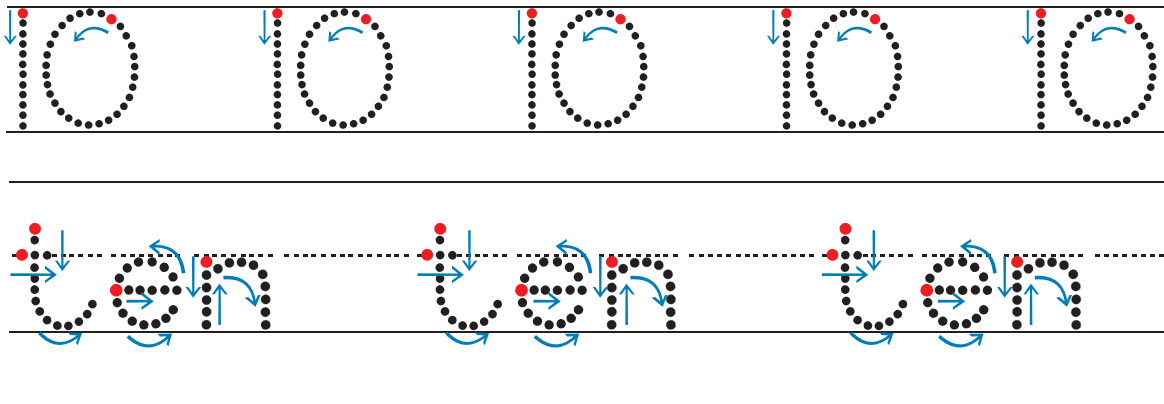
10

This is number name

ten



2. Write the number symbol and number name for 10 in your classwork book.



3. Ayanda loves to read.


- a) If she has read five books so far, how many more books does she need to read to reach ten books?




- b) Write the number symbol and number name in your classwork books.

# Know your number names

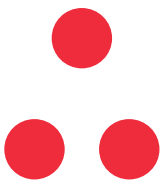
Here are the number names for the number symbols 1 to 10.



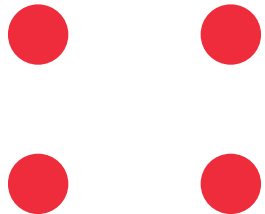
1  
one



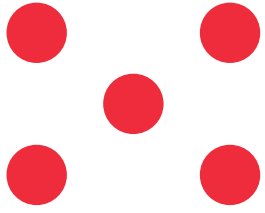
2  
two



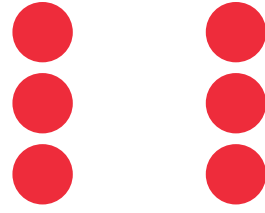
3  
three



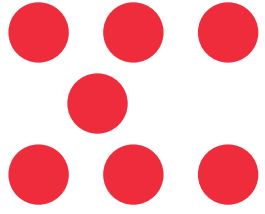
4  
four



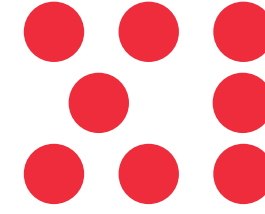
5  
five



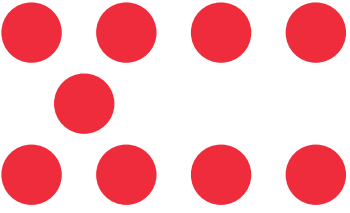
6  
six



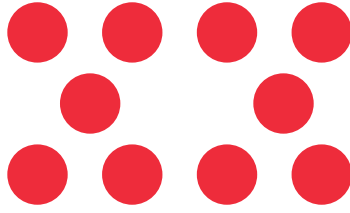
7  
seven



8  
eight



9  
nine


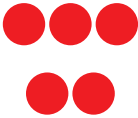
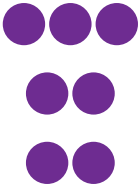
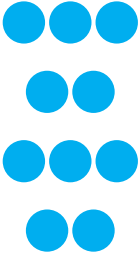



10  
ten

## Activity 6

TERM 2

1. Sort and match the number with the correct picture.

Picture	Number symbols	Number names
	7	two
	10	ten
	2	five
	4	four
	5	seven

2. Copy and complete. Fill in the missing numbers:

a) 4; ; 6

b) ; 8; 9

c) 5; 6;

d) 10; ; 8

e) 7; 6;

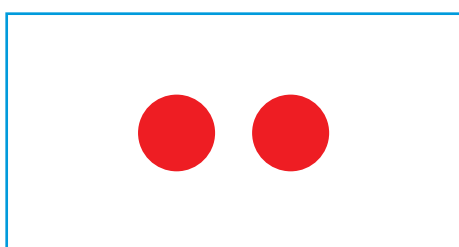


# Compare and order numbers

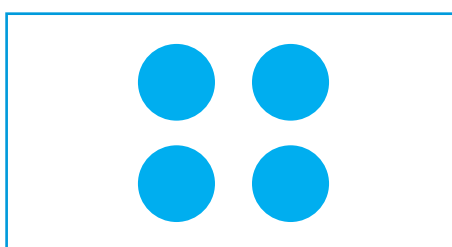
We can compare groups of objects by saying which group has more objects, and which group has less objects.

## Example

Which group has more objects? A or B.



A



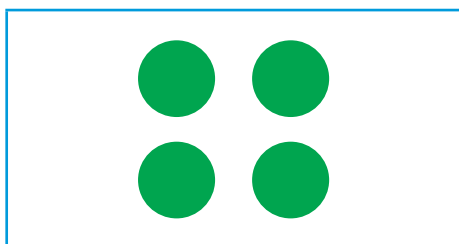
B

## Answer

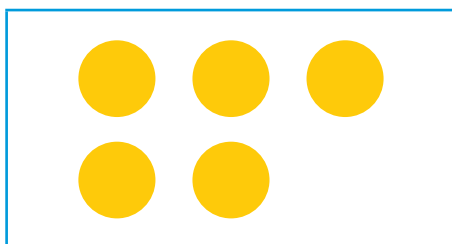
B has more objects than A.

## Example

Which group has less objects? A or B?



A



B

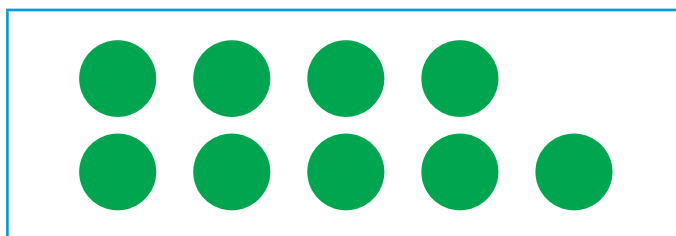
## Answer

A has less objects than B.

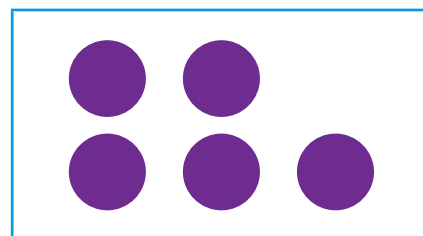
## Activity 7

TERM 2

1. a) Which group has more objects? A or B?



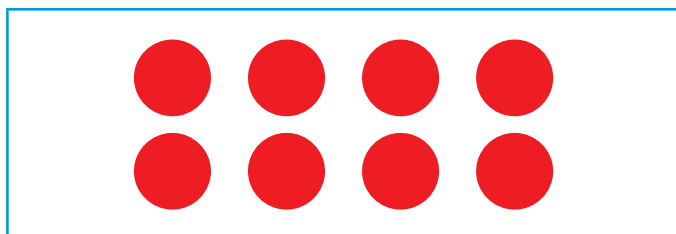
A



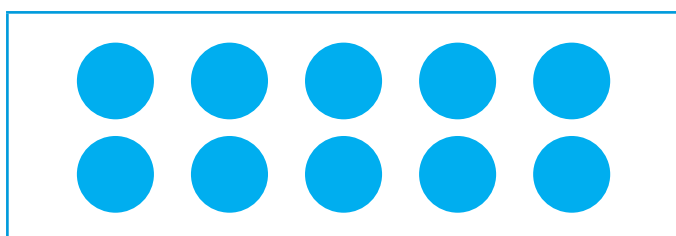
B

- b) Write the number for the group you chose.

2. a) Which group has less objects? A or B?



A

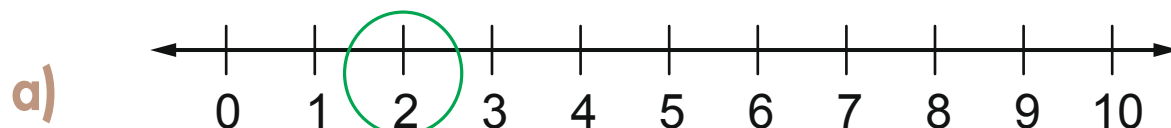


B

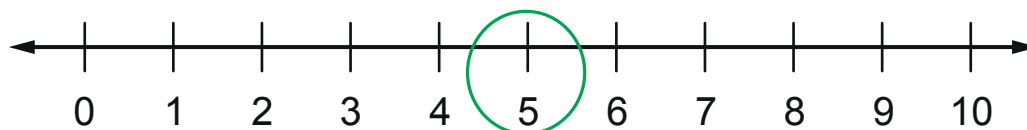
- b) Write the number for the group you chose.

You can use number lines to help you count and work with numbers.

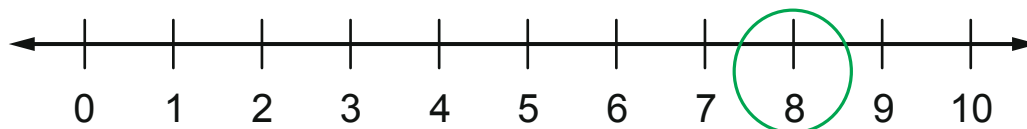
3. Write the number symbol and number name for the circled number on the number line.



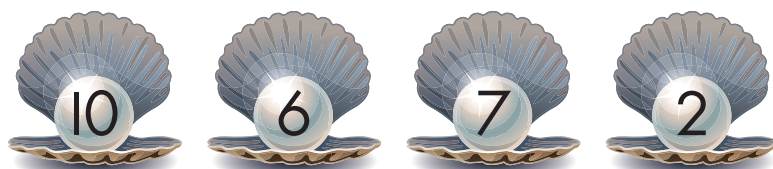
b)



c)



4. Order the numbers from the smallest to greatest.

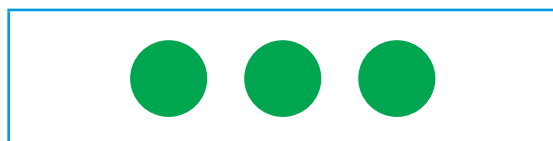
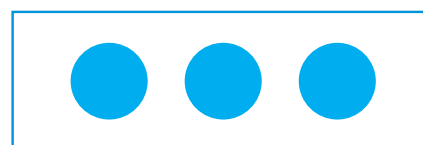


5. Order the numbers from the greatest to smallest.

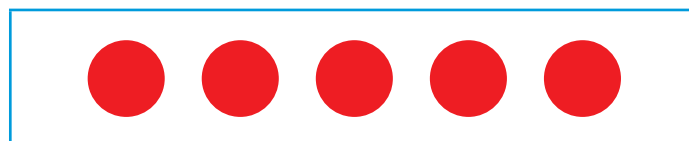


### Example

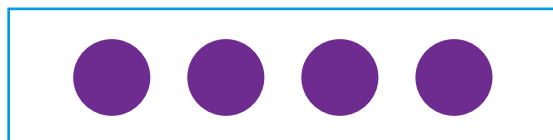
Choose the set that has 1 more object than the given set.



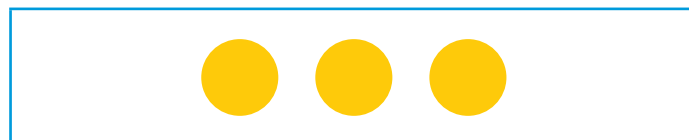
A



B



C

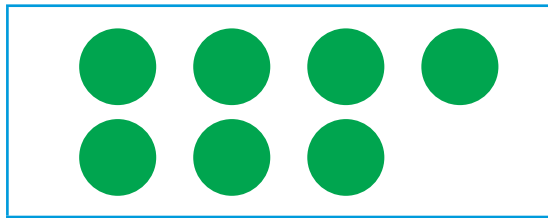
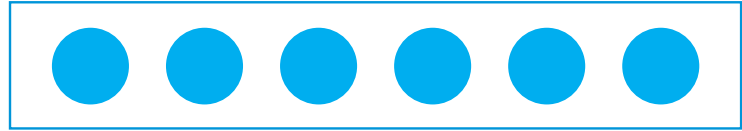


D

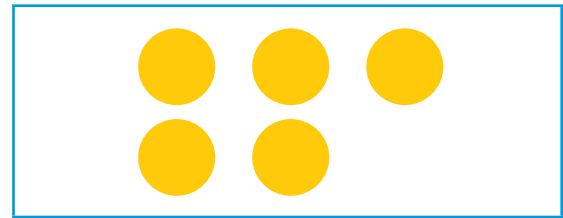
### Answer

C has one more object.

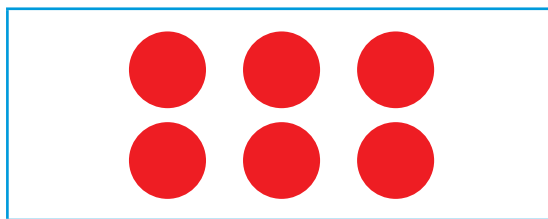
6. a) Choose the set that has 2 more objects than the given set.



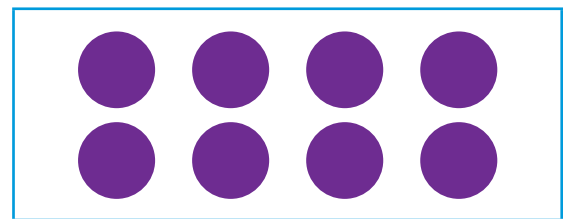
A



B



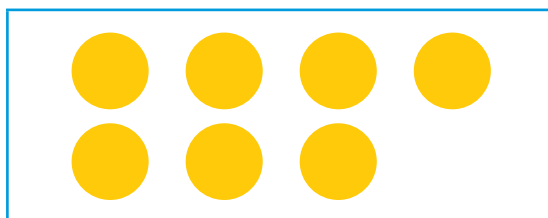
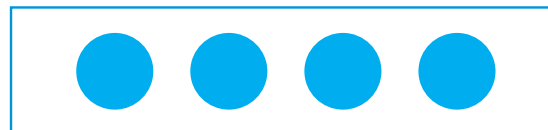
C



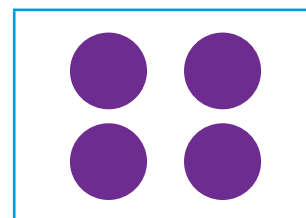
D

- b) Write the number for the group you chose.

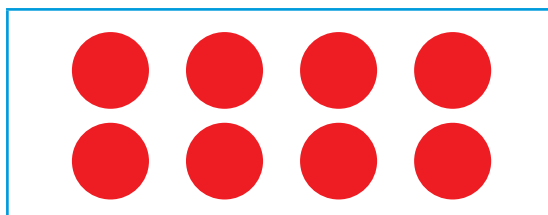
7. a) Choose the set that has 3 more objects than the given set.



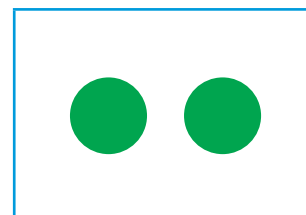
A



B



C



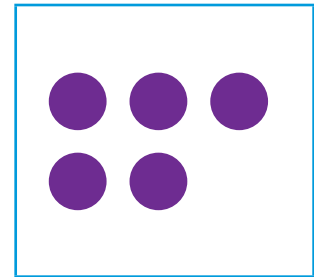
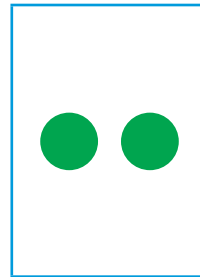
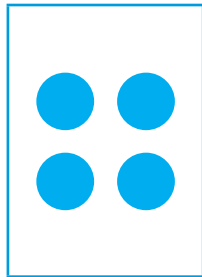
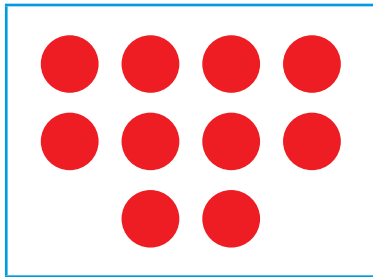
D

- b) Write the number for the group you chose.

We can also count and order objects from greatest to smallest or from smallest to greatest.

### Example

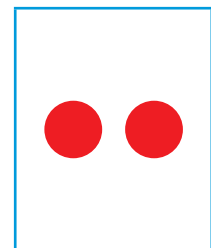
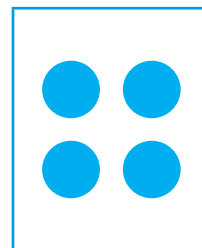
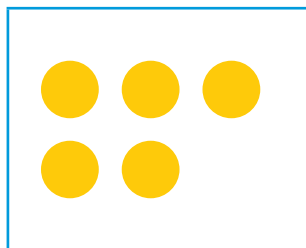
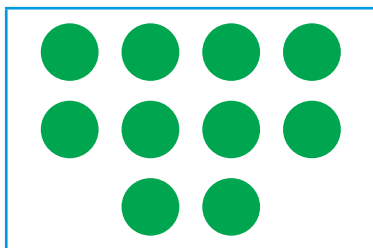
a) Count and order the objects that has the most items to the least items.



b) Write the numbers in order from greatest to smallest.

### Answer

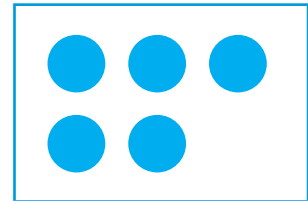
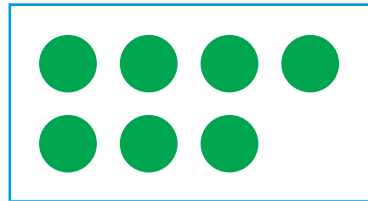
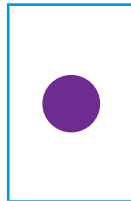
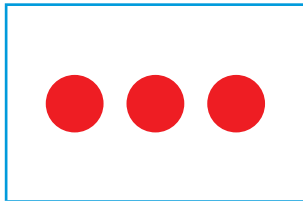
a)



b) 10; 5; 4; 2

**Example**

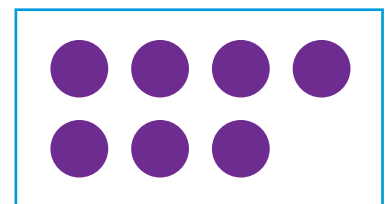
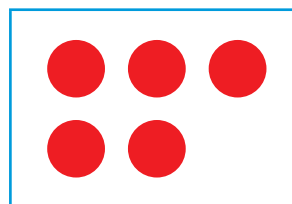
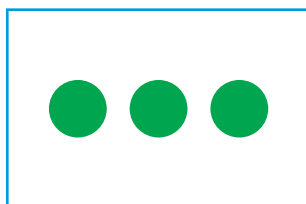
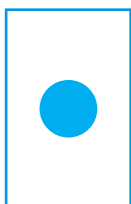
- a) Count and order the objects that has the most items to the least items.



- b) Write the numbers in order from smallest to greatest.

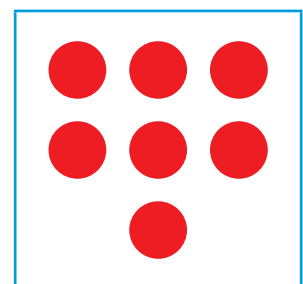
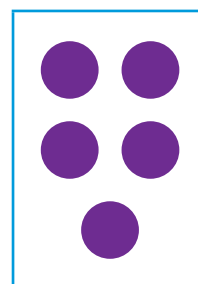
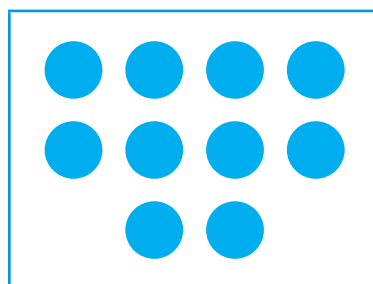
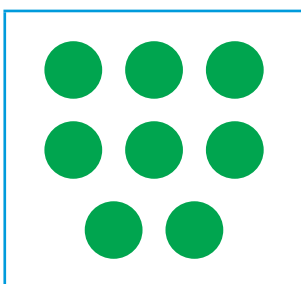
**Answer**

a)



- b) 1; 3; 5; 7

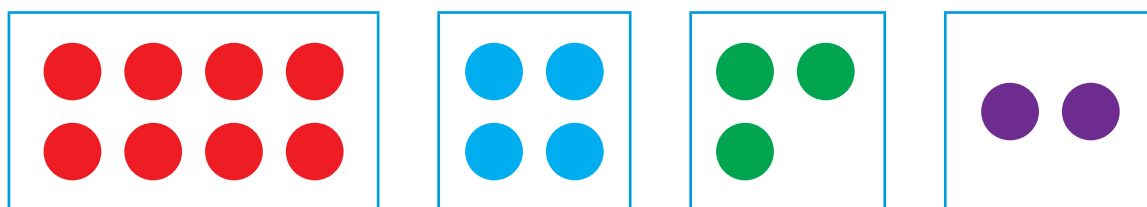
8. a) Count and order the objects that has the most items to the least items.



- b) Write the numbers in order from the group that has the most items to the one that has the least items.



9. a) Count and order the objects in each box from greatest to smallest.

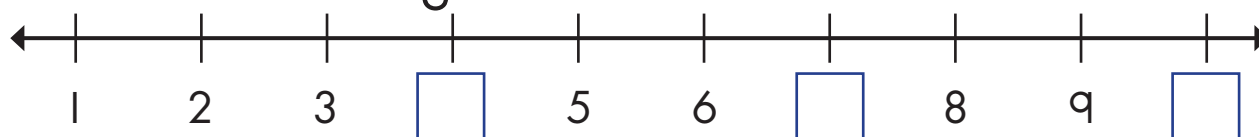


- b) Write the numbers in order from smallest to greatest.

10. Copy and fill in the missing number

- a)  is 1 less than 5  
b)  is 2 less than 7  
c)  is 3 more than 5  
d)  is 1 more than 4

- II. Fill in the missing numbers on the number line.



- a) Write the number that comes before 10.  
b) Write the number that comes after 5.  
c) Write the number that is between 4 and 6.  
d) Write the number that is 1 more than 8.  
e) Write the number that is 1 less than 6.

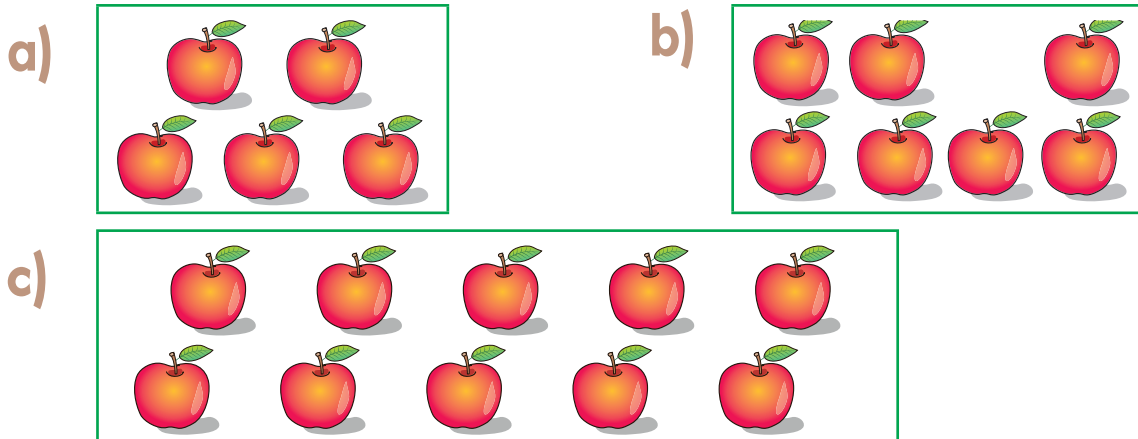
# Counting

## Counting to 15

To estimate means to find a value closest to the number. Sometimes we estimate and do not count the objects.

### Activity 8

1. Estimate the number of apples in each group.



2. Now count the number of apples in each group.

a) \_\_\_\_\_

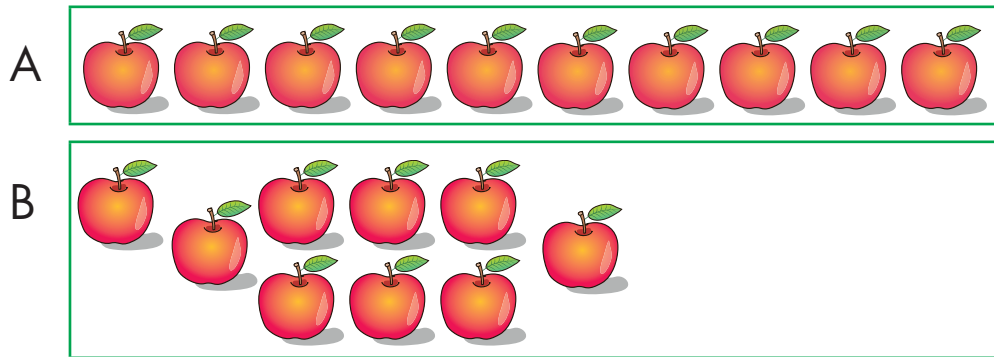
b) \_\_\_\_\_

c) \_\_\_\_\_

d) Was your estimate close?

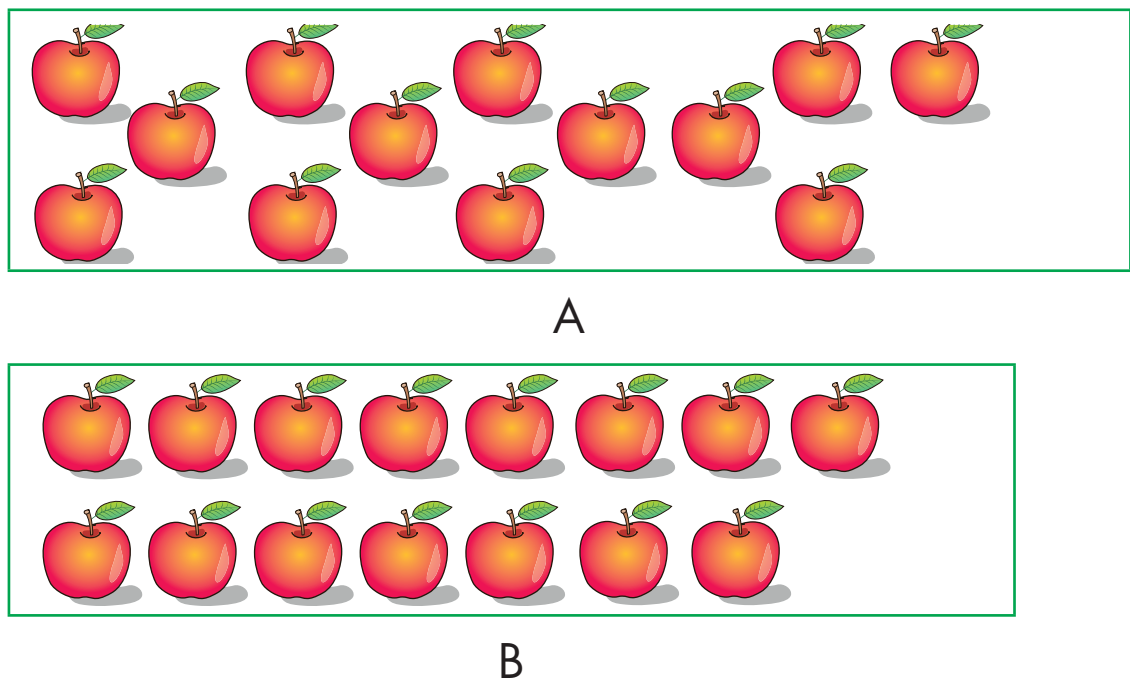
3. Draw a picture of an apple tree that has 5 more than 8 apples in it. Ask your friends to estimate how many apples there are on the tree.

4. a) Estimate what group has more apples?



b) Now count the number of apples in each group.

5. a) Estimate what group has less apples.



b) Now count the number of apples in each group.

6. Look at groups A and B in numbers 1, 3 and 5. Ask your friend:

a) Which groups were easier to count?

b) Why were these groups easier to count?

# Count to 20

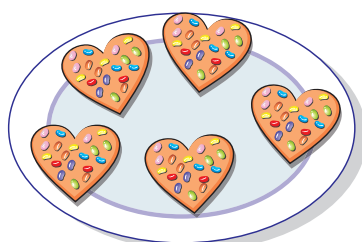
## Activity 9

1. Copy and complete the number grid.

	2	3		5		7		9	
11		13	14		16	17			20

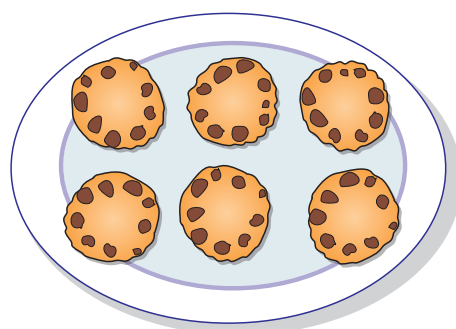
Caitlin and her mom bake biscuits for a cake sale. Caitlin wants to make 20 biscuits.

2. a) Here is what Caitlin bakes:



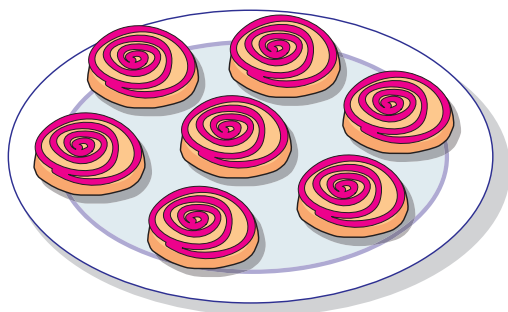
How many biscuits are there?

b) Here is what Caitlin bakes:



How many biscuits are there?


c) Here is what Caitlin bakes:







How many biscuits are there?

d) How many biscuits are there altogether?


3. Look at the number grid.

a) Write the number hidden by every .

I		3		5		7		9	
II		13		15		17		19	

b) Read the numbers out loud.

4. Look at the number grid.

a) Write the number hidden by every .

I	2	3	4		6	7	8	9	
II	12	13	14		16	17	18	19	

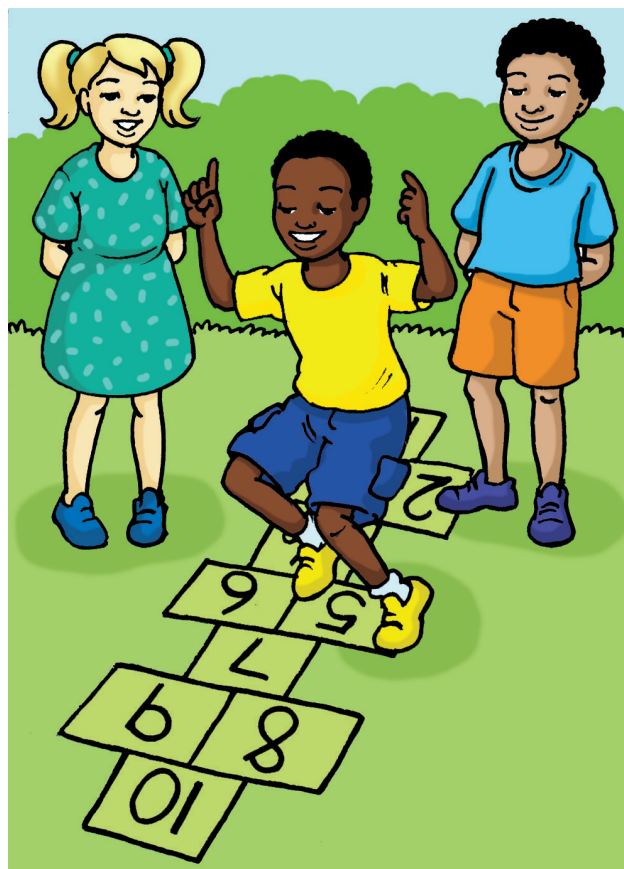
b) Read the numbers out loud.

# Counting in groups up to 20

Let's practise counting in groups.

## Example

- a) How many children?
- b) 1 child, how many eyes?
- c) 2 children, how many eyes?
- d) 3 children, how many eyes?



## Answer

- a) 3
- b) 2
- c) 2 and 2 makes 4
- d) 2 and 2 and 2 makes 6

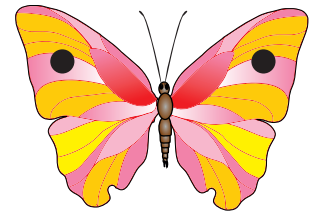


## Activity 10

1.
  - a) 1 child, how many arms?
  - b) 2 children, how many arms altogether?
  - c) 3 children, how many arms altogether?



2.
  - a) 3 butterflies, how many spots?
  - b) 4 butterflies, how many spots?
  - c) 5 butterflies, how many spots?



3.
  - a) 1 plate, how many cupcakes?
  - b) 2 plates, how many cupcakes?
  - c) 3 plates, how many cupcakes?
  - d) 4 plates, how many cupcakes?



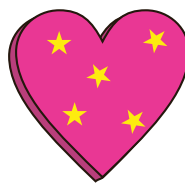
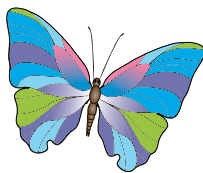
Sipho wants to make a birthday card for her mom. She uses these decorations for the card.



4. a) Copy the grid. Make a ● to show the number of decorations.  
 b) Count how many ● there are.  
 c) Write the number.


5. Sipho decided to get more items to decorate her mother's card.

Here are the items Sipho got:

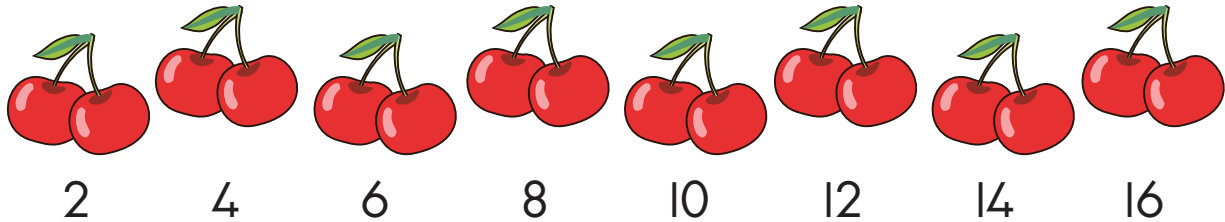


- a) Use your grid and make a ● to show how many items.  
 b) Count how many ●.  
 c) Write the number.
6. How many decorations does Sipho use to decorate her mom's card?
7. Explain to your friend how you got your answer.

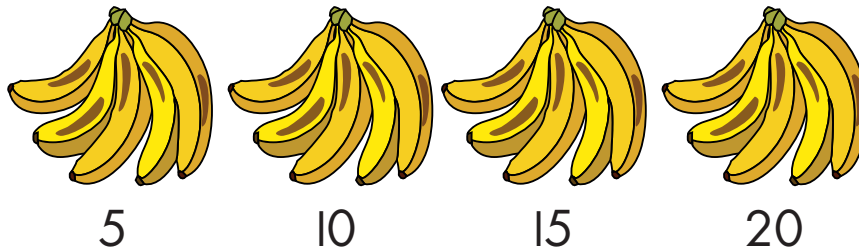
# Skip counting

Skip some numbers, so that you can count fast.

Here are cherries. Count in 2s.



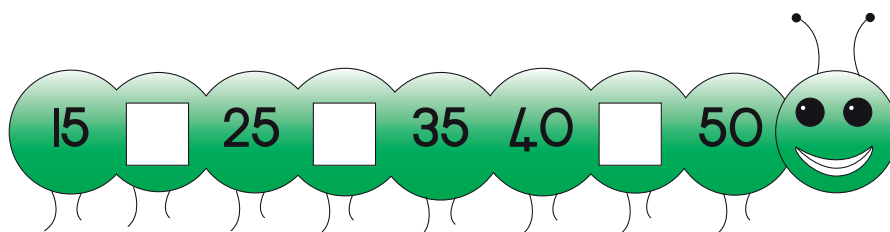
Here are bananas. Count in 5s.



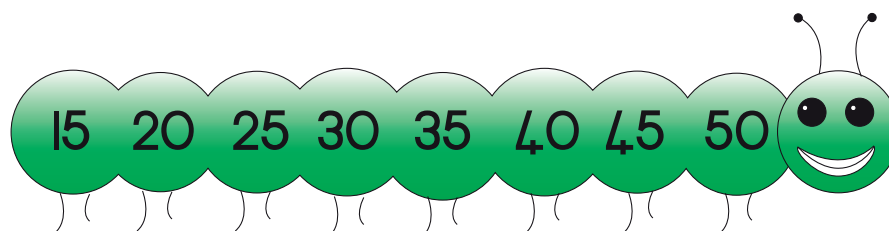
You are counting in groups!

## Example

Copy and complete. Fill in the missing numbers by counting in 5s.



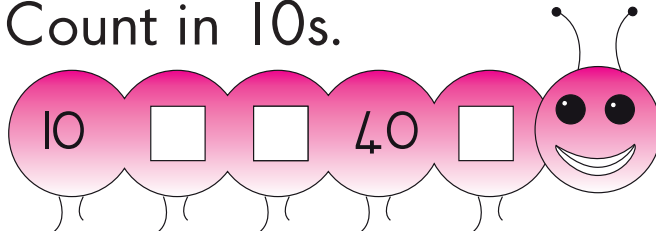
## Answer



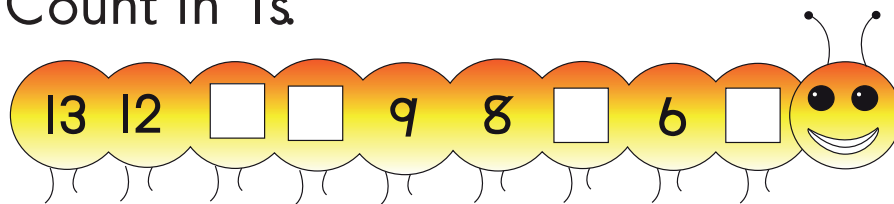
## Activity II

1. Write the missing numbers.

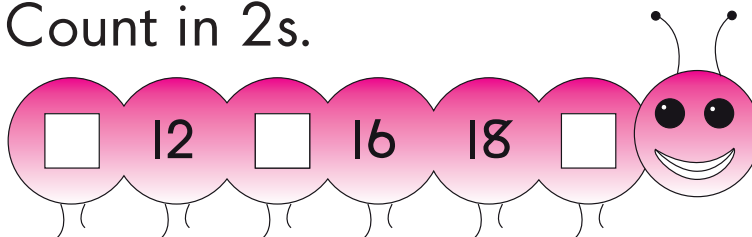
a) Count in 10s.



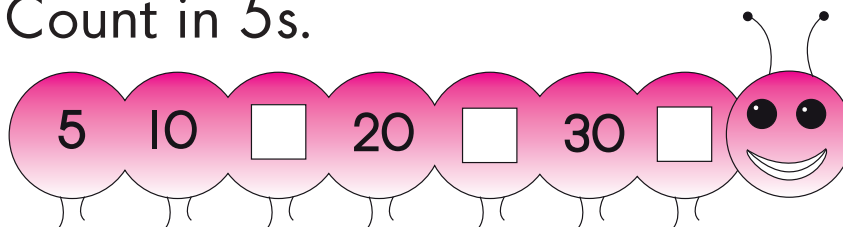
b) Count in 1s



c) Count in 2s.



d) Count in 5s.



2. Tell your friend which numbers are missing.

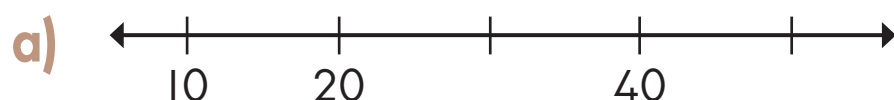
a)

2	4	6		10
	14	16	18	

b)

5	10	15		
30			45	50

3. Tell your friend which numbers are missing.



When skip counting look at the number patterns you created.

### Example

a) Complete the missing numbers.

2; 4; 6; 8; \_\_\_\_; 12; \_\_\_\_; 16; \_\_\_\_

b) What number pattern do you notice?

### Answer

a) 2; 4; 6; 8; 10; 12; 14; 16; 18

b) You are counting in 2s.

4. Look at the shaded numbers in the table.

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

a) What number pattern do you notice?

b) List all numbers that are shaded from 8 to 18.

c) List all numbers that are shaded from 2 to 12.

# Practise number bonds to 7

Let's practise our number bonds up to 7.


## Activity 12

1. Complete.

a)  $3 + \square = 7$

b)  $\square + 1 = 7$

c)  $4 + \square = 7$

d)  $\square + 2 = 7$

e)  $6 + \square = 7$

f)  $5 + \square = 7$

2. Find and write down the pairs of numbers that add up to 7. The first one is done for you.

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

3. How many pairs did you find?




# Add up to 10


You can use any strategies you have learnt to help you add.

## Activity 13


1. Complete each number sentence to make it true.




1 and  makes 4



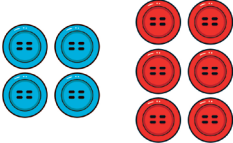
and  makes 5



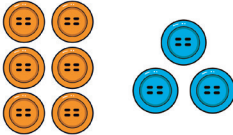
3 and 4 makes




and 2 makes 8



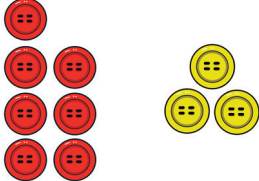
4 and  makes 10



6 and 3 makes



1 and  makes 10



and  makes 10

2. Use the strategies you have learnt to find the answers quickly.

- a)  and 3 makes 10
- b)  and 4 makes 10
- c) 5 and 5 makes
- d) 2 and  makes 10
- e) 10 equals  and 4
- f) 10 equals 8 and

### Example

Copy and colour to show different ways of making 4.

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



OR



3. Colour to show different ways of making:

- a) 5 

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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- b) 6 

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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- c) 7 

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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- d) 10 

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Use counters to help you solve these problems.

Use your counters to make the following numbers.

### Example

Add 1 and 4

### Answer

● and ●●●● makes ●●●●●  
 1 and 4 makes 5  
 $1 + 4 = 5$

### Example

Find the total of 7 and 2.

### Answer

●●●●●●● and ●● makes ●●●●●●●●●  
 7 and 2 makes 9  
 $7 + 2 = 9$

Use your counters to make the following numbers:

4. Copy and match pairs of numbers to make:

a) 7

3	5
1	4
2	2
5	6

b) 9

2	4
5	7
1	6
3	8

Use different colours to show the pairs.

5. a) 5 and 2  
b) 6 and 4

6. Use the number line to find the answers.



- a) 3 and 2 makes
- b) 5 and 2 and 2 makes
- c) 4 and  makes 6
- d)  and 5 makes 9
- e) Make your own number sentence.

7. Complete.

- a)  $3 + 4 =$
- b)  $2 + 6 =$
- c)  $5 + 5 =$
- d)  $4 + 6 =$
- e)  $6 + 4 =$

# Subtract from 10

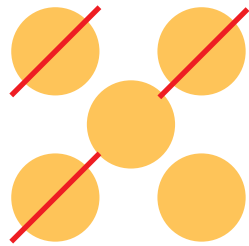
Subtraction is taking one number away from another. The answer is then called the **difference**.

## Example

Take away 3 from 5.

## Answer

5 take away 3 makes 2



$$5 - 3 = 2$$

## Activity 14

I. Complete the sentences.

a) 10 take away 7 =

b) 10 take away 6 =

c) 10 take away 5 =

d) 10 take away 4 =

e) 10 take away 3 =

## 2. Complete

a)  $9 - 3 = \square$

b)  $8 - 5 = \square$

c)  $8 - 4 = \square$

d)  $7 - 4 = \square$

e)  $6 - 2 = \square$

Let's practise some more subtraction from 10.

**Example**

3 ladybirds sit on a leaf  
1 lady ladybird flies away.  
How many left?

**Answer**

2

## 3. Solve.

a) 5 ladybirds sit on a leaf.  
2 ladybirds fly away.  
How many left?

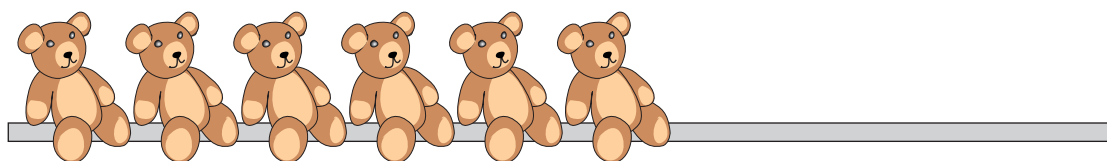
b) 7 ladybirds sit on a leaf.  
3 ladybirds fly away.  
How many left?



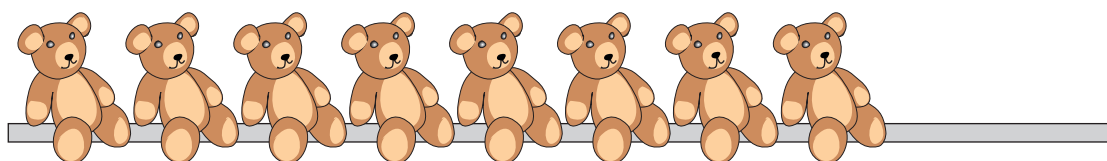


4. Solve the following.

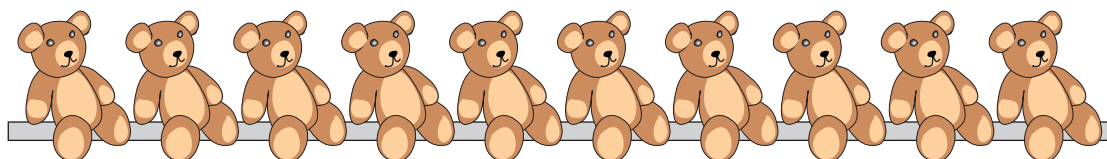
- a) 6 bears sit on a shelf. If 2 fell off, how many are left?



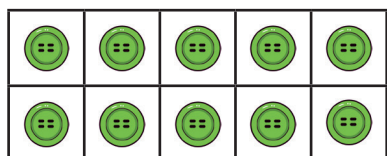
- b) 8 bears sit on a shelf. If 5 fell off, how many are left?



- c) 10 bears sit on a shelf. If 6 fell off, how many are left?



5. Use the tens frame to help you solve these:



- a)  and 7 makes 10, therefore  
10 take away  makes 7

- b) 4 and  makes 10, therefore  
10 take away 4 makes

- c) 9 and  makes 10, therefore  
10 take away 9 makes

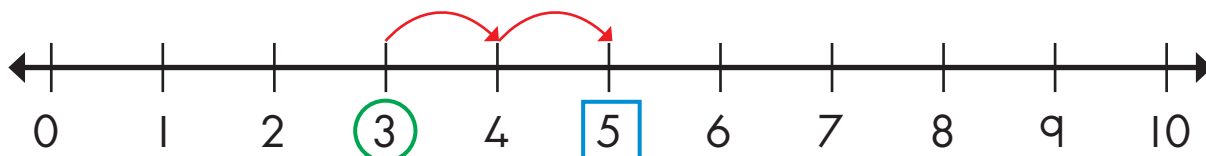
You can also use symbols as a short way to write these problems.

### Example

Use a number line to help you add.

Andy caught 3 bugs. He searched some more and caught 2 more bugs. How many altogether?

### Answer



**3 and 2 makes 5**

**Number sentence:**

**3 + 2 = 5**

### Example

Write:

10 take away 6 is equal to 4 using symbols.

### Answer

$$10 - 6 = 4$$

### Example

Write:

7 plus 3 is equal to 10 using symbols.

### Answer

$$7 + 3 = 10$$

Use any strategy you know to solve these problems.  
Use number symbols and symbols (+, – and =) to write a number sentence for each one.

6. a) Amy collects pictures of animals. She found 5. Then she finds 3 more. How many pictures has she found altogether?



- b) Thando has collected 6 twigs. Mandla has collected 3 twigs. How many twigs have they collected altogether?



- c) Kayla and Keera each lost 3 teeth.  
How many teeth did they loose altogether?



- d) Nandi, Mads and Tahira each have one bow in their hair. How many bows do they have altogether?

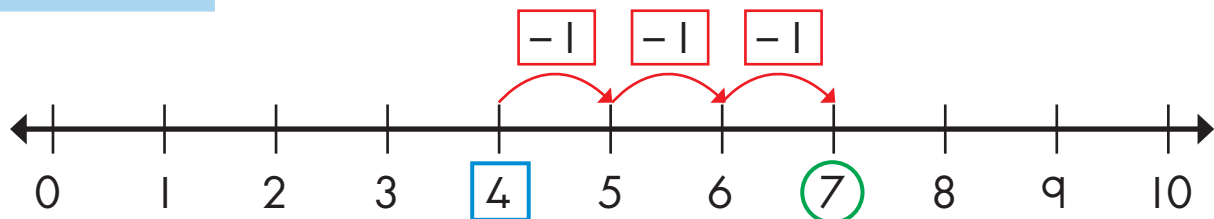


## Example

Use a number line to help you subtract.

Andy caught 7 bugs. 3 got away. How many bugs does he have left?

## Answer



$$\begin{array}{r} 7 \text{ take away } 3 \text{ makes } 4 \\ 7 - 3 = 4 \end{array}$$

7. Use any method you know to solve these problems. Write a number sentence for each one.



- a) Keera got 5 spinners on her birthday. She gave 3 spinners away to her brothers. How many spinners does she have left?



- b) Thabo and Vuyo were playing with their marbles. Thabo had 8 marbles. He lost 5 to Vuyo. How many does he have left over?



# Problem solving

## Use concrete apparatus to solve problems

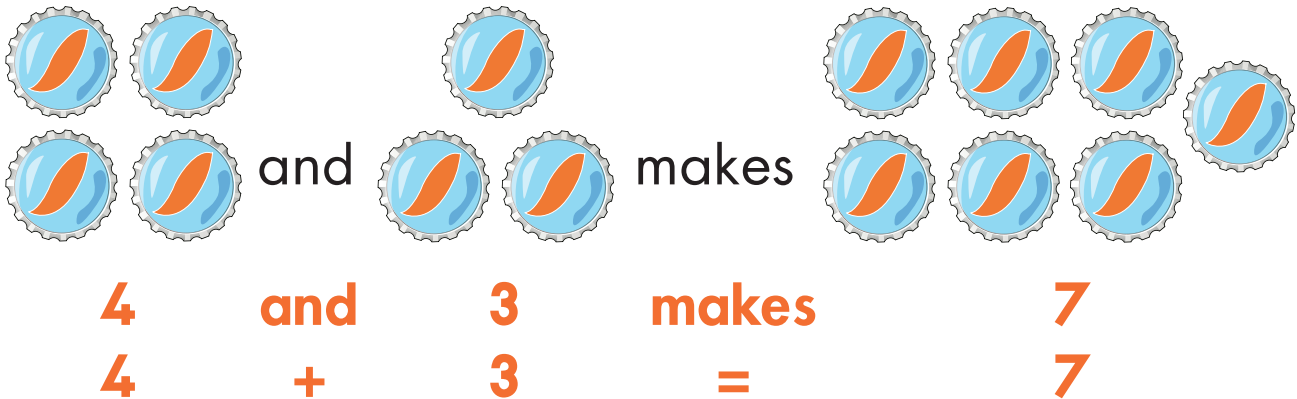
In Term 1 you learnt that you can use counters to help you solve problems.

### Example

Aidan pours juice for 4 friends. 3 more friends come visit. How many glasses of juice must he pour in total?

### Answer

Use counters to help you solve the problem.



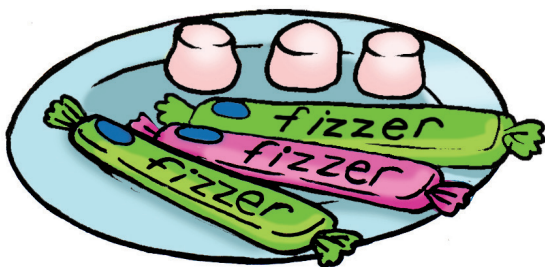
It's Bongi's birthday today. She has invited 10 friends from school to celebrate her birthday with her.



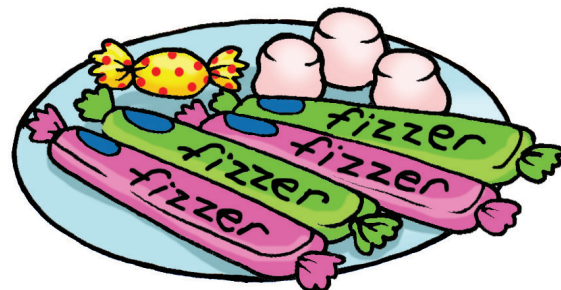
### Activity 15

- I. Evan and Siya take some sweets from the table. Here is what they take:

Evan's plate



Siya's plate



- a) Who has the most sweets?
- b) How many more sweets does Siya have than Evan?

2. Look at Bongi's birthday cake. How many more candles does her mother need to add to make 7?



3. Here are Bongi's gifts.



If Bongi opens 3 of these gifts, how many more gifts does she still need to open?

4. There are 10 . Mother gives 5 children

1  each.



How many cupcakes are left over?

## Use drawings to solve problems

In Term 1 you learnt that we can use drawings and counters to help you solve problems.

### Example

Nathi has 3 sweets. His sister gives him 2 more. How many does he have in total?

### Answer

Use drawings to help you:

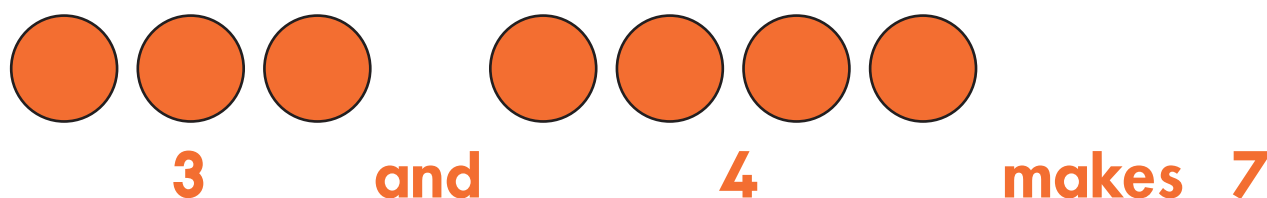


We write:  $3 + 2 = 5$

### Example

You have 3 books and received 4 more books. How many books in total? Use drawings to solve the problem.

### Answer



We write:  $3 + 4 = 7$



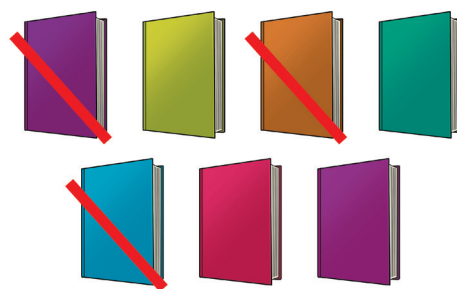
## Example

Tebogo borrows 7 books from the library. She reads 3 books in one week. How many books must she still read?



## Answer

Use drawings to help you:  
7 take away 3 makes 4  
We write:  $7 - 3 = 4$



TERM 2

## Activity 16

Draw pictures in your classwork book to solve these problems.

1. Idah has 2 cats. The cats have 5 kittens. How many cats and kittens does Idah have altogether?
2. Sophie has 2 dogs. Terrence has three dogs. How many dogs do they have altogether?
3. Naeem has 4 hamsters. He gives 2 away. How many hamsters does he have left?
4. Seshni has 5 rabbits. She gives 2 away. How many rabbits does she have left?



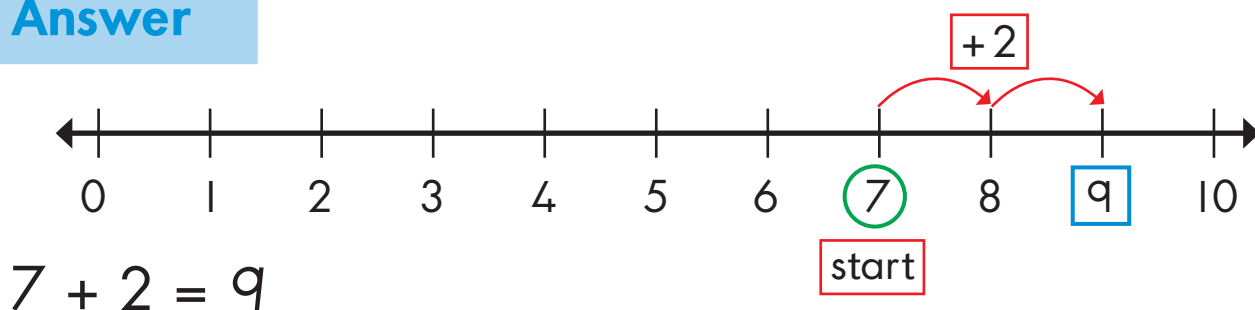
## Use a number line to solve problems

**Counting on** using a number line is a good problem-solving strategy.

### Example

Use a number line to find 7 plus 2.

### Answer

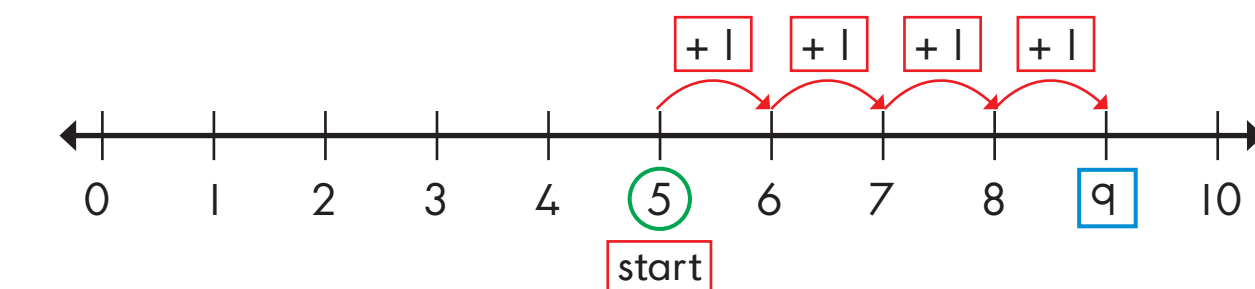


### Example

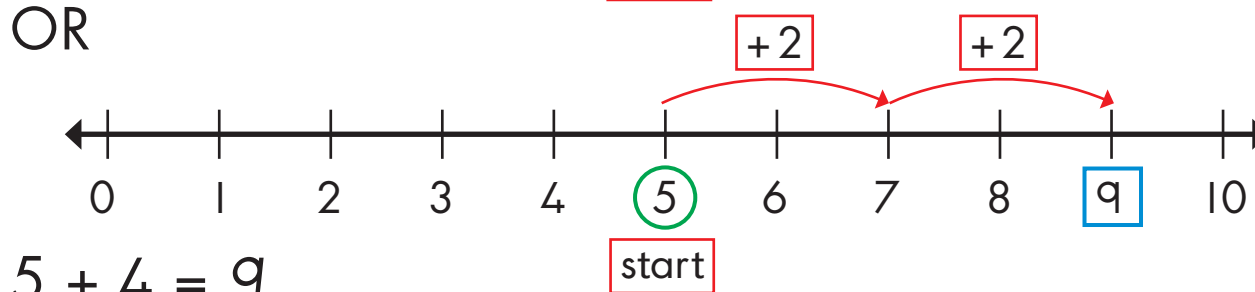
There are 5 boys and 4 girls doing extra art. How many learners are in the class?

### Answer

Draw a number line to help you solve this problem.



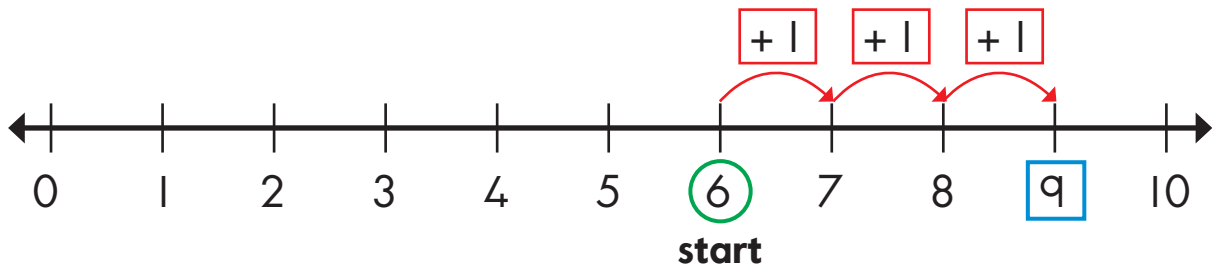
OR



5. Use a number line to find the answers.

**Example**

What does 6 and 3 make?



**Answer**

6 and 3 makes 9

$$6 + 3 = 9$$

- a) What does 5 and 4 make?
- b) What does 8 and 2 make?
- c) What does 7 and 3 make?
- d) What does 6 and 4 make?

6. Work with a partner.

Make your own number line from 1 to 10.

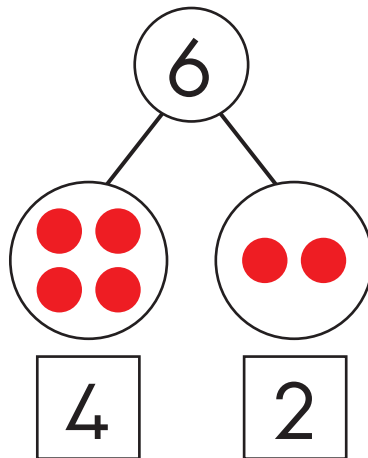
- a) Create five problems that another pair can solve.
- b) Exchange your problems and once complete, check your answers.

# Break down and build up numbers

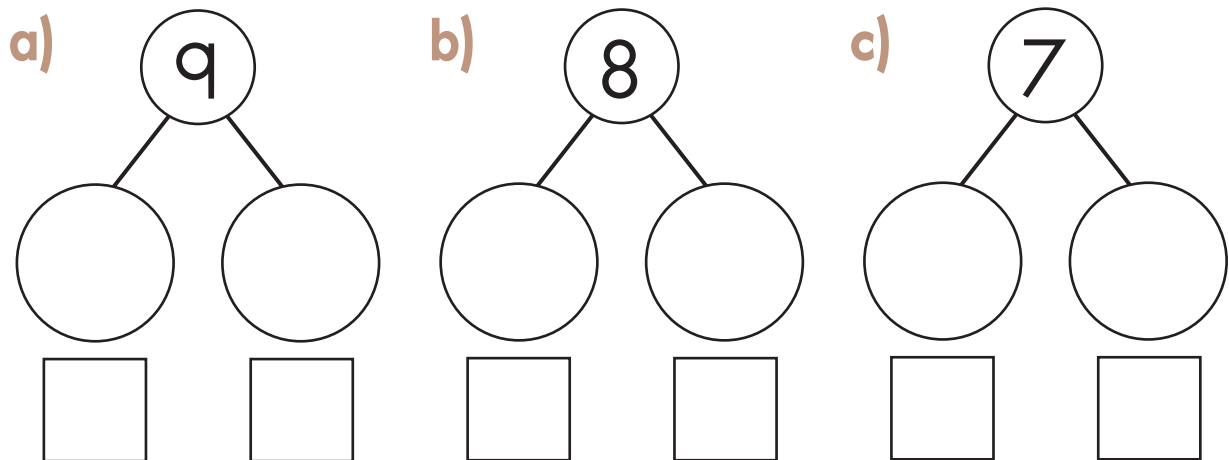
To make numbers easier to work with we can **break down** and **build up** numbers.

## Example

Draw dots to equal the number at the top. Write the number in the boxes.



7. Draw dots to equal the number at the top. Write the number in the boxes.



**Example**

What numbers is 5 made up of?

**Answer**

We break down 5 into 1 and 4.

We can also break down 5 into 3 and 2.

**Example**

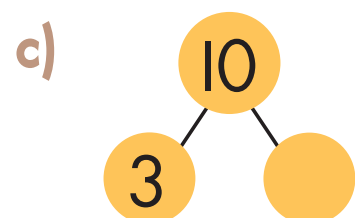
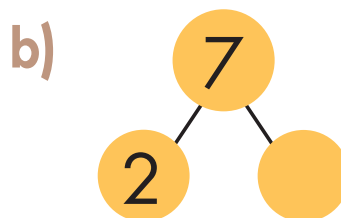
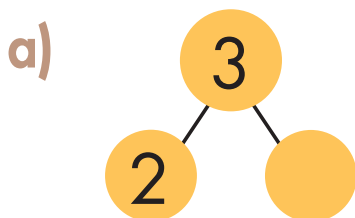
Find 2 numbers that make 8. Can you find any other numbers that 8 can be made up of?

**Answer**

8 can be made up of 6 and 2  
OR 4 and 4

We say 8 can be broken down into 6 and 2 or 8 can be broken down into 4 and 4.

8. Copy and complete by breaking down the number.

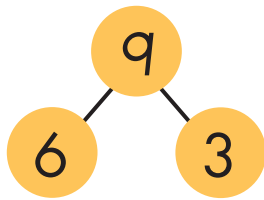


### Example

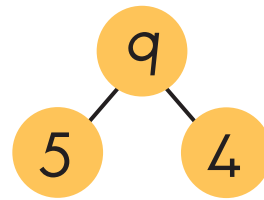
Candice says that the number 9 is made up of 6 and 3. Tombi says the number 9 is made up of 5 and 4. Who is correct?

### Answer

Both girls are correct.



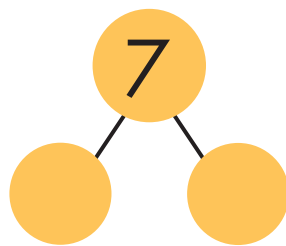
9 can be broken down into 6 and 3



9 can also be broken down into 5 and 4

9. Answer these questions.

a) David's teacher asks him to write the numbers that can be used to make up 7.



b) Megan says that 8 can be broken down only into 4 and 4. Is she correct? Explain why.

10. Fill in the missing numbers.  
Use counters to help you.

- a) 4 and  makes 9
- b)  and 3 makes 10
- c) 3 and  makes 7
- d) 8 equals  and 2

### Example

Michaela has 8 counters. She makes one group of 4. With the other counters she makes 2 groups of 2. When she counts, they all add up to 8. She says that 4 and 2 and 2 makes 8. Is she correct?

### Answer

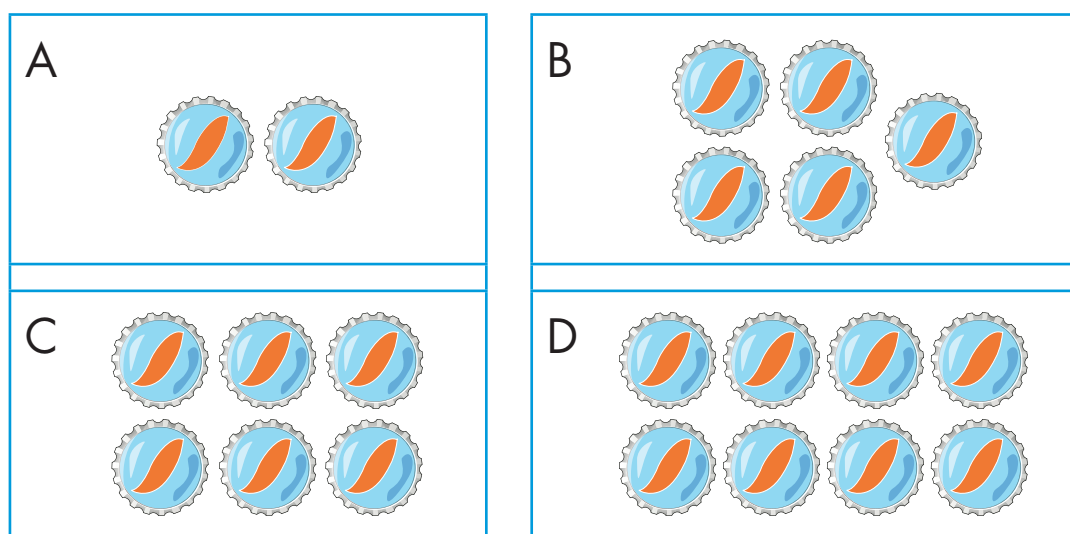
Yes, she is correct. 8 can be broken down into 4 and 2 and 2.

11. Answer these questions.

- a) Which numbers can be used to make 7?  
Write the numbers.
- b) Makgoshi uses 6 and 3 to make up 10.  
Is she correct? Explain.



- c) Idah has to make 10. She has these groups of counters.



What groups of counters can she use to make 10? Explain.

12. Fill in the missing numbers.



- a)  and 3 makes 8

- b) 4 and  makes 8



- c) 9 equals  and 2

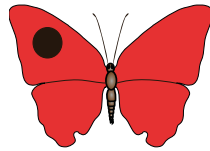
- d) 9 equals  and 4

# Doubling and halving

When you add the same number to the first number it will be twice as big. This is called **doubling**.

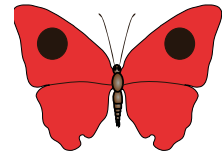
## Example

Double 1 is



## Answer

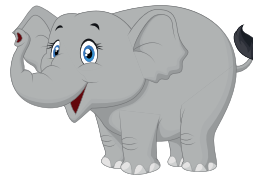
Double 1 is 2.



## Example

a) How many legs?

b) Double 4 is



## Answer

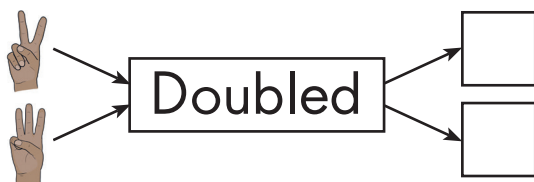
a) 4 legs

b) Double 4 is 8.

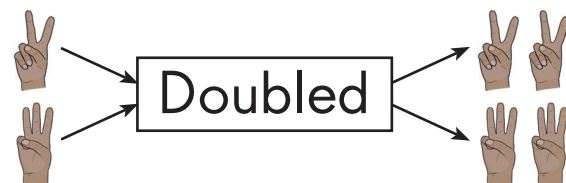
Let's practice our **doubling**.

## Example


Copy and complete.




## Answer

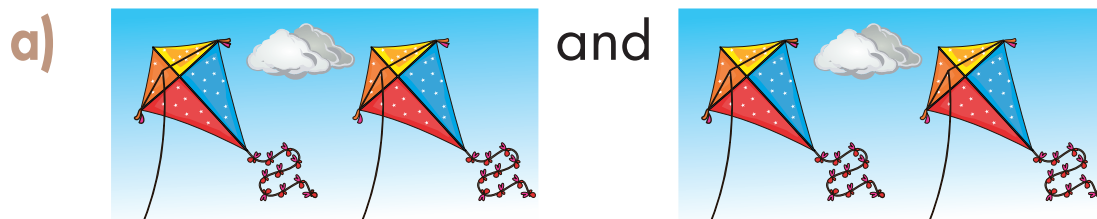


13. Write the numbers.

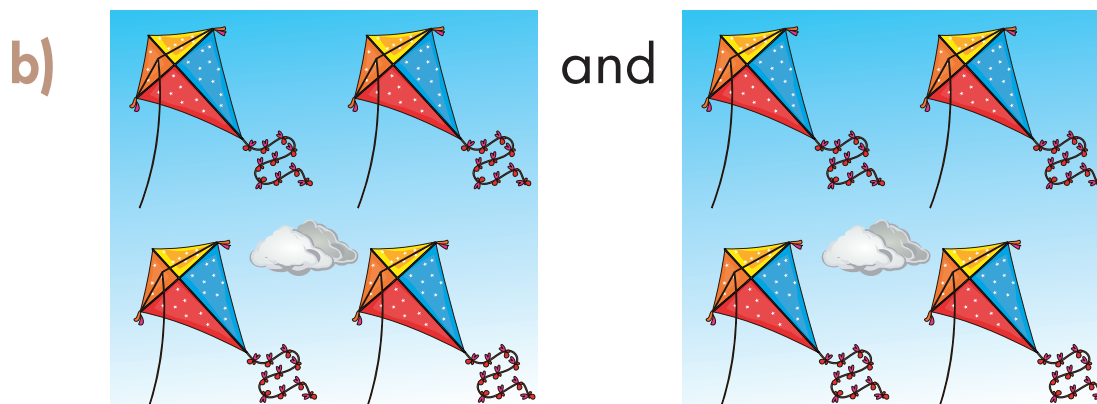
a)  → Doubled →

b)  → Doubled →

14. David and his dad are at a kite festival. Here is what he sees.



How many kites altogether?



How many kites altogether?

15. Tania and Sean have 5 bread rolls each. How many bread rolls do they have altogether?

16. Double each number that you can see on the dice.

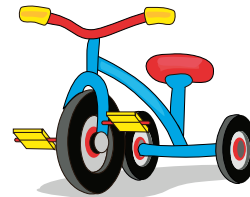


17. How many wheels?

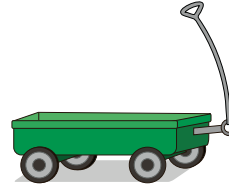
a) Write: Double 2 is



b) Write: Double 3 is



c) Write: Double 4 is



18. Khetha and Katlego have 2 rides left on each of their bus tickets. How many rides are left altogether?

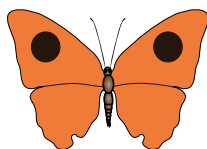
19. Nathan and Angie have 4 marbles each. How many marbles do they have altogether?

20. Bongi and Tebogo have 5 stickers each. How many stickers do they have altogether?

When you break a number into two equal parts, you halve it. We call this **halving**.

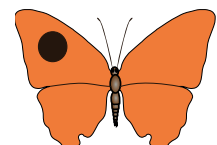
**Example**

Half of 2 is



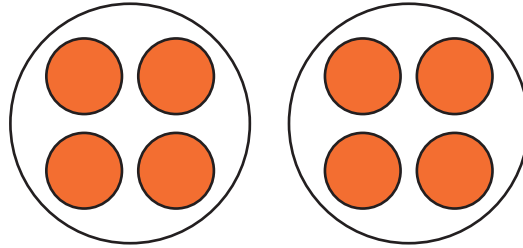
**Answer**

Half of 2 is 1.



## Example

You have 8 counters and you make two equal groups.



- a) What is half of 8?
- b) What is double 4.

## Answer

- a) 4
- b) 8

## Example

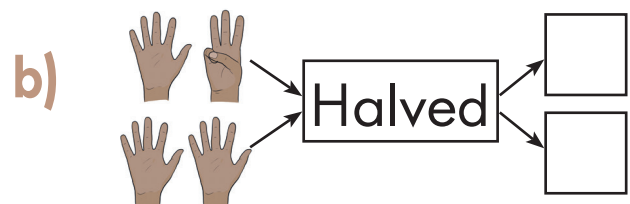
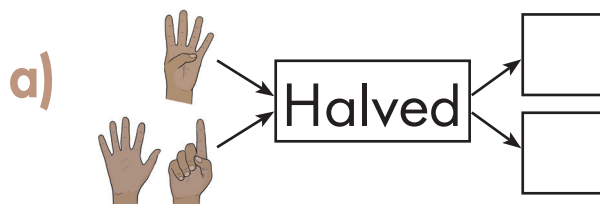
Copy and complete.



## Answer



21. Write the numbers.



- 22.** Stan has 4 soccer balls. He wants to share them equally between Naeem and Tristan. How many balls will each boy get?

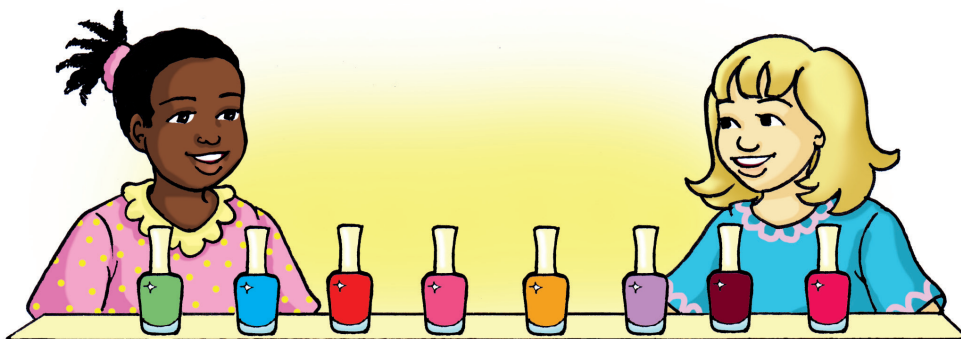


- 23.** Tori bakes 6 muffins. She shares the muffins equally between Tobi and Tom.

How many muffins does each boy get?

- 24.** Cindy and Lebo have 8 bottles of nail polish.

- a)** Share the bottles of nail polish equally between the two girls.



- b)** Lebo has 10 hair clips. Share the hair clips equally between the two girls.



- 25.** Prakesh and Shayna have 8 blocks left over to build their towers.



- a) Share the 8 blocks equally between the two children.
- b) How many blocks will each one get?
- 26.** Mother has 10 sweets to decorate two cakes. How many sweets will she have on each cake if she shared the sweets equally?
- 27.** Solve the following:

- a) double 1 = , therefore half of 2 =
- b) double 2 = , therefore half of 4 =
- c) double 3 = , therefore half of 6 =
- d) double 4 = , therefore half of 8 =
- e) double 5 = , therefore half of 10 =

# Repeated addition

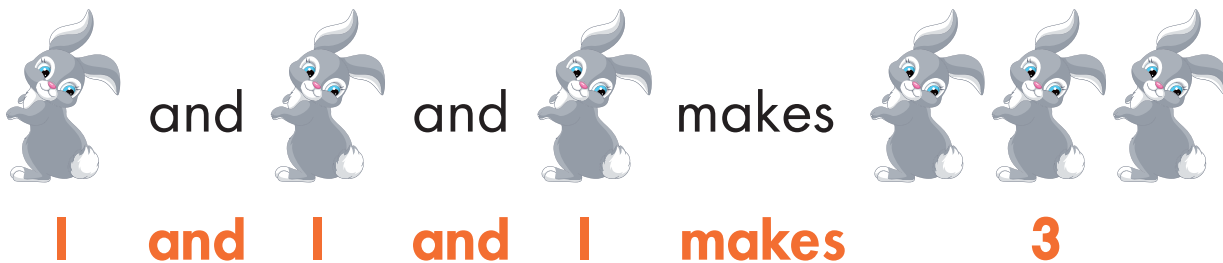
Repeated addition is when we add numbers that are the same.

## Example

1 rabbit has 1 fluffy tail.

How many tails will 3 rabbits have altogether?

## Answer



We write:  $1 + 1 + 1 = 3$

## Activity 17

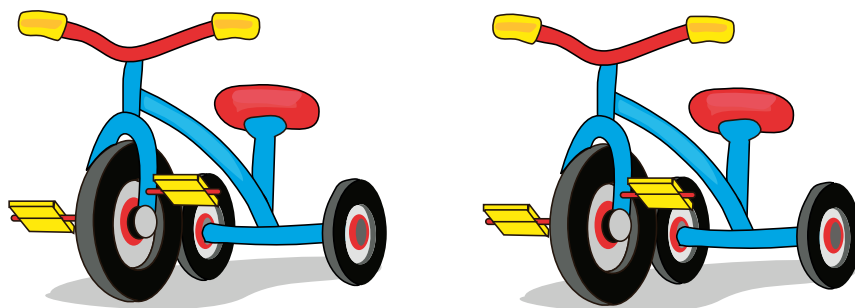
- I. Find the correct answer.
  - a) 1 bicycle has 2 wheels.



How many wheels will 4 bicycles have?

Write:  $2 + 2 + 2 + 2 = \square$

b) 2 tricycles has 3 wheels each.



How many wheels do 3 tricycles have?

Write:  $3 + 3 + 3 = \square$

2. a)  $2 + 2 = \square$

b)  $2 + 2 + 2 = \square$

c)  $2 + 2 + 2 + 2 = \square$

d)  $2 + 2 + 2 + 2 + 2 = \square$

3. a)  $3 + 3 = \square$

b)  $3 + 3 + 3 = \square$

4. a)  $4 + 4 = \square$

b)  $5 + 5 = \square$

# Working with money

Every day we use money to buy what we need or want. Here is some of the money in South Africa.



We can count money.

## Example

How much money?



## Answer

40c

## Activity 18

1. How much money?



2. Money can be made up in different ways.  
Let's try different ways to make up some money.  
Copy and complete. The first one has been done for you.

E.g. 	 
	
	
	
	

# Solve money problems

You can also work out how much change to give someone, or how much change you need to get when you buy something.

## Example

You buy two chocolates at R4 each.

- How much will you pay for the chocolates altogether?
- How much change will you get if you pay with a R10?

## Answer

- You will pay  $R4 + R4 = R8$
- Your change will be  $R10 - R8 = R2$

## Example

Salome wants to buy one sweet.



10c

She gives the shopkeeper



How much change will she get?



















## Answer





## Activity 19

1. What is missing?

- a)  and \_\_\_\_\_ makes 
- b) \_\_\_\_\_ and  makes  
- c)  and  and  makes \_\_\_\_\_
- d)  and  and \_\_\_\_\_ makes 
- e)  and  makes \_\_\_\_\_
- f)  and  makes \_\_\_\_\_
- g)  and  and  and \_\_\_\_\_

makes



2. How much change? Copy and complete.

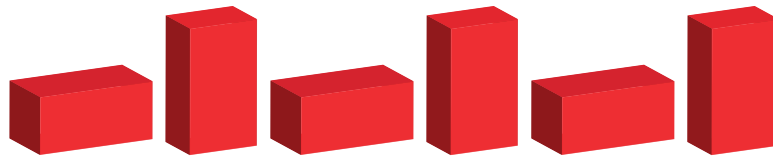
	Item	Pay	Change
Eg.	 <div>R1</div>		
a)	 <div>10c</div>		
b)	 <div>R2</div>		
c)	 <div>R1</div> <div>R1</div> <div>R1</div>		

# Geometric patterns

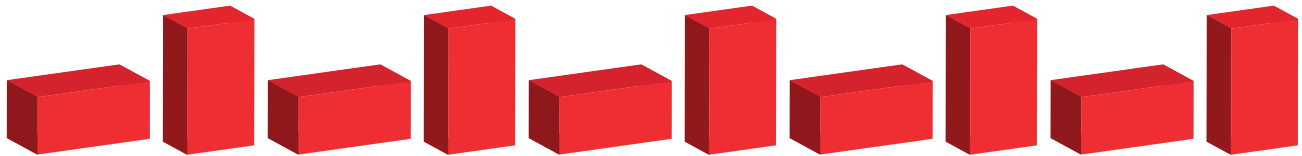
We can build geometric patterns using objects, shapes or lines.

## Example

Copy the pattern and extend by adding 4 more boxes.



## Answer



## Activity 20

1. Describe the pattern. Copy the pattern and extend it (draw the next three shapes).



2. Describe the pattern. Copy the pattern and extend it (draw the next five shapes).



3. Use objects such as boxes and balls to create your own pattern.

4. Copy and extend each pattern:



Describe the pattern in your own words.



Describe the pattern in your own words.



Describe the pattern in your own words.

d) Why do you think your extension is correct?

5. Make your own pattern using shapes or lines.

# Recognise number patterns

## Example

Count backwards from 13 to 7.

## Answer

13; 12; 11; 10; 9; 8; 7

## Activity 21

1. Tell your friend what the missing numbers are.

a)

1	2	3	4	5	6	7	8	9	10
11	12					17	18		20
21						27	28	29	30

b) 15; 14; 13; —; —; —; —; 8

c) 24; 25; 26; —; —; 29

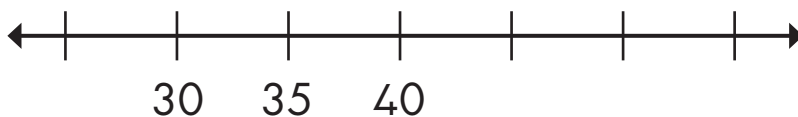
d) 16; 15; 14; —; —; —;

2. Tell your friend what the missing numbers are.

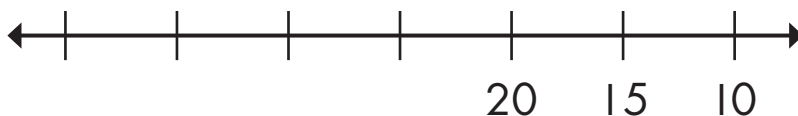
a)



b)



c)



3. Tell your friend what the missing numbers are.

- a) 4; 6; 8; —; —; 14; 16
- b) 15; 14; 13; 12; —; —;
- c) —; —; 24; 22; 20; —; —; —
- d) —; —; 42; 44; 46; —; —; —;

4. a) What numbers are missing:

10; 20; 30; —; —; —; —

80; 70; 60; —; —; 30; —

- b) Read the numbers in the shaded squares.  
Start from 10 and count forwards.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50

## Practical Activity

5. Count how many sticks. Place the correct number card to show the number of sticks in each row. The first one has been done for you.

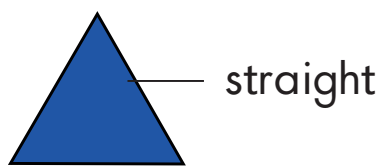
5 groups of 5 sticks	5
4 groups of 5 sticks	
3 groups of 5 sticks	
2 groups of 5 sticks	
1 group of 5 sticks	
0 groups of 5 sticks	
5 groups of 5 sticks	
4 groups of 5 sticks	
3 groups of 5 sticks	
2 groups of 5 sticks	
1 group of 5 sticks	



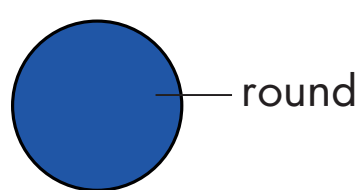
# Two-dimensional shapes

Look at the shapes.

This shape has straight sides.



This shape is round.

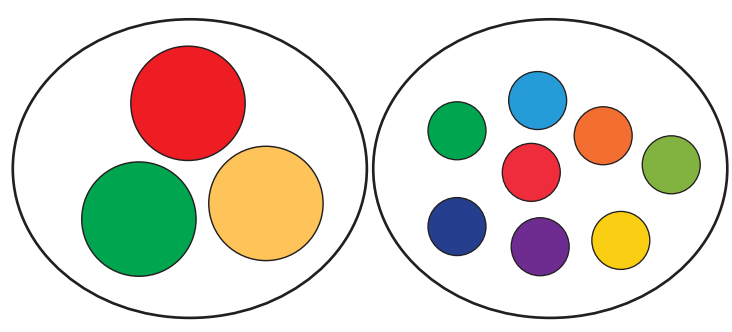


Look at the shapes:

Circles	Triangles	Squares
Round	Straight sides	Straight sides Same length

## Example

Look at the circles. How are they sorted?



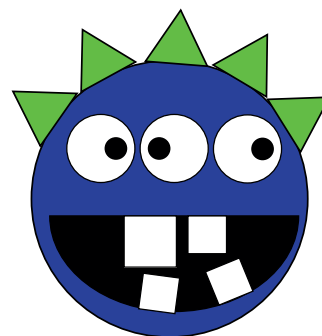
## Answer

By size.

### Example

Look at the monster:

- a) How many green triangles?
- b) How many white circles?
- c) What shape is the four teeth?



### Answer

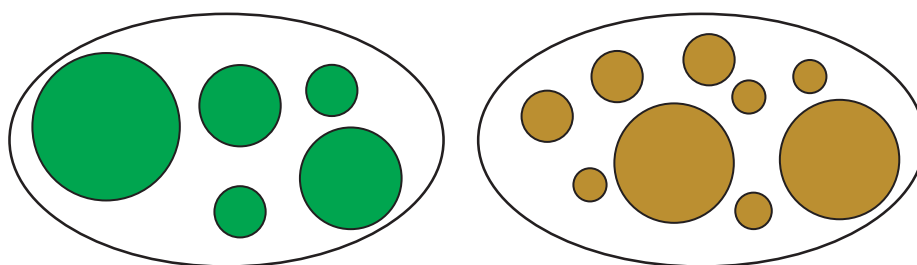
a) 5

b) 3

c) square

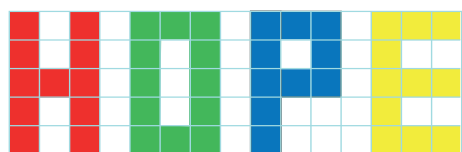
## Activity 22

1. Look at the circles.



How are they sorted?

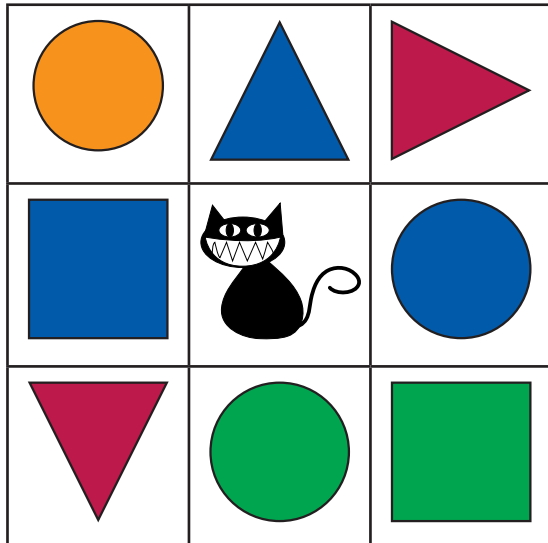
2. Look at the word and tell your friend:



- a) How many red squares?
- b) How many green squares?
- c) How many blue squares?
- d) How many yellow squares?

3. Look at the table.

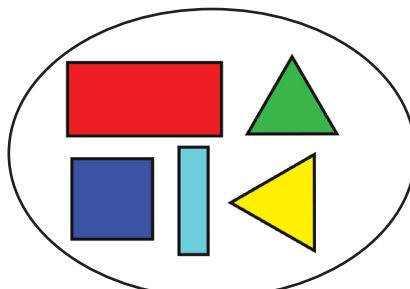
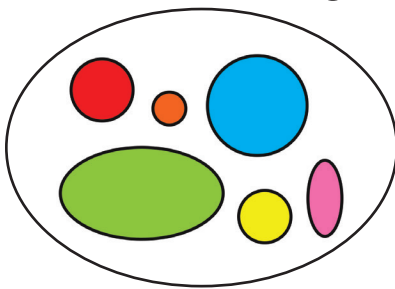
Use the words in the box to answer the questions.



triangle circle square

- Which shape is **below** the cat?
- Which shape is **above** the cat?
- Which shape is **to the left** of the cat?
- Which shape is each of the cat's ears?

4. These shapes have been grouped in two different ways.



Here is a new shape.



- What group will this shape belong to?
- Explain how you know.

# Compare and order capacity

Sometimes you can **estimate** which container holds more or less water just by looking at it.

## Example

Which container holds more water? The bottle or the glass?

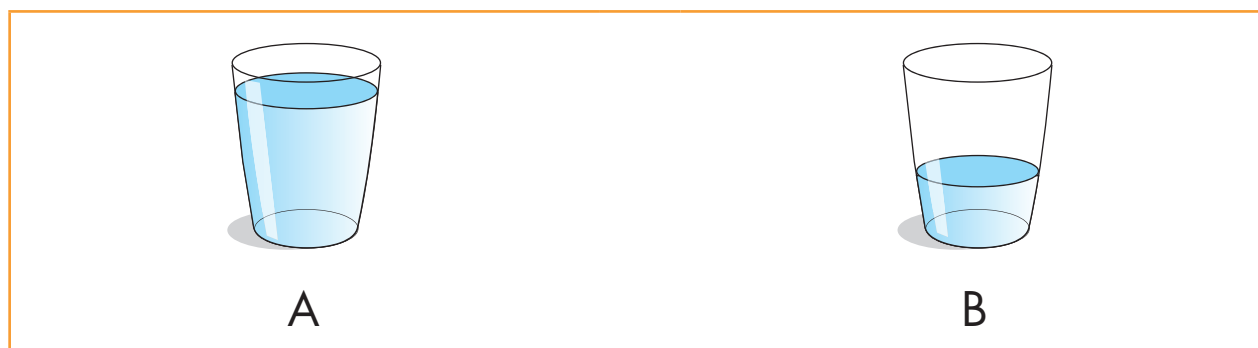


## Answer

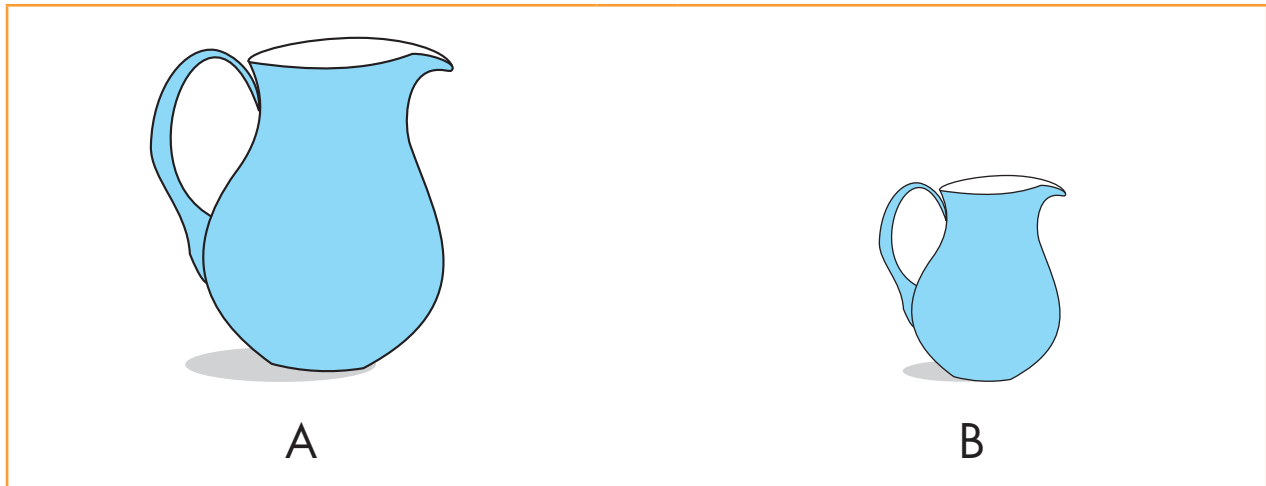
A – the bottle holds more water.

## Activity 23

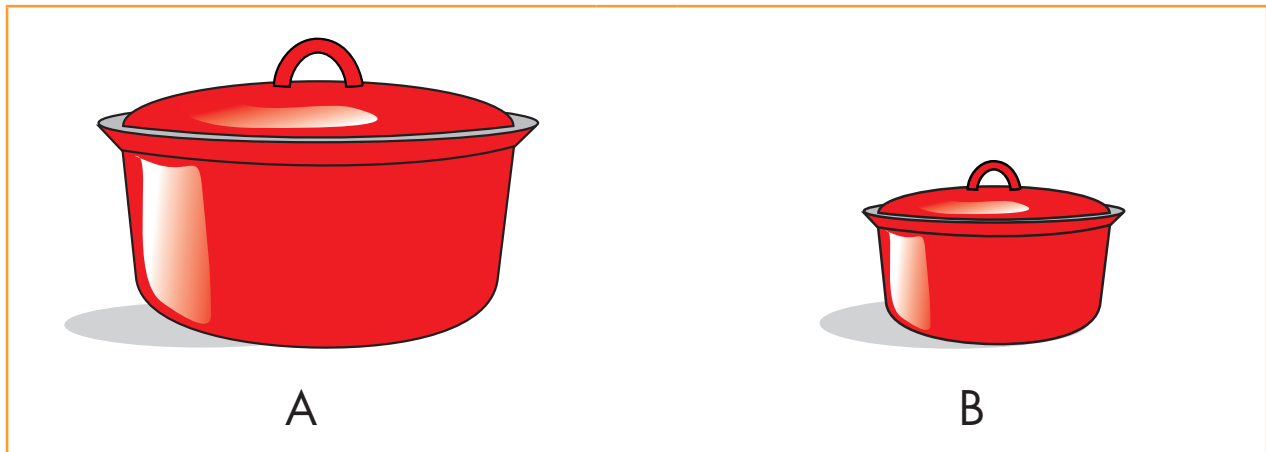
1. Which glass has less water in it? A or B?



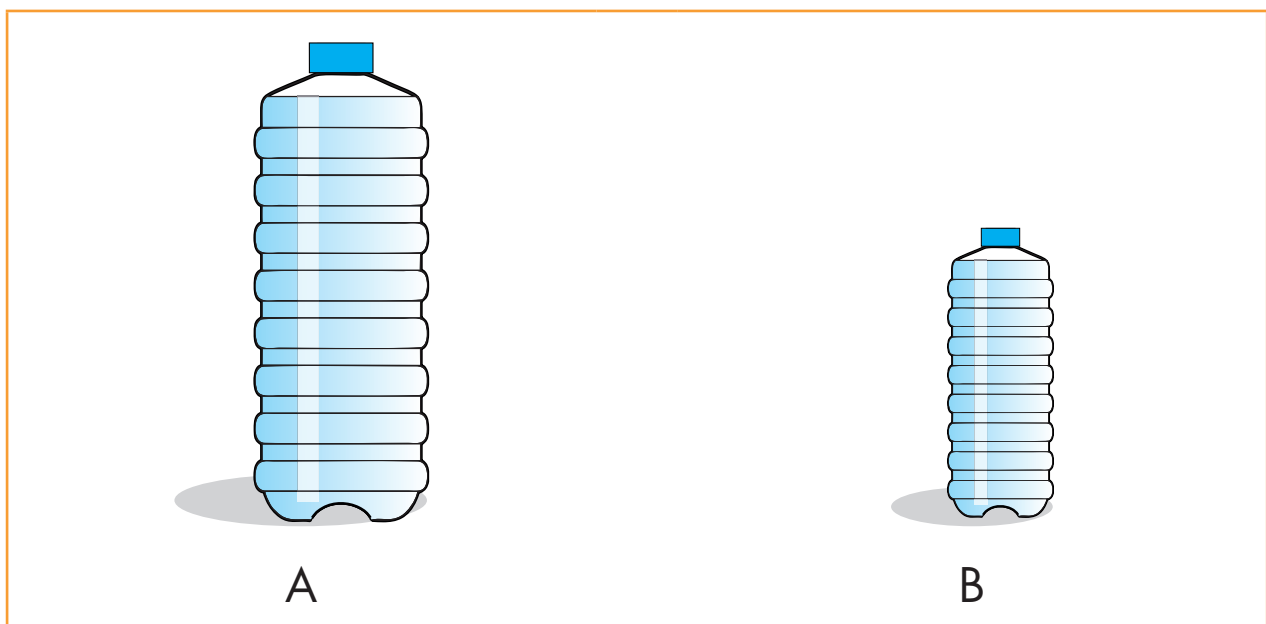
2. Which jar holds more water? A or B?



3. Which pot holds less water? A or B?



4. Which bottle holds more water? A or B?

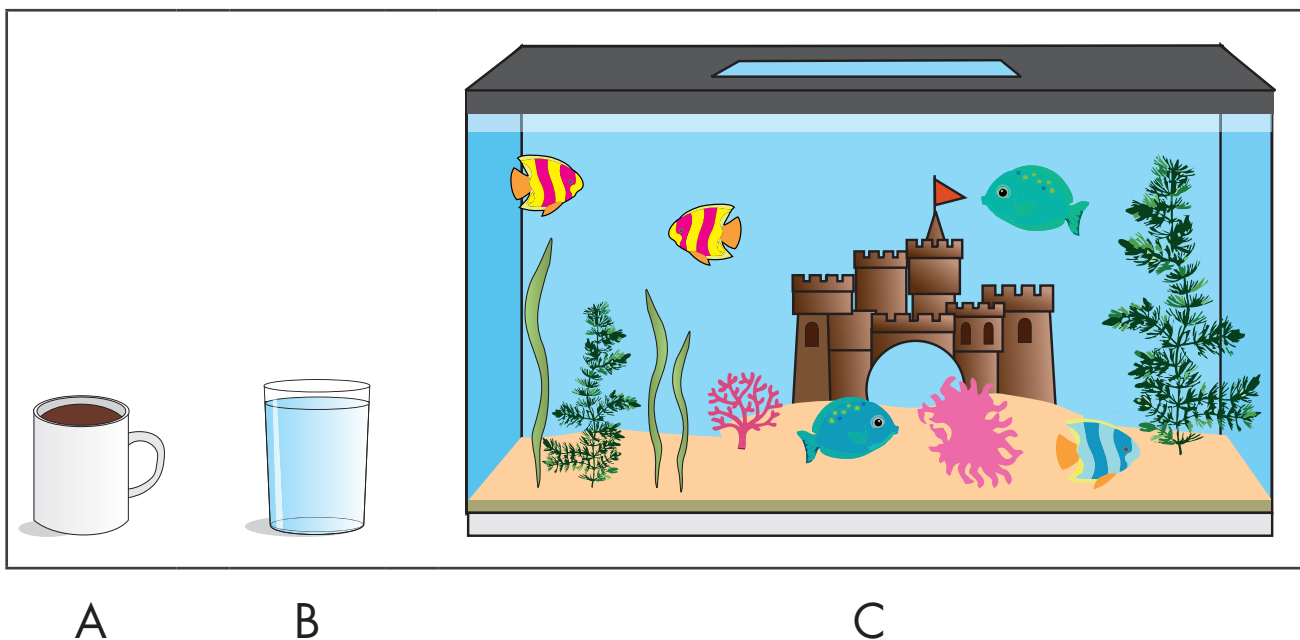
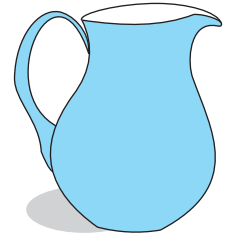


# Use the language of comparison

We can compare containers using the words **more than**, **less than**, **full** or **empty**.

## Example

Look at the jug and containers A, B and C.



Which container holds more water than the jug?

## Answer

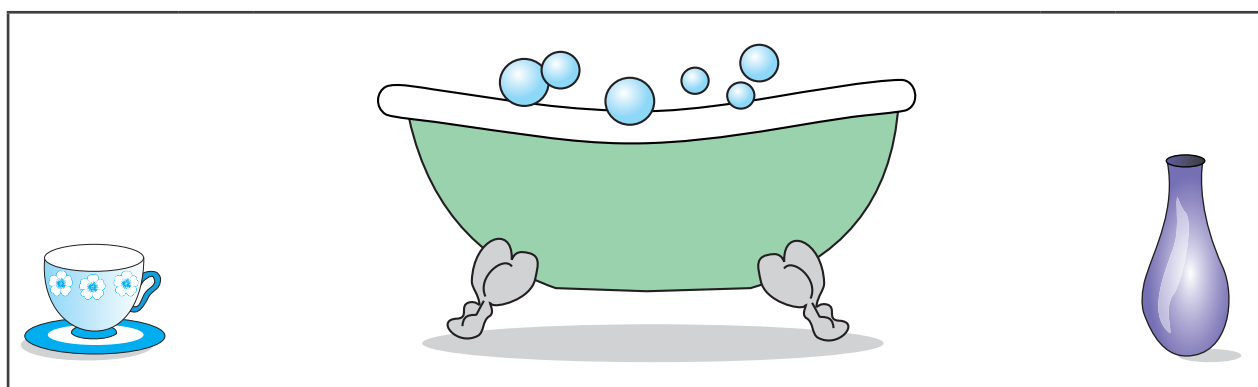
Container C holds more water than the jug.

## Activity 24

- Look at the pot and containers A, B and C.



Which containers holds **less** water **than** the pot?



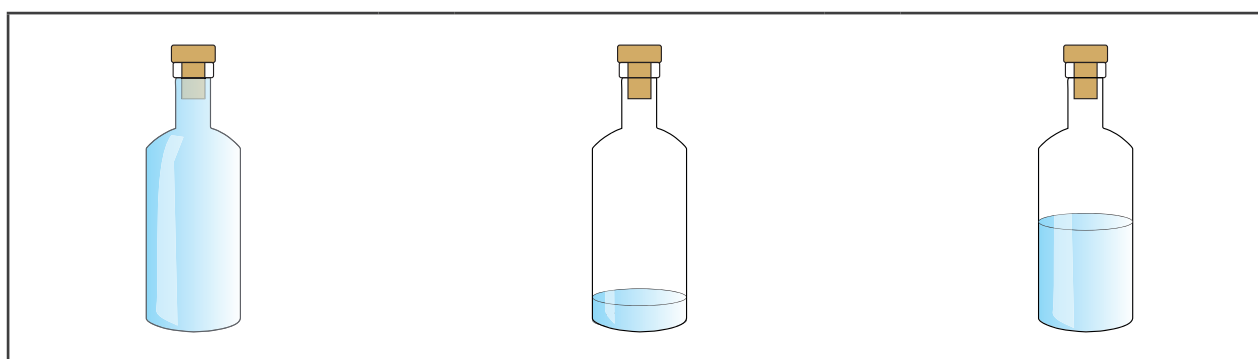
A

B

C

TERM 2

2. Look at the bottles.



A

B

C

- a) Bottle A has (more/less) water than bottle B.
- b) Bottle B has (more/less) water than bottle C.
- c) Bottle C has (more/less) water than bottle A.

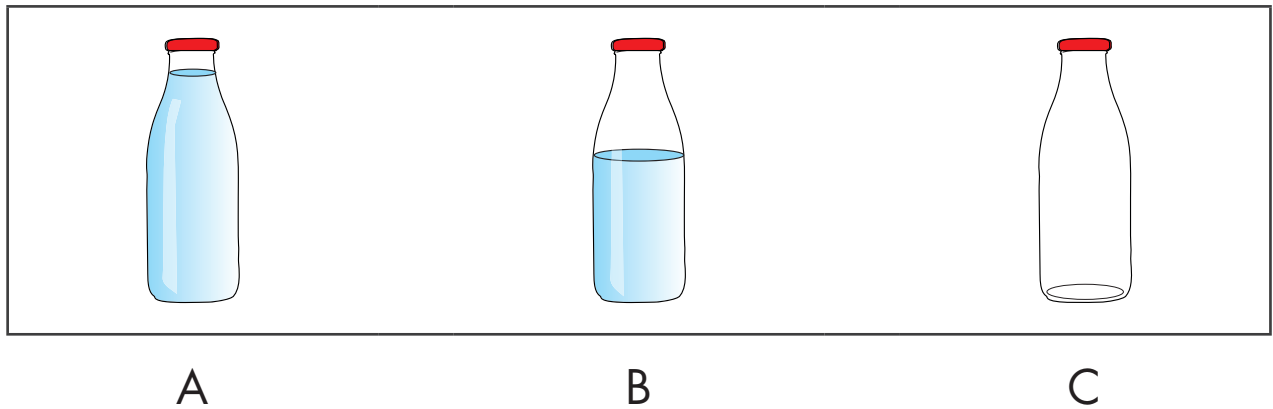
3. Choose the correct word.

The bottle can hold (less/more) water than the glass.





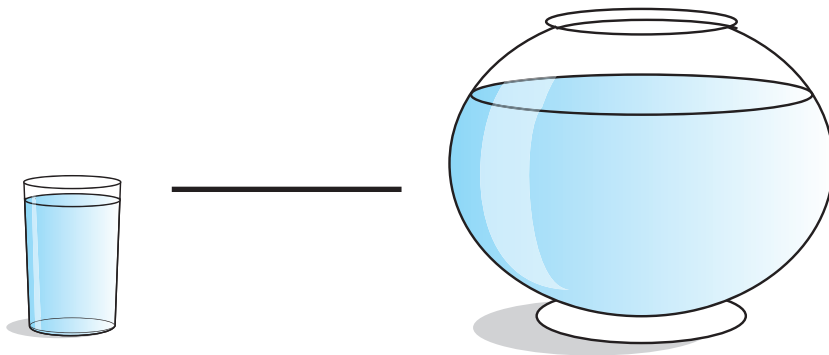
4. Look at these bottles.



- a) Which bottle is **empty**?
- b) Which bottle is full?
- c) Bottle C has (more/less) water than bottle B.
- d) Bottle B has (more/less) water than bottle A.

5. Choose the correct word.

The glass holds (more/less) water than the bowl.



6. Choose the correct word.

The yellow bucket holds (the same/less/more) amount of water as the blue bucket.

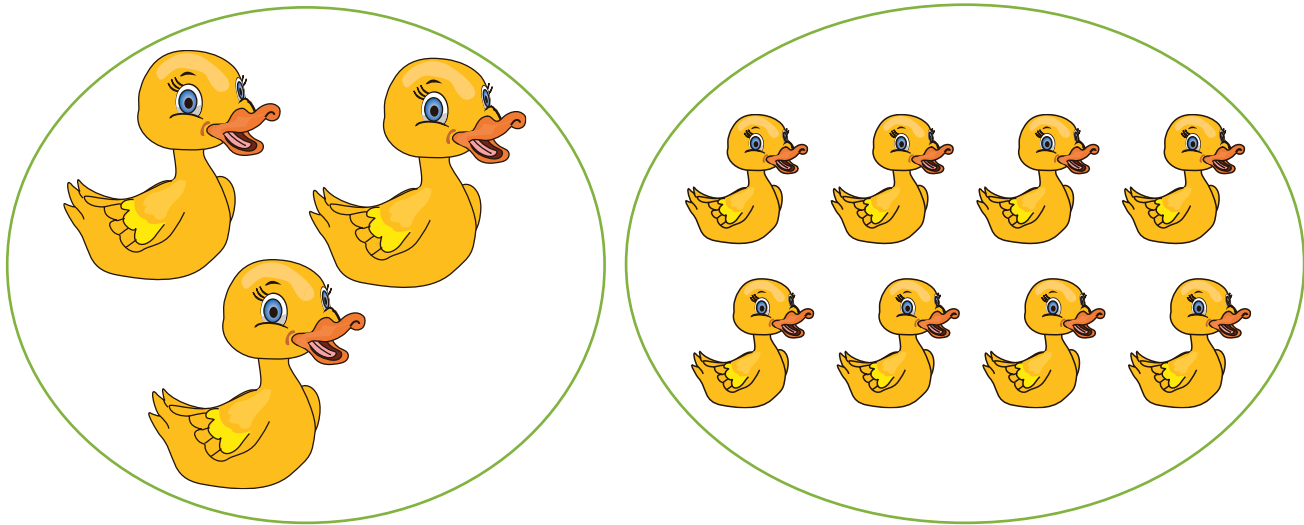


# Collect and sort objects

We can sort our collected objects according to size, shape or colour.

## Example

Look at the ducks. How are they sorted?



## Answer

By size.

## Example



Look at the ducks. How are they sorted?

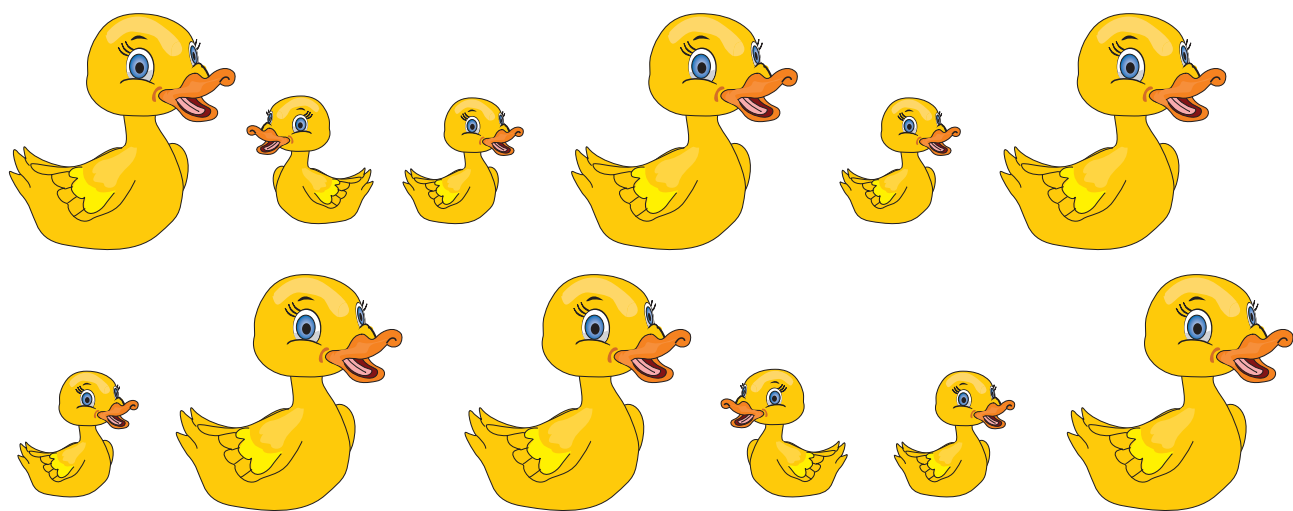


## Answer

By colour.

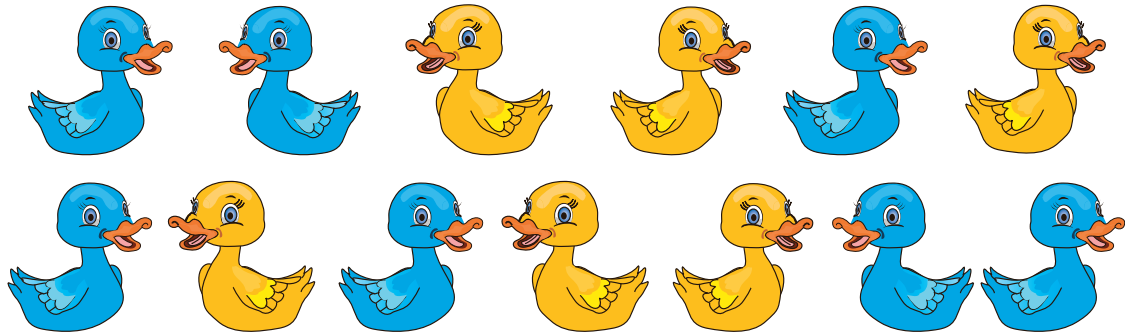
# Activity 25

- l. a) Sort the ducks by size.
- b) Copy and complete the table.  
Use a  to represent a large duck.  
Use a  to represent a small duck.



Ducks sorted by size		
7		
6		
5		
4		
3		
2		
1		
	Small dot	Large dot

2. a) Look at the ducks.

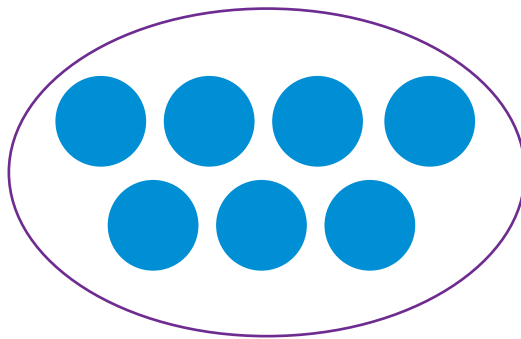


Sort the ducks by colour.

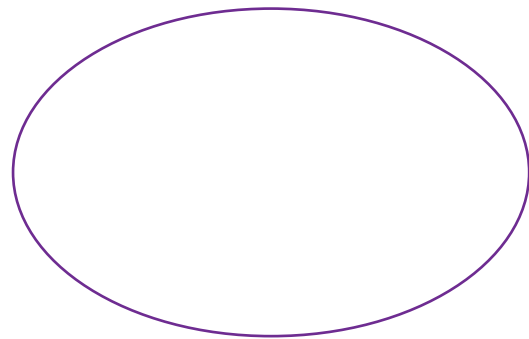
b) Copy and complete the groups.

Use a ● to show a yellow duck.

We used a ● to show a blue duck.

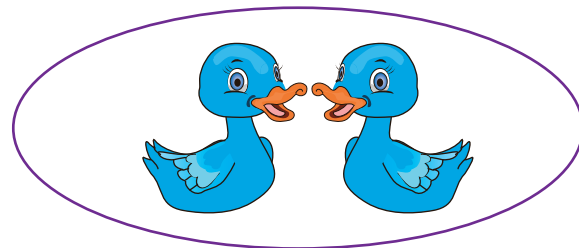
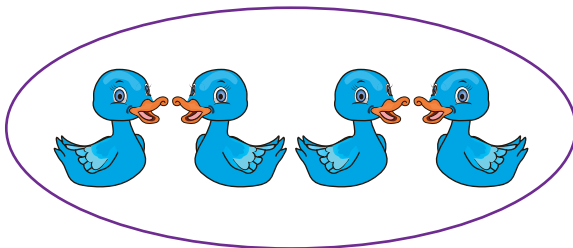


Blue ducks

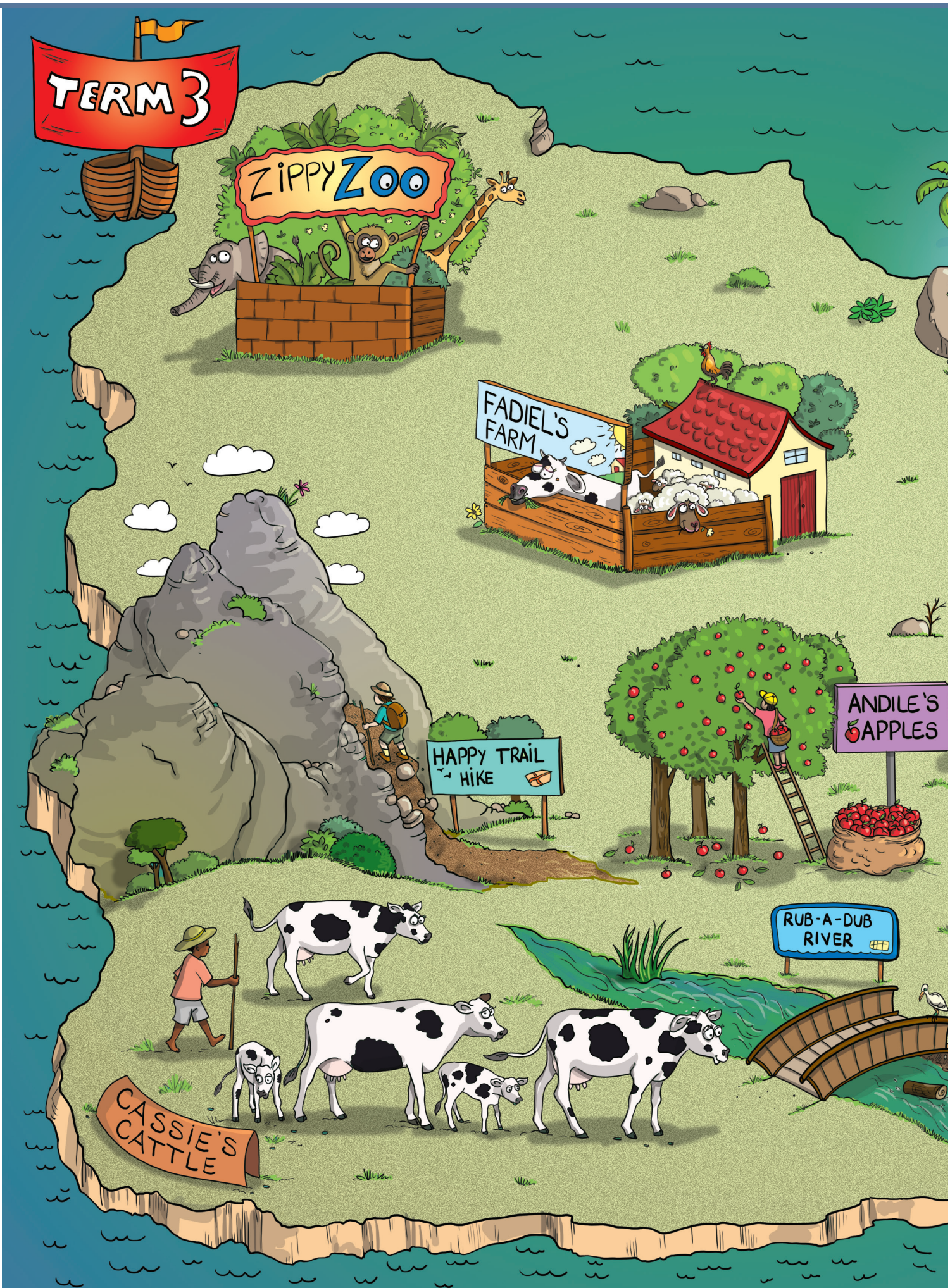


Yellow ducks

3. Look at the ducks. How are they sorted?

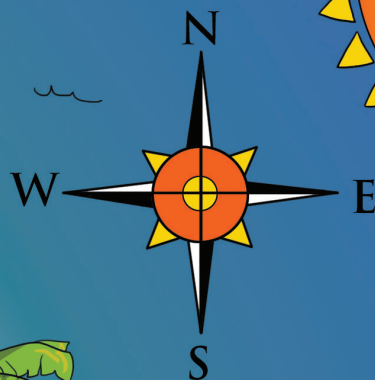








1, 2, 3... we've come so far. Almost there, as we journey on to Term 4!



TERM 3



Term 3

195



# Number symbols and number names




Look at the number 10 below.

This is the number symbol → 10

ten ← This is the number name

## Activity I

- I. Match the number names to the row that has the same number of objects.






a) one	
b) two	
c) three	
d) four	
e) five	
f) six	
g) seven	
h) eight	
i) nine	
j) ten	



## 2. Write the number names correctly.

1 noe	2 wot	3 ehert	4 rfuo	5 fvie
6 ixs	7 enves	8 igthe	9 enni	10 etn

## 3. Count. Write the number symbol and number name.

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

## 4. Copy and complete by filling in the missing numbers. Start at 30 and count backwards to 1.

30								22	
			17						
	9								1

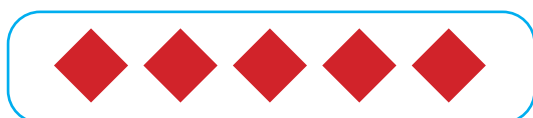
# Describe, compare and order numbers

We use the words **more than**, **less than**, **just as many** to compare.

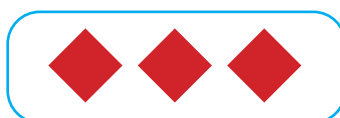
## Activity 2

I. Which group has:

a) more objects? A or B?

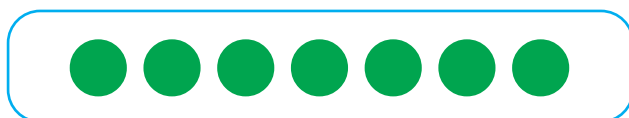


A



B

b) less objects? A or B?



A

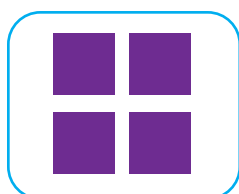


B

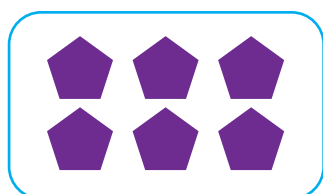
c) more objects than A?



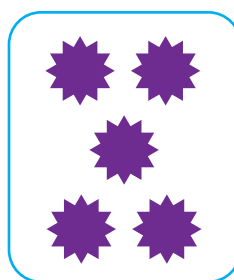
A



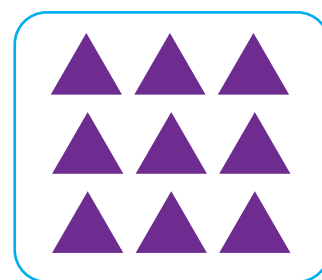
B



C

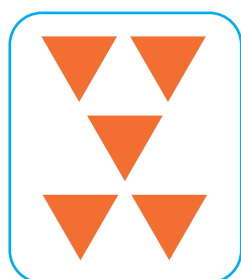


D

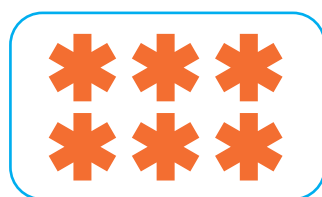


E

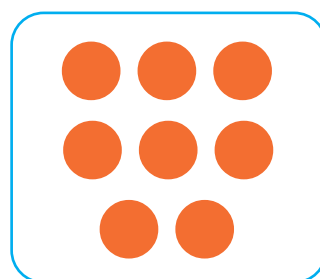
d) less objects than A?



A



B



C

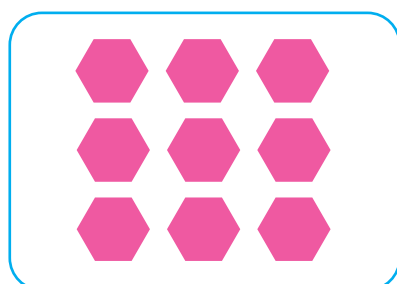


D

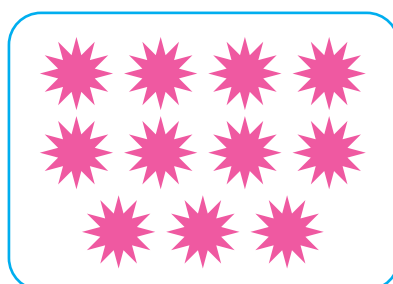
e) the same number of objects as A?



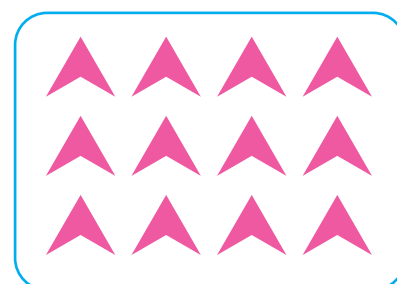
A



B



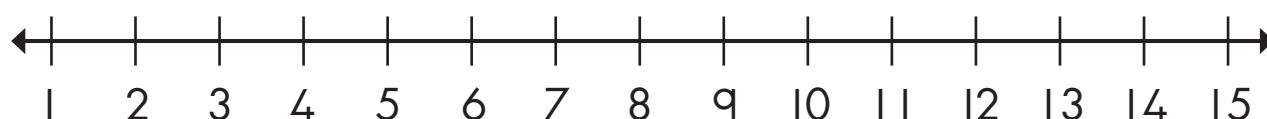
C



D

TERM 3

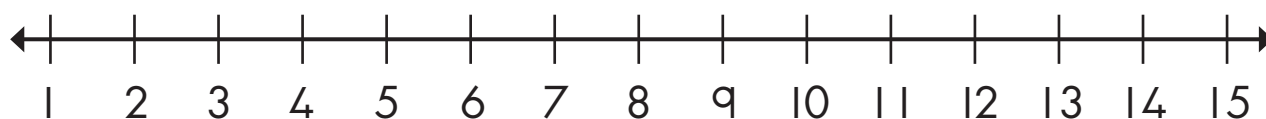
2. Look at the number line.



Find the number 12 on the number line.

- Which number comes before 12.
- Which number comes after 12.
- 12 is 1 more than \_\_\_\_.
- 10 is 1 less than \_\_\_\_.
- Which number is between 6 and 8?

3. Find the number 10 on the number line.



- a) Which number comes before 10?
- b) Which number comes after 10?
- c) Which number is 1 more than 10?
- d) Which number is 1 less than 10?

4. Copy and complete these number patterns.

- a) 7, 8, —, 10, —, —, 13
- b) 5, —, 15, 20, 25
- c) 15, 14, —, —, 11, 10
- d) 9, 8, —, —, 5, 4, —, —

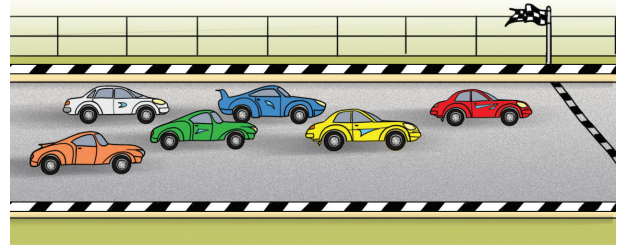
5. In your classwork book, draw your own picture with just as many stars.



We can describe the order or position of a number or an object.

### Example

The red car is **first**.  
The yellow car is **second**.  
The blue car is **third**.  
The orange car is **last**.



6. Look at the learners standing in a line for the tuckshop.



- a) Theo is \_\_\_\_\_ in line.  
b) Mia is \_\_\_\_\_ in line.  
c) Neo is \_\_\_\_\_ in line.  
d) Linda is \_\_\_\_\_ in line.  
e) Write the learner's name that is last.

# Count backwards and forwards

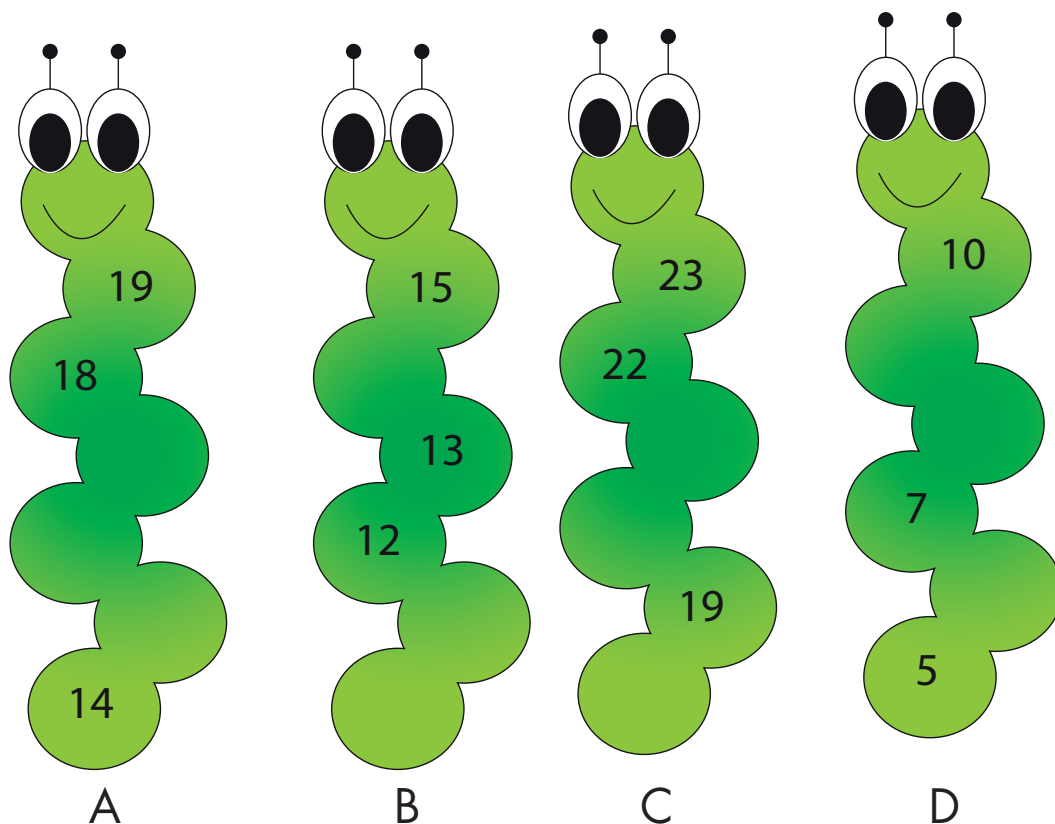


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

## Activity 3

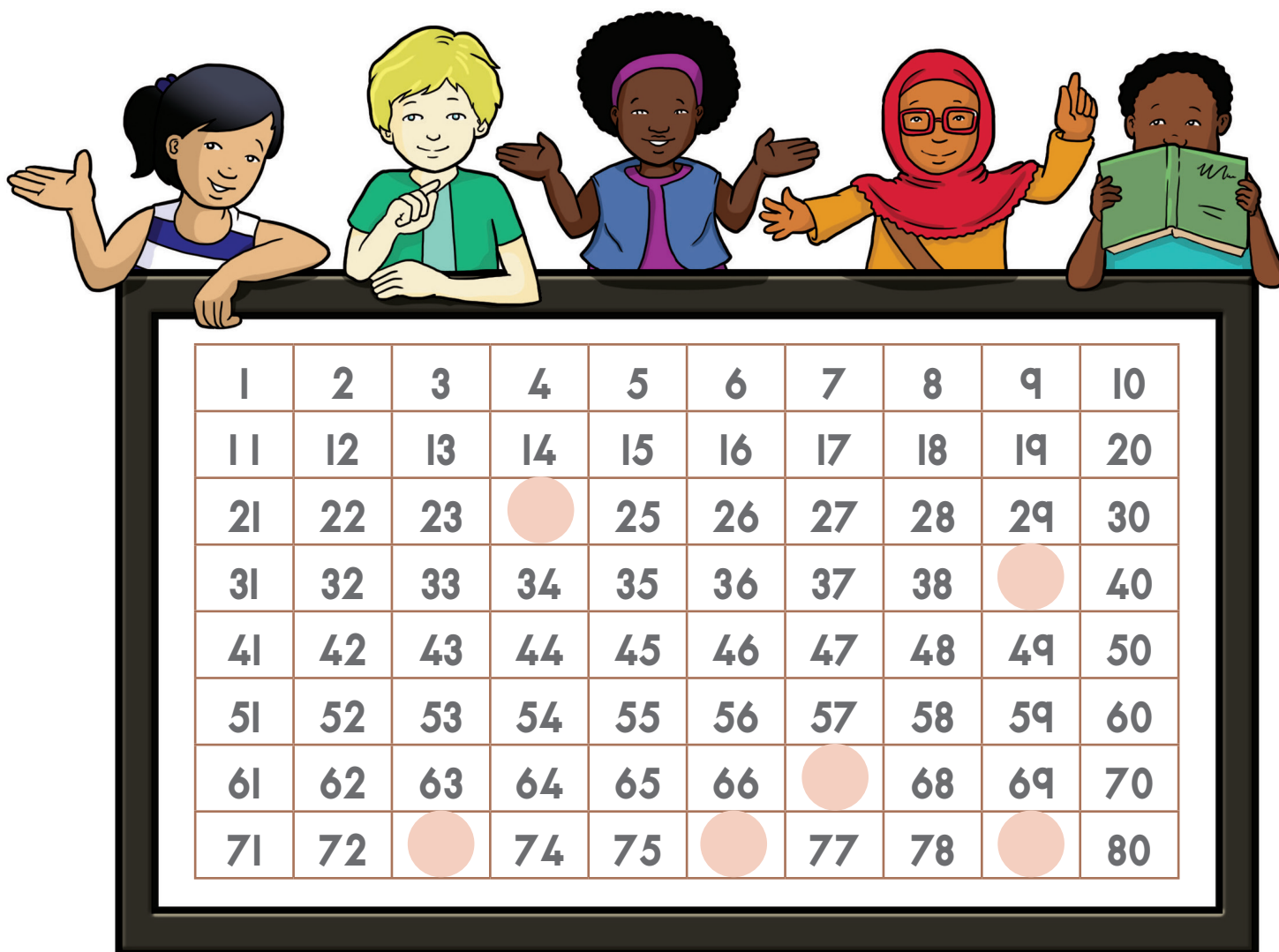
- I. Look at the number grid. Count:
  - a) forwards from 1 to 20.
  - b) forwards from 20 to 60.
  - c) forwards from 40 to 80.
  - d) backwards from 20 to 1.
  - e) backwards from 30 to 20.
  - f) backwards from 80 to 50.

2. Use the number grid.
- a) Count in 1s from 25 to 40.  
Write the numbers.
  - b) Count in 10s from 30 to 80.  
Write the numbers.
  - c) Count in 5s from 15 to 60.  
Write the numbers.
  - d) Count in 10s from 10 to 80.  
Write the numbers.
  - e) Count backwards in 1s from 30 to 2.  
Write the numbers.
3. Work in pairs.
- a) Tell your friend what numbers are missing.





4. Work in pairs. Look at the number grid.



- a) Which number is before 68.
- b) Which number is after 23.
- c) Which number is between 38 and 40.
- d) Which number is before 80.
- e) Which number is after 75.
- f) Which number is between 72 and 74.

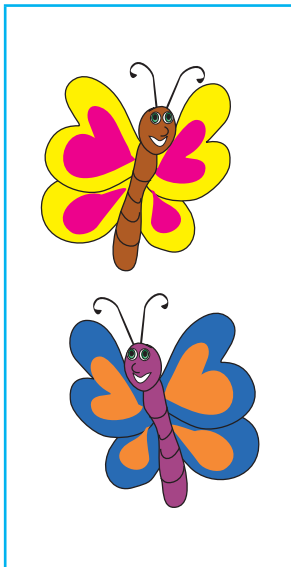
# Counting up to 30 objects

Are you curious about the world around you?  
Do you ask questions about how long something is,  
who is taller or shorter than you, who has more or  
less sweets than you? Knowing how to count can  
help you answer all these questions!

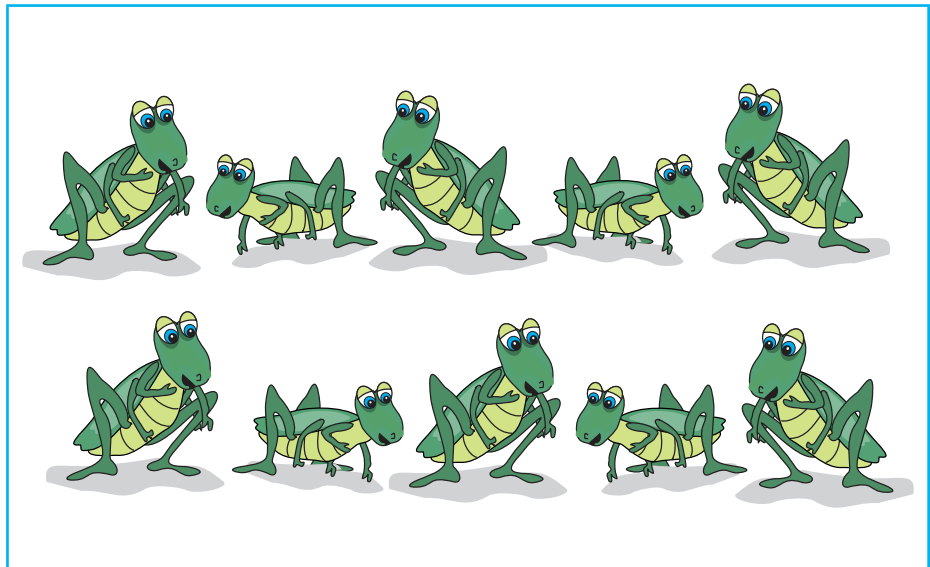
## Activity 4

TERM 3

I.



A



B

- a) Which group has **many** insects?
- b) Which group has **few** insects?
- c) Write **many** or **few** for each group.
- d) Estimate the number of bugs in each group.
- e) Count and write the number of bugs in each group.

2. Look at the objects.



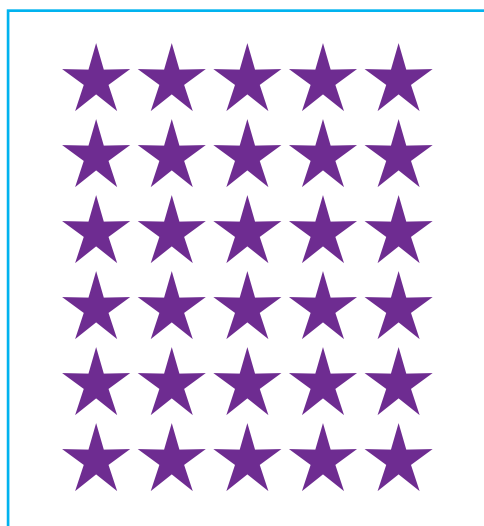
A



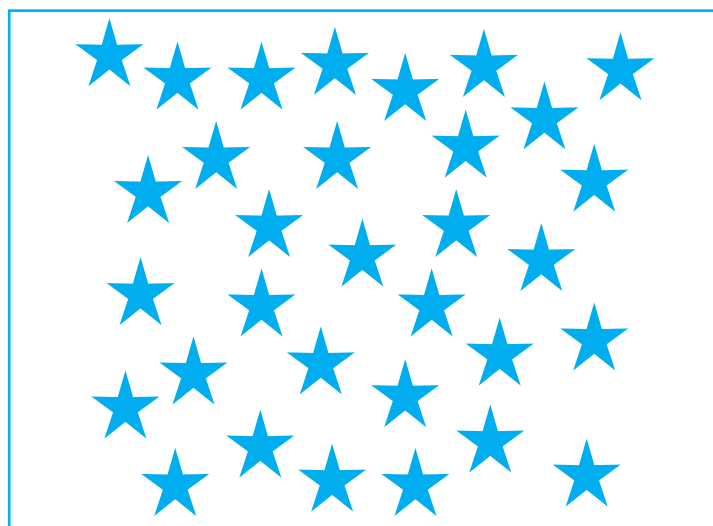
B

- a) Estimate the number of objects in each group.
- b) Count the number of objects in each group.
- c) Which group has more objects?

3. Look at the objects.



A



B

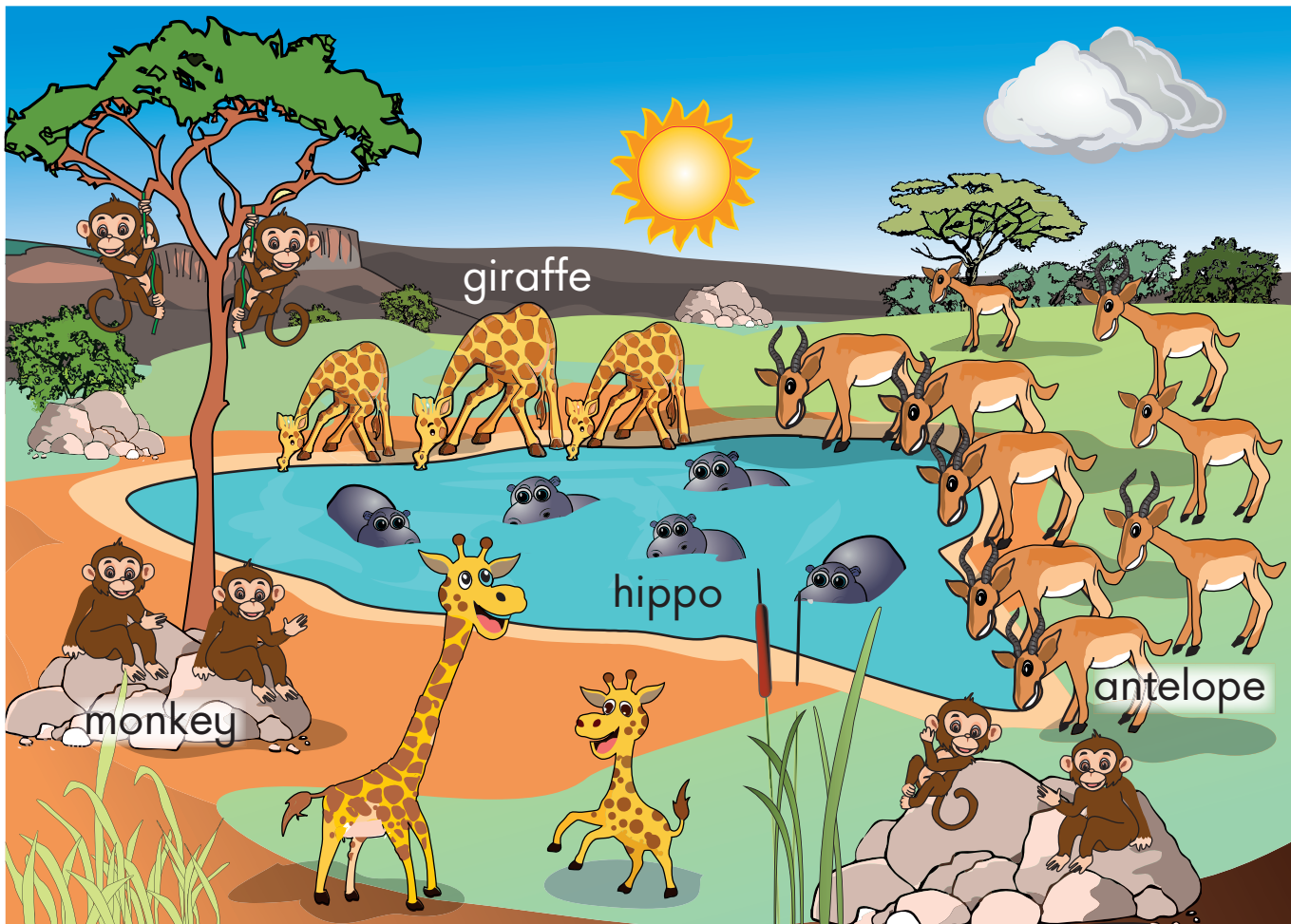
- a) Estimate the number of objects in each group.
- b) Count the number of objects in each group.
- c) Which group has more objects?

# Counting up to 40 objects

Counting can help you solve simple problems that have numbers in them.

## Activity 5

I. Count the number of animals.



TERM 3

- a) How many antelope?
- b) How many monkeys?
- c) How many hippos?
- d) How many giraffes?
- e) How many animals are not drinking water?

2. Tell your friend what the missing numbers are.

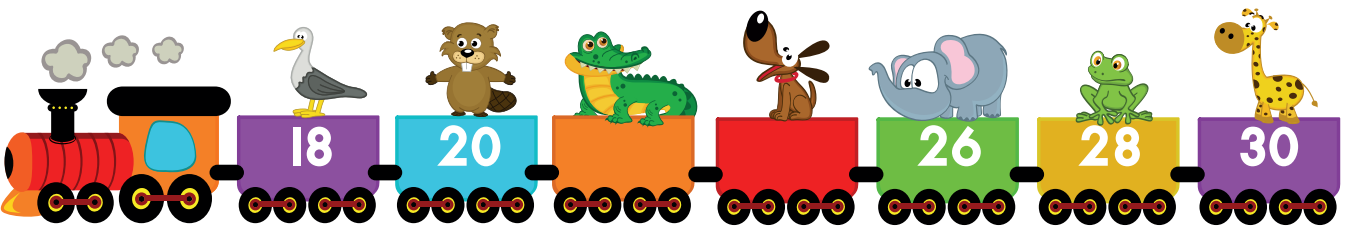
a)



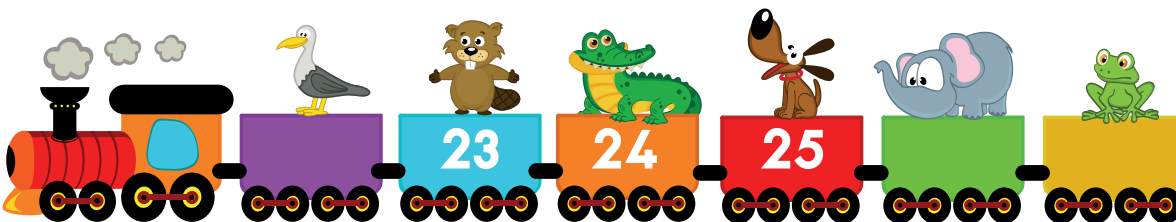
b)



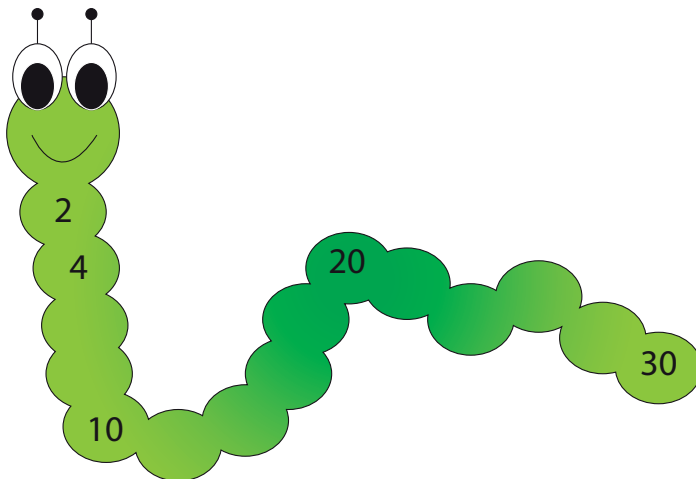
c)



d)



3. Count in 2.



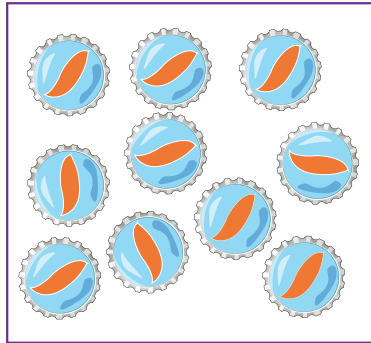
Tell your friend the missing numbers.

# Counting by grouping

Grouping objects makes big groups easier to count.

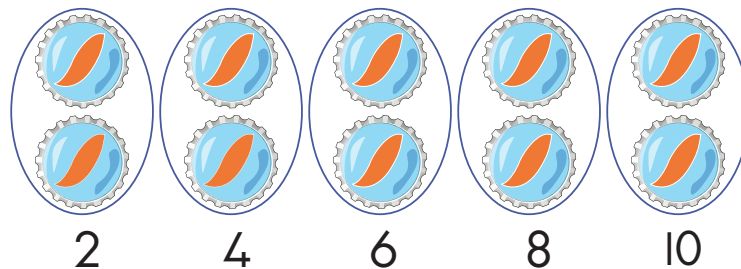
## Example

Make groups of 2 and count the bottle tops.



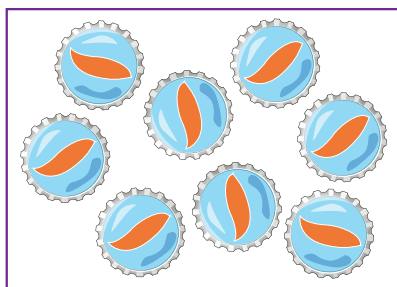
## Answer

You can **group** the bottle tops in 2 rows and use skip counting to find how many there are.



## Activity 6

- I. How many groups of 2?

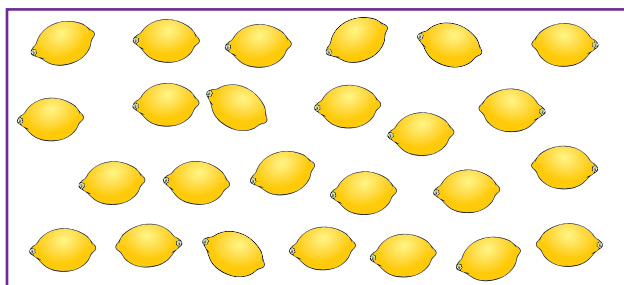


- a) **Group** and **count** the bottle tops.



b) How many objects altogether?

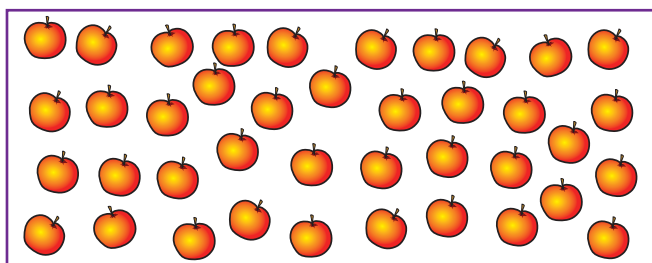
2. How many groups of 5?



a) Group and count the lemons.

b) How many objects altogether?

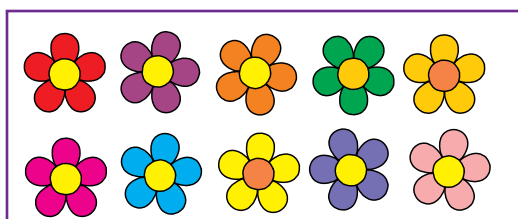
3. How many groups of 10?



a) Group and count the apples.

b) How many objects altogether?

4. How many flowers?

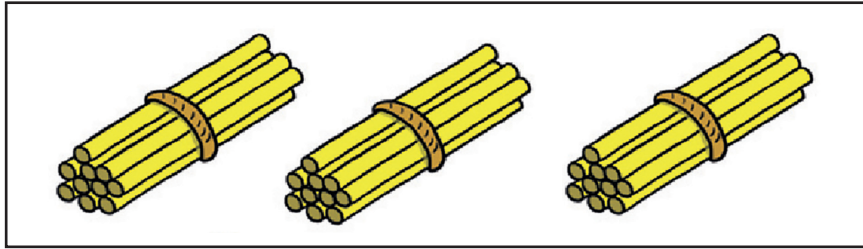


a) Count the flowers.

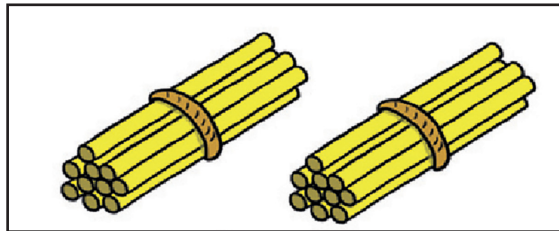
b) How many petals on each flower?

c) How many petals altogether?

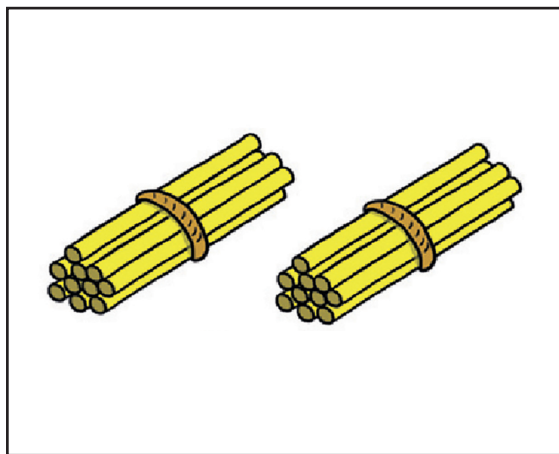
5. a) How many groups of 10?  
How many altogether.



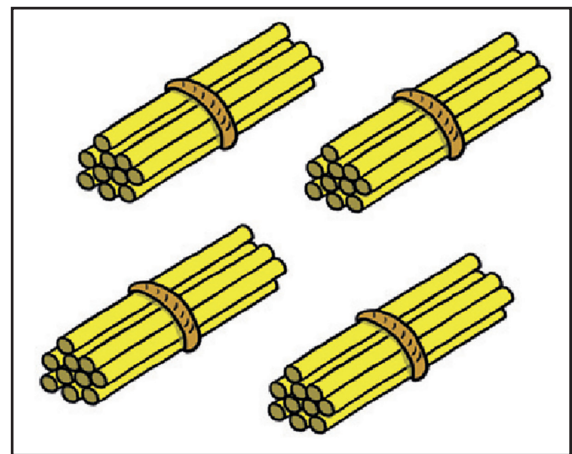
- b) How many groups of 10?  
How many altogether.



- c) Which group has more objects?



Group A



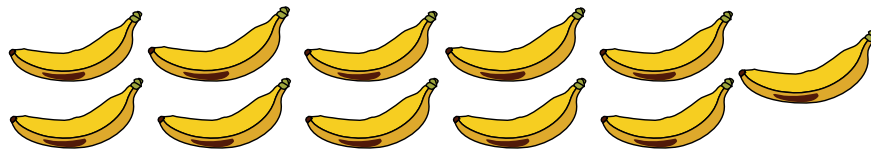
Group B

# Place value

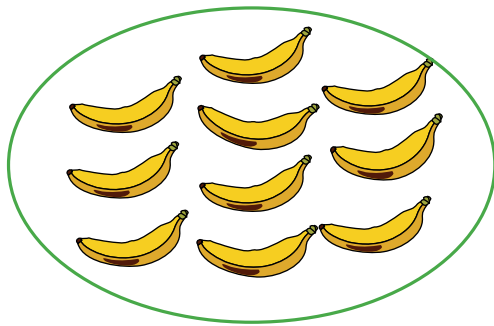
Numbers between 19 and 15 are represented by 2-digit numbers, for example, 12.

## Example

Count to 10 and circle the tens group. Count how many ones there are. Write the number.



## Answer



1 group of ten

1 ten



1 ones

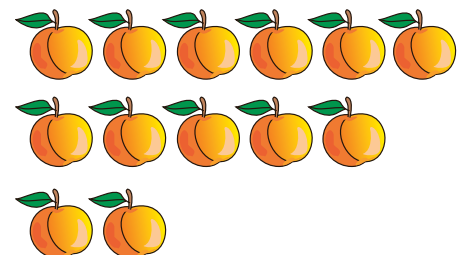
and 1 one makes 11

## Example

Complete.

group of ten  ones

ten and  ones makes



## Answer

1 group of ten and 3 ones

1 ten and 3 ones makes 13

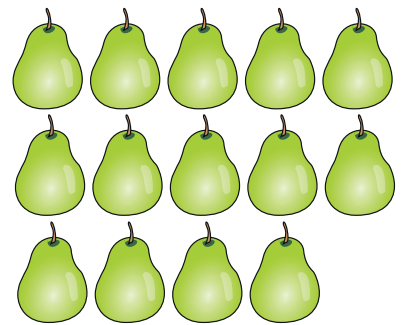
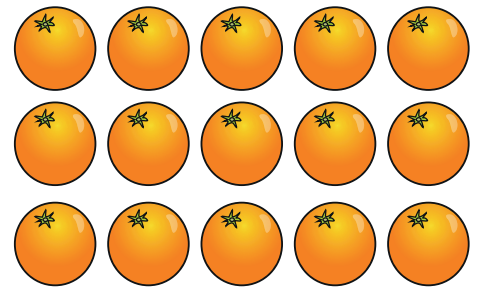
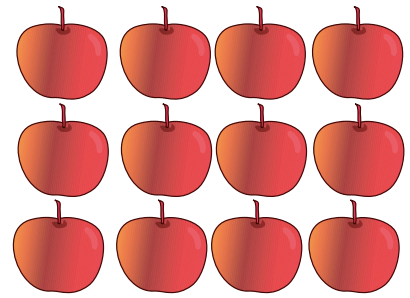
## Activity 7

1. Complete.

a)  group of ten  ones  
 ten and  ones  
 makes

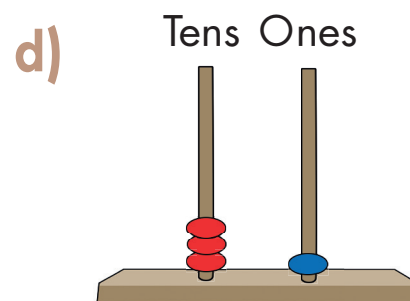
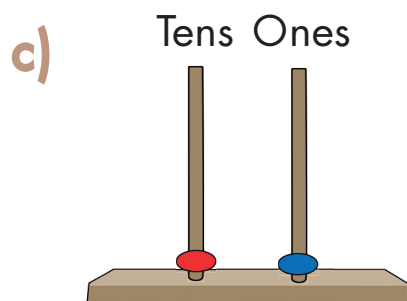
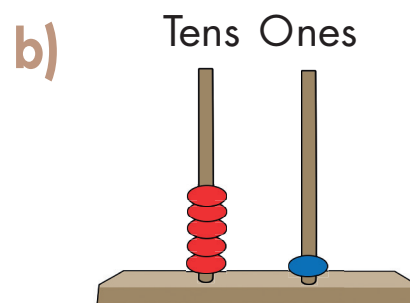
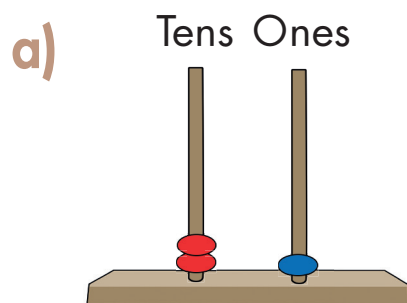
b)  group of ten  ones  
 ten and  ones  
 makes

c)  group of ten  ones  
 ten and  ones  
 makes



TERM 3

2. What number does each abacus show?



# Number bonds to 8 and 9

Find numbers that add up to 8 and 9.

We call these the **bonds** of 8 and bonds of 9.

## Activity 8

Fill in the blanks

a)

8	
3	

b)

9	
2	

c)

2	6

d)

3	6

e)

8	
4	

f)

2	7

g)

8	
6	

h)

9	
4	

# Addition

It does not matter in what order you add, you will still get the same answer.

## Example

$$4 + 5 = \square \qquad 5 + 4 = \square$$

## Answer

$$4 + 5 = 9 \qquad 5 + 4 = 9$$

## Activity 9

1. Solve the following.

a)  $6 + 7 = \square$

$7 + 6 = \square$

b)  $5 + 9 = \square$

$9 + 5 = \square$

c)  $3 + 4 = \square$

$4 + 3 = \square$

d)  $11 + 4 = \square$

$4 + 11 = \square$

e)  $3 + 12 = \square$

$12 + 3 = \square$

f)  $7 + 8 = \square$

$8 + 7 = \square$

g)  $9 + 3 = \square$

$3 + 9 = \square$



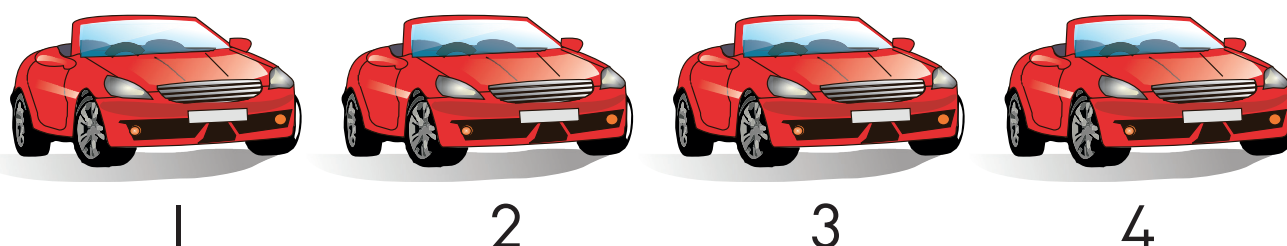
We can add by **counting all**.

### Example

Seth has 2 toy cars. His dad buys 2 more toy cars. How many toy cars altogether?

### Answer

We can count all.



Seth now has 4 toy cars.

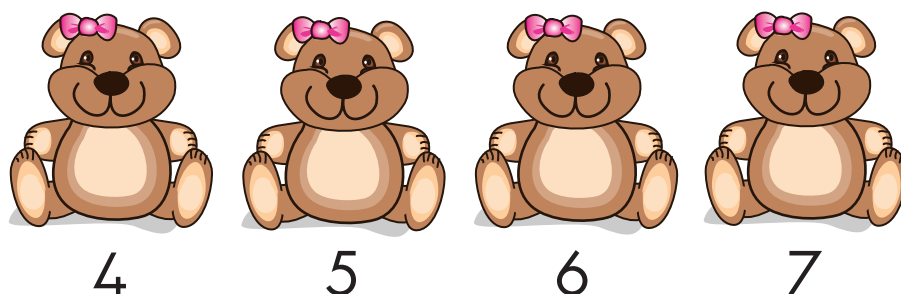
We can add by **counting on**.

### Example

Melissa has 3 teddy bears. She got 4 more teddy bears. How many does she have now?

### Answer

We can count on.



Melissa now has 7 teddy bears.

When we add a big number and a small number, it is easier to count on starting **from the bigger number**.

### Example

Vusi has 3 marbles. He wins 5 more marbles. How many does he have now?

### Answer

Step 1: What do you already know?

You know that Vusi has 3 marbles.

Step 2: What do you need to do?

You need to add 5.

Step 3: What strategy can you use?

To count on from 3 will take longer than counting on from 5.

### Note

Remember that  $3 + 5$  is the same as  $5 + 3$

Step 4: Find the answer.

$$5 + 3 = \square$$

Vusi has 8 marbles.

2. Use any strategy you know to help you calculate.

a)  $2 + 5 = \square$

b)  $3 + \square = 10$

c)  $3 + \square = 4$

d)  $\square + 4 = 8$

3. Malieka is making samoosas for the market day. So far she has made 6. How many more does she need to make so that she has 10?

4. Ayesha decides to make pancakes for the market day.

She wants to make 12 pancakes.



If she has already made 4 pancakes, how many more does she need to make?

# Subtraction

Addition and subtraction are **opposites**.

## Example

$$15 - 9 = \square$$

## Answer

We can use the inverse relationship between addition and subtraction to solve this problem.

If  $15 - 9 = \square$ , we know that  $9 + \square = 15$

We can count on from 9 to find the answer.

So,  $15 - 9 = 6$  because  $9 + 6 = 15$

## Activity 10

1. Solve the following:

a)  $15 - 7 = \square$

b)  $7 + \square = 15$

c)  $15 - 12 = \square$

d)  $12 + \square = 15$

e)  $15 - 8 = \square$

f)  $8 + \square = 15$

g)  $15 - 11 = \square$

h)  $11 + \square = 15$

## Subtraction strategies

This year we have also learnt different **strategies** for doing subtraction.

We can subtract by **taking away**.

### Example

Four birds are sitting at the beach. If two fly away, how many will be left?



### Answer

We can subtract by taking away.

There are two birds left sitting at the beach.

4 take away 2 makes 2

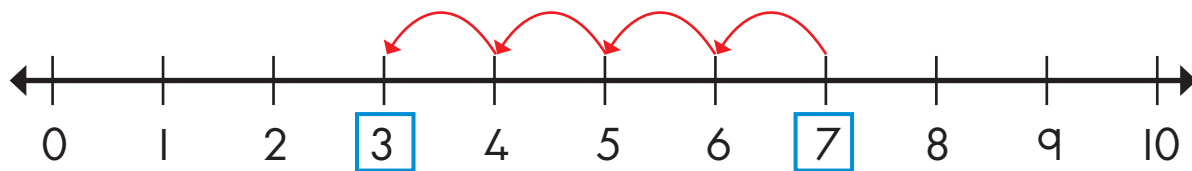
$$4 - 2 = 2$$

We can subtract by counting backwards.

### Example

Moses draws 7 pictures of his favourite character. He is not happy with 4 of them. How many pictures is he happy with?

### Answer



Step 1: What do you already know?

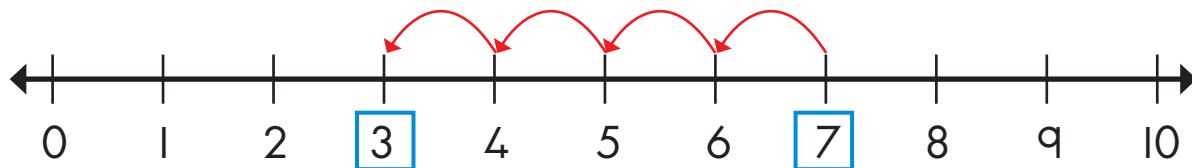
Moses drew 7 pictures altogether.

Step 2: What do you need to do?

How many pictures does Moses like?

Step 3: What strategy can you use?

We can subtract by counting backwards.



Step 4: Find the answer.

$$7 - 4 = \square$$

Moses is happy with only 3 pictures.

2. Use any strategy to help you calculate.

a)  $10 - 6 = \square$

b)  $8 - \square = 6$

c)  $\square - 7 = 3$

d)  $10 - 8 = \square$

3. Mandla tries on 6 ties. He does not like 4 of them. How many ties does he like?

4. Jenny buys a bag filled with 7 apples at the shop. 3 apples have brown spots on them. How many apples have no brown spots on them?

5. Nazley fits on 9 dresses. She likes only 6 of the 9 dresses.



a) How many dresses did she not like?

b) Her mother says she can choose only 3 of the 9. How many of the 9 dresses does she not choose?



# Problem solving

## Use drawings or counters to help you solve problems

You can use drawings or counters to help you solve problems.

### Example

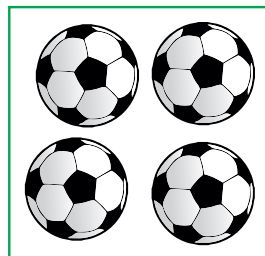
Tebogo's team scored 2 goals during the first half of his soccer match. They scored 4 more goals in the second half. How many goals altogether?

### Answer

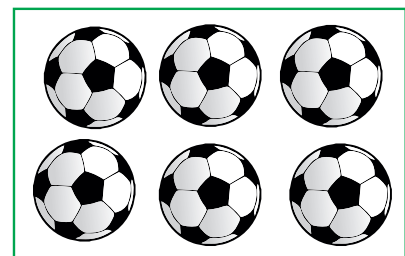
Use drawings to help you



and



makes



2  
2

and  
+

4  
4

makes  
=

6  
6

### Activity II

- I. Moses takes  from the library.

He goes back and gets .

How many books altogether?

2. Tania took part in a race.  
She first finished a 5 kilometre bike race.

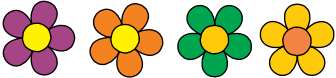


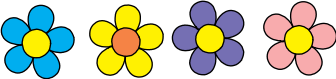
Then she finished a 2 kilometre race.



How many kilometres did she complete altogether?

3. Heidi collected .

She gives  to her mother.

Then she gives  to her sister.

How many flowers does she have left?

4. Ayanda and his sister are picking up their toys.  
Ayanda picks up 10 toys.  
He gives 4 toys to his sister to pack away.  
How many toys does he have left to pack away?

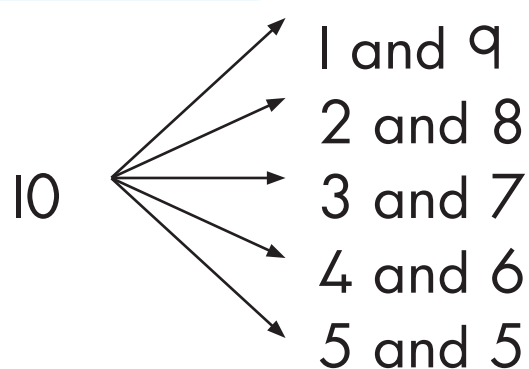
# Break down and build up numbers

To make numbers easier to work with we can **break down** and **build up** numbers.

## Example

What numbers can 10 be made up of?

## Answer



5. What can the numbers on the left be made up of?

a)

	— and —
	— and —
6	— and —
	— and —
	— and —

b)

	— and —
	— and —
12	— and —
	— and —
	— and —

c)

	— and —
	— and —
15	— and —
	— and —
	— and —

6. Fill in the missing numbers.

a) 5 and  makes 7      b)  and 4 makes 8

c) 6 and 3 makes       d) 7 and  makes 12

e) 13 equals  and 7      f) 15 equals  and 8

It is easy to add and subtract from 10. So, to make addition and subtraction easier to work with, we find a number that's closest to 10.

### Example

$$\begin{array}{c}
 \text{8} + \text{4} = \boxed{12} \\
 \text{2} \quad \text{2}
 \end{array}$$

$$\underline{10} + \underline{2} = \underline{12}$$

**Example**

Add  $9 + 6$ .

**Answer**

Take one away from the 6 and add it to the 9 to make 10.

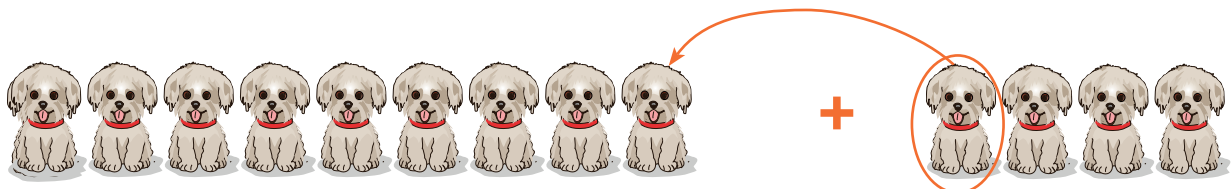
$$9 + 6 \rightarrow 10 + 5 = \square$$

Then add

$$9 + 6 \rightarrow 10 + 5 = 15$$

**Example**

There are 9 dogs in the park. 4 more dogs come into the park. How many dogs altogether?

**Answer**

$$9 + 4 = \square$$



10

+

+

3

Therefore,  $9 + 4 \rightarrow 10 + 3 = 13$

7. Use bridging through 10 techniques to perform the calculation.

a)  $9 + 7 = \square$

b)  $6 + 5 = \square$

c)  $8 + 5 = \square$

d)  $9 + 4 = \square$

8. Solve.

a)  $8 + 5 = \square$

b)  $7 + 6 = \square$

c)  $9 + 3 = \square$

d)  $9 + 7 = \square$

You can also break a number down into different parts that are easier for you to work with.

### Example

Pam calculates  $8 + 6$  as follows:

$$8 + 6 \rightarrow 8 + 2 + 4 \rightarrow 10 + 4 = 14$$

Sam calculates  $9 + 4$  as follows:

$$9 + 4 \rightarrow 9 + 1 + 3 \rightarrow 10 + 3 = 13$$

### Example

Subtract:

$$15 - 9 = \square$$

$$15 - (5 + 4)$$

$$15 - 5 \rightarrow 10 - 4 = \square$$

Then subtract

$$15 - 5 \rightarrow 10 - 4 = 6$$

9. Solve.

a)  $8 + 7 = \square$

b)  $7 + 6 = \square$

c)  $15 - 8 = \square$

d)  $13 - 7 = \square$

10. Caitlin has 7 Barbie movies. Her dad buys 6 more Barbie movies for her. How many movies does she have now?



11. Cedric collects stamps. In his stamp collection he has 15 stamps. 6 are damaged by water. How many stamps are not damaged?





# Doubling and halving

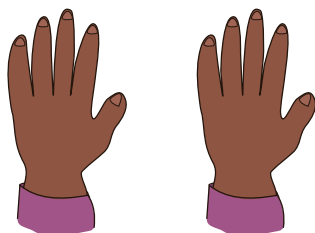
## Example

Double 5 is



## Answer

Double 5 is 10.



12. Complete.

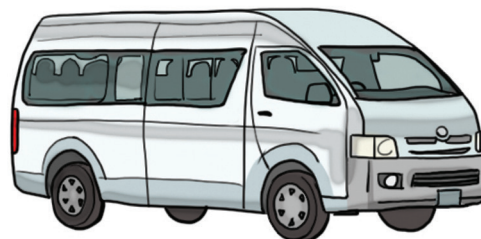
a) How many legs?

Double 4 is .



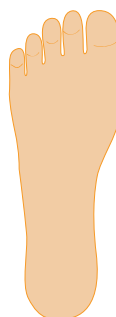
b) How many wheels?

Double 4 is .



c) How many toes?

Double 5 is .



Double a number by adding the same number together.

**13.** Answer the following questions.

- a) Double 4.
- b) What is two 4s?
- c) I roll double 5. What is my score?
- d) I roll double 6. What is my score?

**14.** 2 socks in 1 pair.

- a) How many socks in 3 pairs?
- b) How many socks in 5 pairs?
- c) How many socks in 7 pairs?



**15.** 2 skates in 1 pair.

- a) How many skates in 4 pairs?
- b) How many skates in 6 pairs?
- c) How many skates in 7 pairs?



**16.** Magda and Moteoli have 3 dolls each. How many dolls do they have altogether?

**17.** Safeena and Shania have 6 cards each.

- a) How many cards do they have altogether?

- b) If Shania started off with 12 cards, how many cards has she already played?
- c) If Safeena plays 3 cards, then picks up 5 cards, how many cards will she have?

**Halving** means to break a number down into two equal parts, called halves.

**Example**

Half of 6 is

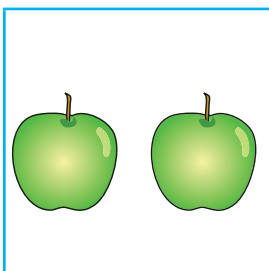


**Answer**

Half of 6 is 3.

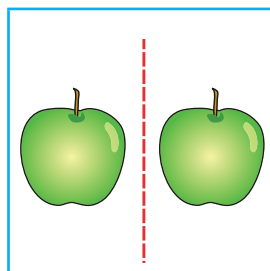


**18.** Double these.

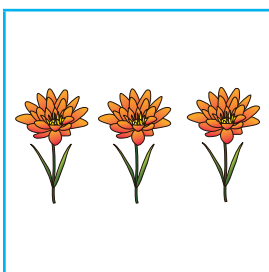


$$1 + 1 = \square$$

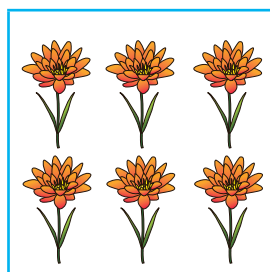
Halve these



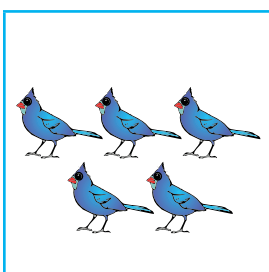
$$\text{half of } 2 \text{ is } = \square$$



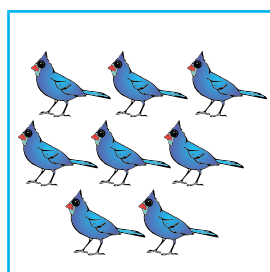
$$3 + 3 = \square$$



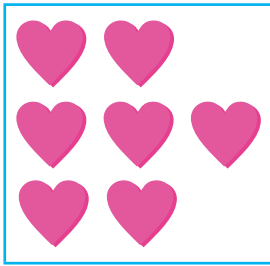
$$\text{half of } 6 \text{ is } = \square$$



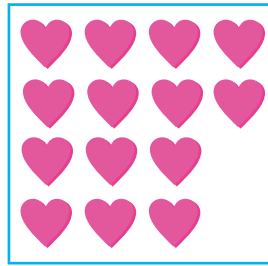
$$5 + 5 = \square$$



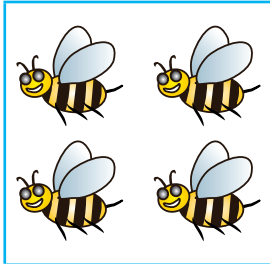
$$\text{half of } 10 \text{ is } = \square$$



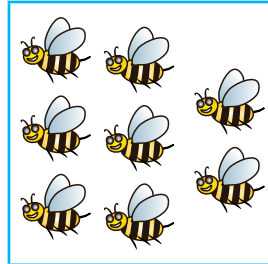
$$7 + 7 = \square$$



$$\text{half of } 14 \text{ is } = \square$$

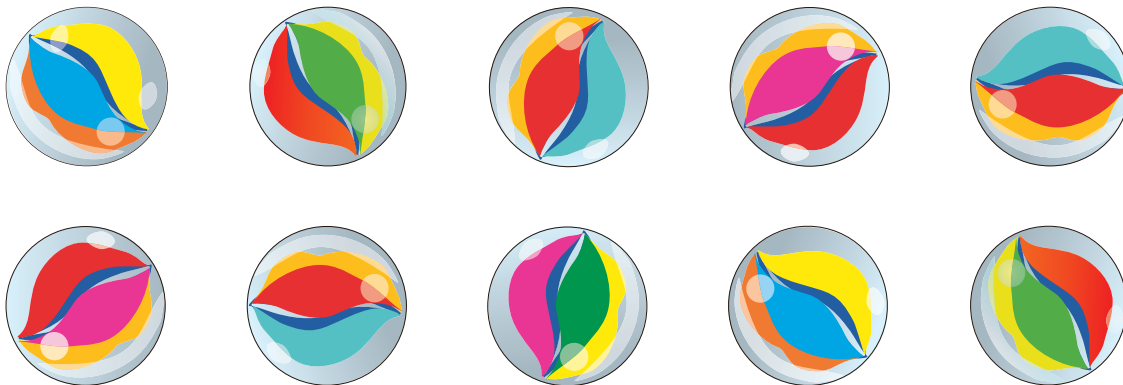


$$4 + 4 = \square$$



$$\text{half of } 8 \text{ is } = \square$$

19. Lynn and Bandile have 10 marbles altogether. How many marbles will each child get if each one gets an equal share?



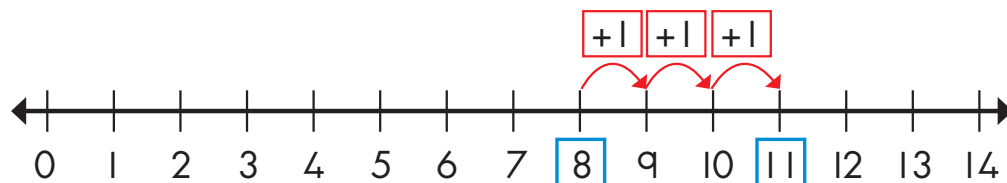
20. Mother bought Angel and Luthando 12 hairbands. How many hairbands will each child get?
21. During hockey training, coach splits the full team of 16 into two.
- How many players will be on each team?
  - Two players are injured. How can the coach split the new team of 14 into two now?

# Use a number line to solve problems

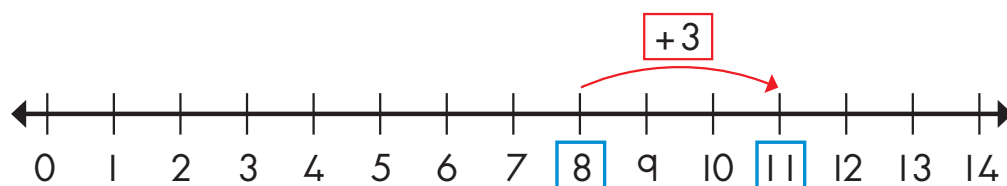
We can **count on** to do addition.

## Example

Use the number line to find  $8 + 3$ .



Or

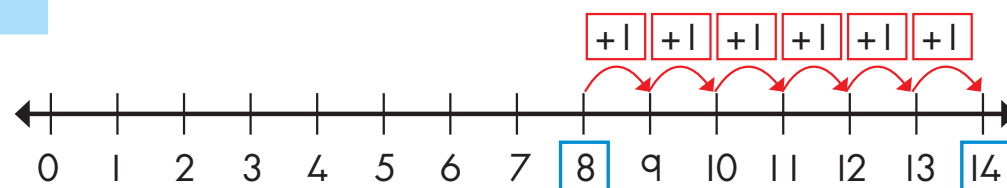


## Example

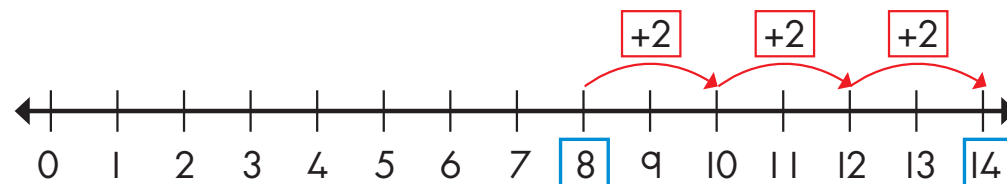
There are 8 girls and 6 boys in the class doing dance after school.

Use a number line to find how many learners in the class are doing dance?

## Answer



Or

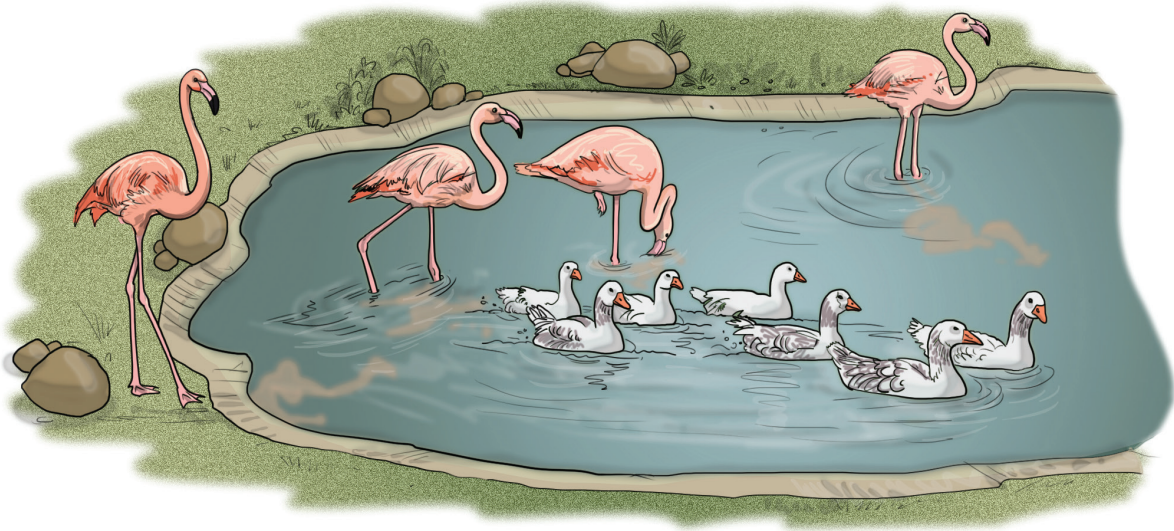


Or



Use a number line to solve these problems.

- 22.** Seshni and Shayna are visiting the bird park.  
They see 4 flamingos and 7 ducks.  
How many birds did they see altogether?



- 23.** At a bird show they see 6 eagles, 4 vultures and 3 hawks.  
How many birds did they see altogether?





24. Ayanda is packing up all his old toys to donate to charity. He has 6 toy cars, 2 fire engines and 7 toy soldiers.

How many toys did he pack altogether?

25. Mother bought 2 tins of sardines, 6 tins of baked beans, 1 jar of peanut butter and 1 bag of rice.
- How many items did she buy altogether?



We **take away** a smaller number from a bigger number when doing subtraction.

26. Monica and Nkosi are selling cupcakes at their cake sale stand. They started with 15 cupcakes.



- a) They sold 3. How many cupcakes are left?
- b) They then sold 5. How many cupcakes are left?



- c) They sold 5 again. How many cupcakes are left?
- d) Vuyo wants 2 cupcakes. Are there enough cupcakes are left for her?

**27.** Aidan is making breakfast. A tray of eggs has 12 eggs in it. He uses 3 eggs per person.

- a) If Aidan cooks for 3 people, how many eggs would he use?
- b) How many eggs are left over?

# Repeated addition

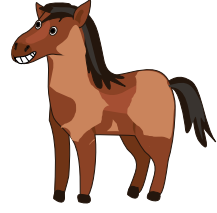
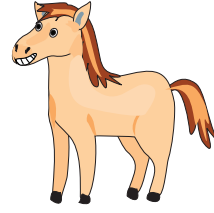
We use **repeated addition** when we add numbers of the same value repeatedly.

Repeated addition answers the question, how many groups of something there is.

## Example

Two horses, how many legs?

## Answer

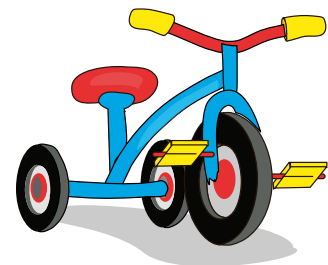
 **and**  **makes 8**

**4 + 4 = 8**

## Example

Copy and complete the table.

tricycle	1	2	3	4	5
wheels					



## Answer

tricycle	1	2	3	4	5
wheels	3	6	9	12	15

## Activity 12

1. Shade the correct number of boxes that need to be added together. The first one has been done for you.

a)  $2 + 2 + 2 + 2 =$

2	2	2	2	2
2	2	2	2	2

b)  $3 + 3 + 3 + 3 + 3 + 3 =$

3	3	3	3	3
3	3	3	3	3

c)  $2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 =$

2	2	2	2	2
2	2	2	2	2

d)  $4 + 4 + 4 + 4 + 4 + 4 =$

4	4	4	4	4
4	4	4	4	4






2. Complete the addition sentences for each picture.

a)  +  + 

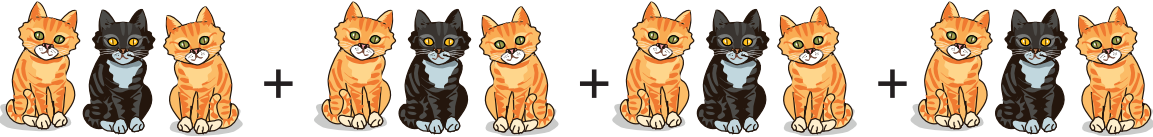




$2 + \underline{\quad} + \underline{\quad} = \underline{\quad}$




b)  +  + 

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


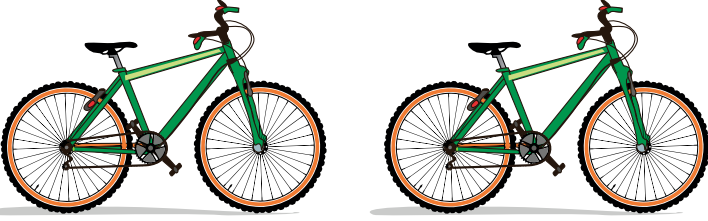
c)  +  +  +  + 

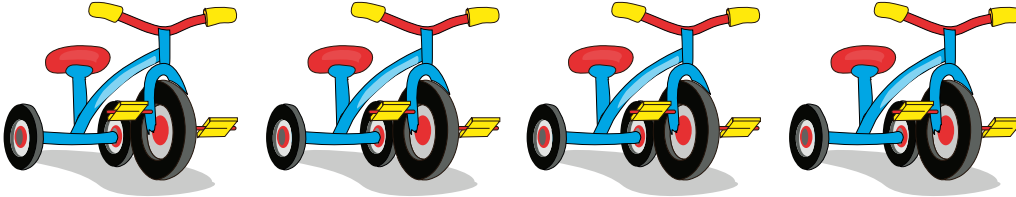
$2 + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

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

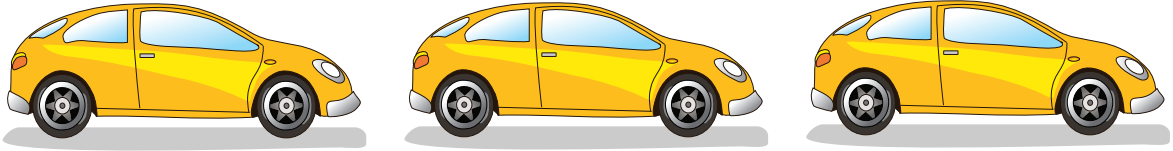
e)  +  +   
 $4 + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

3. How many wheels? Write the number sentence for each one.

a)   
  
 $\boxed{2} + \boxed{\quad} + \boxed{\quad} + \boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

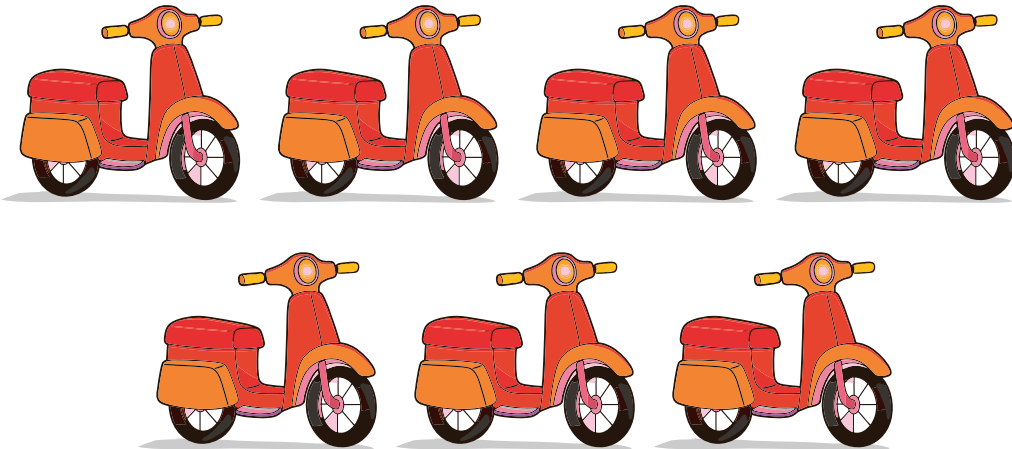
b)   
 $\boxed{\quad} + \boxed{\quad} + \boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

c)



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

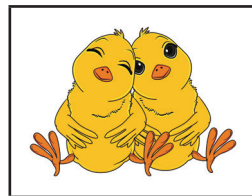
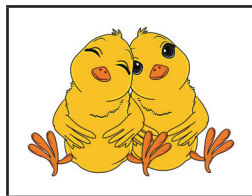
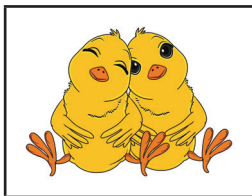
d)



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

4. Write how many.

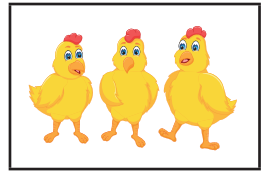
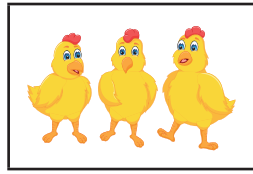
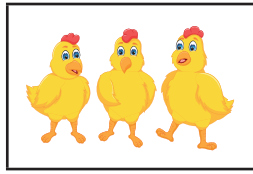
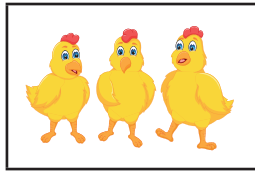
a) There are  $\square$  groups.



There are  $\square$  birds in each group.

You can add.  $\square + \square + \square = \square$

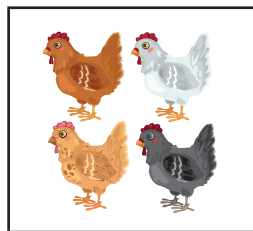
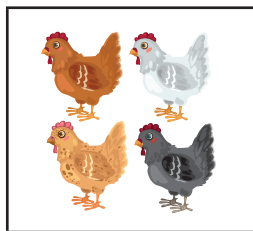
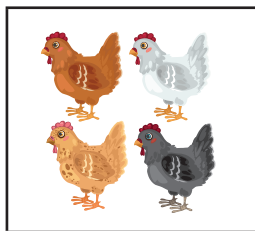
b) There are  groups.



There are  birds in each group.

You can add.  +  +  +  =

c) There are  groups.



There are  birds in each group.

You can add.  +  +  =

5. Copy and complete the table.

car	1	2	3	4	5
wheels					



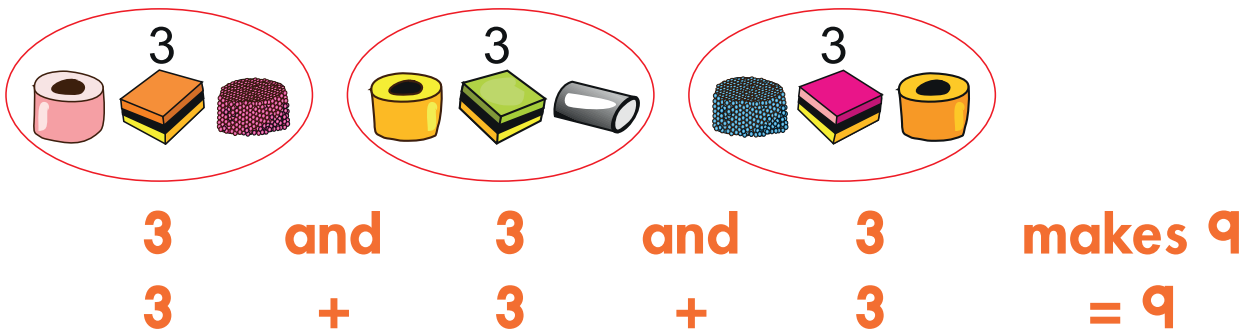
# Grouping and sharing

When we need to group or share things, remember that we may have things left. We call these **remainders**.

## Example

Share 9 sweets between 3 people.

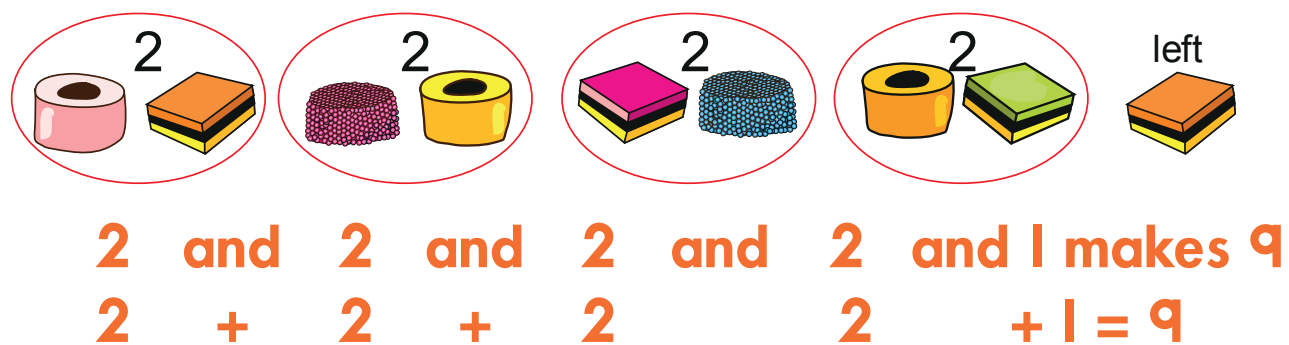
## Answer



## Example

If we have 9 sweets, how many people can have 2 sweets each? How many will be left?

## Answer

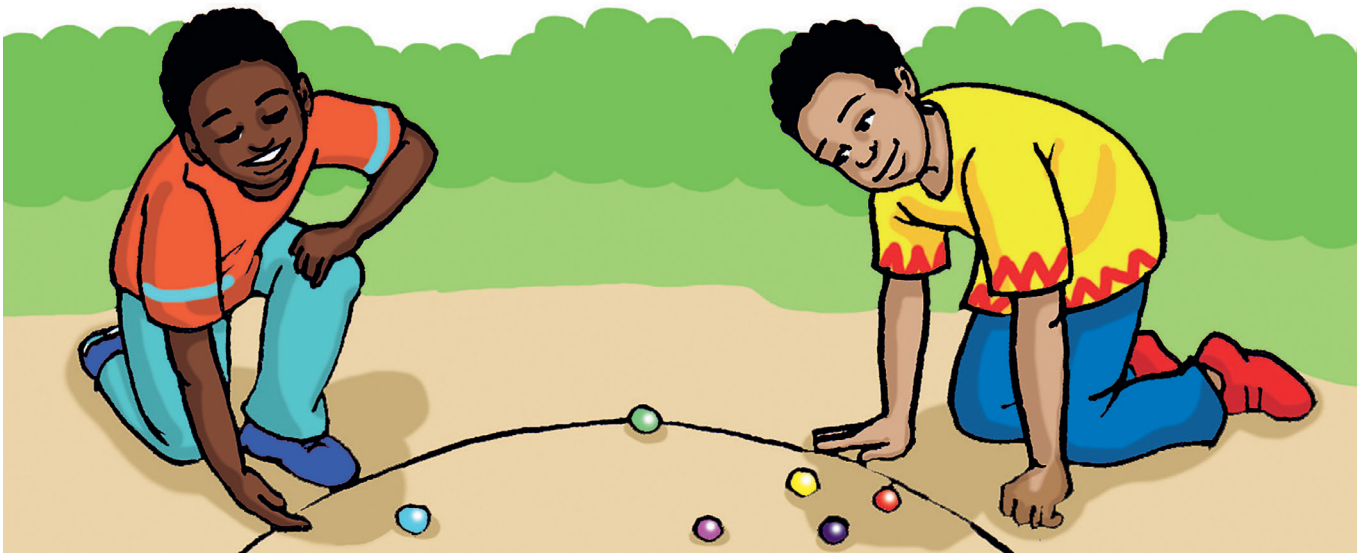


Four people have 2 sweets each. There will be one left.



### Activity 13

1. Lezanne has 8 milk tarts. She has to share it equally amongst 4 families.
  - a) How many will each family get?
  - b) How many will be left?
2. Share 15 oranges equally amongst 7 learners. How many oranges will each learner get?
3. Bandile has 8 marbles. Mike has 12 marbles. Bandile wins 6 marbles from Mike. After the game, Mike and Bandile share the marbles equally.  
How many marbles will each one get?



4. How many groups of 3 can the teacher split her class of 12 into?

# Money

## Example

How much money?



## Answer

5 and 5 and 1 makes 11

$$5 + 5 + 1 = 11$$

There is R 11 altogether.

## Activity 14

1. How much money?



Let's work out how much change you need to give or get when you buy something.

### Example

Salome wants to buy the following items.



R2      R2      R5

She gives the shopkeeper 2 R5 coins  
How much change will she get?

### Answer



2. What is missing?

a)  take away  makes —

b)  and  and  makes —

c)  and  and — makes 

d)   take away   makes —

### 3. How much change? Copy and complete.

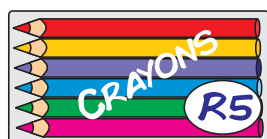
Eg.



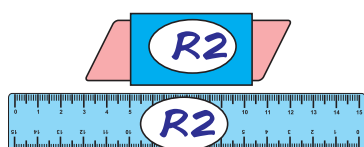
a)



b)



c)

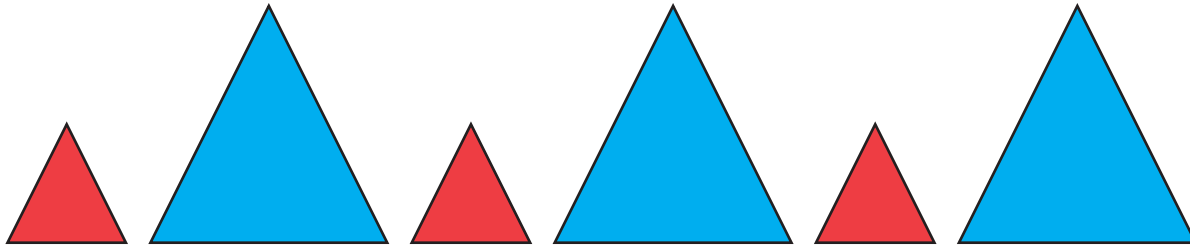


TERM 3

# Patterns

## Example

Describe the pattern.

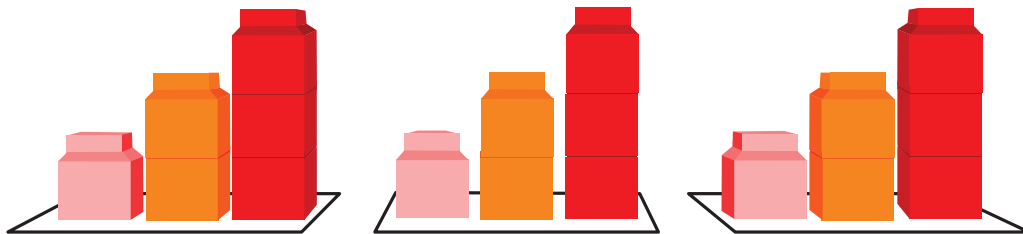


## Answer

The pattern is a small red triangle and then a big blue triangle.

## Activity 15

1. Copy and extend the pattern twice.

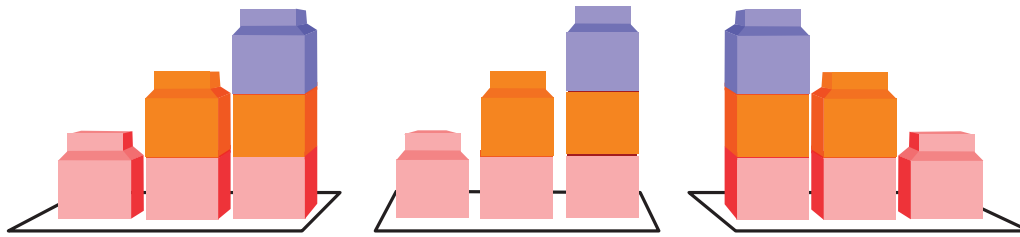


Describe the pattern.

## Note

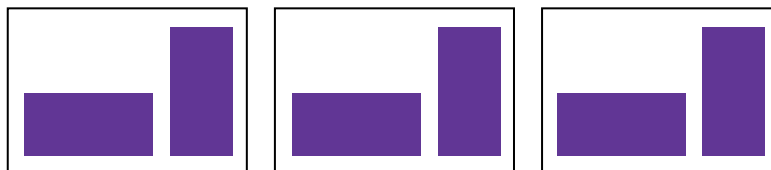
To **describe** is to say something in your own words.

2. Copy and extend the pattern twice.



Describe the pattern.

3. Use blocks to make your own pattern.  
4. Copy and extend the pattern twice.



5. Use a shape or a group of shapes to make your own pattern.  
6. Copy and extend the patterns with 4 more drawings:

a) **N** **N** **N** **N**

b) Make your own pattern using lines and shapes.

7. Create your own pattern using these shapes.



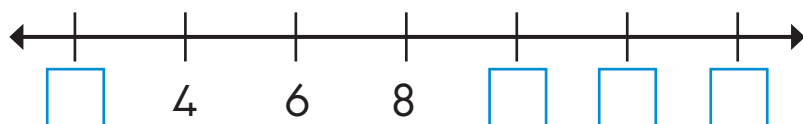
# Number patterns

## Activity 16

### Note

All the numbers that you will write are called **multiples of 2**.

1. Copy and fill in the missing numbers.



- a) Tell your friend which numbers you have on your number line.
- b) Count and write all the numbers on your number line as you count in 2s.

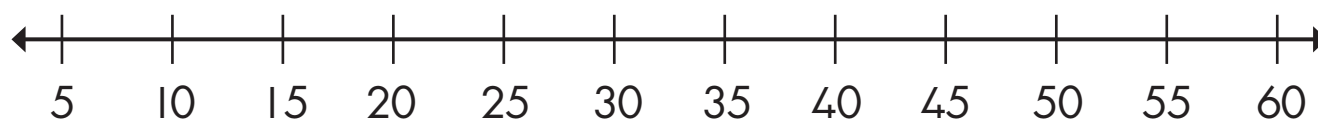
2. Look at the number grid.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

- a) Count forward from 24 to 48.
- b) Count backwards from 50 to 20
- c) Count forward and write all the numbers as you count in multiples of 2 between 28 and 60.



- d) Count the numbers on the number line with a friend.



3. Look at the number grid.

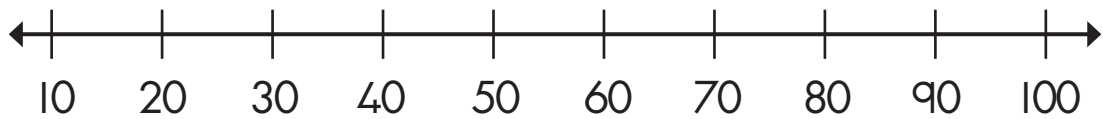
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

- a) Count forward from 49 to 80 in 1s.  
 b) Count backwards from 80 to 35 in 1s.  
 c) Count and write all the numbers as you count in 5s.

### Note

.....  
 All the numbers that you will write are called  
**multiples of 5**

- d) Count the numbers on the number line with a friend.



- e) Write down all the **multiples** of 10 between 1 and 50.

**Note**

All these numbers are called **multiples of 10**

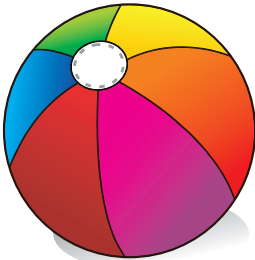
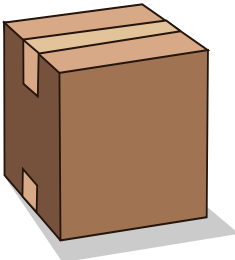
4. Copy and complete the grid.

a)	multiples of 2	2	4				12
b)	multiples of 5	5				25	30
c)	multiples of 10	10				50	60

5. Describe the number pattern to a friend.

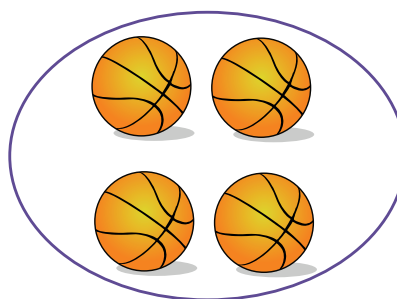
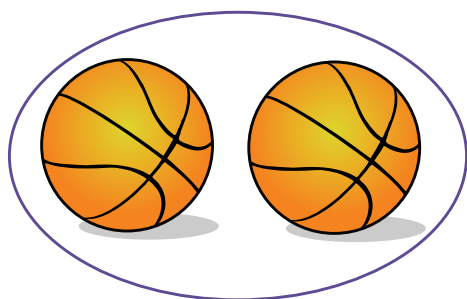


# 3-Dimensional objects

Ball	Box
 <p>This is a <b>ball</b>. It will <b>roll</b> on the floor.</p>	 <p>This is a <b>box</b>. It will <b>slide</b> on the floor.</p>

## Example

Look at the balls. How are they sorted?

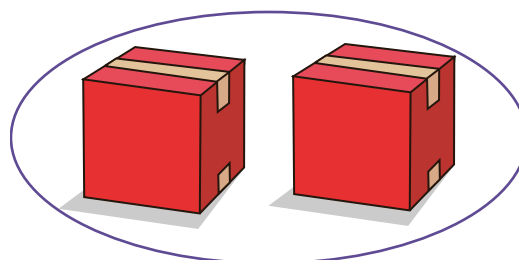
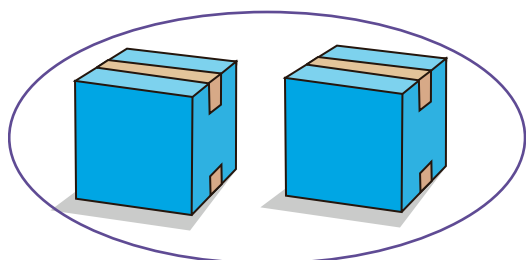


## Answer

By size.

## Answer

Look at the boxes. How are they sorted?



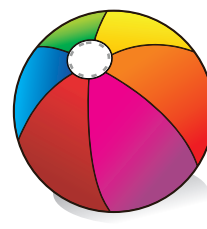
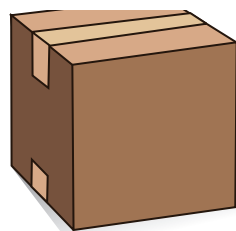
## Answer

By colour.

## Activity 17


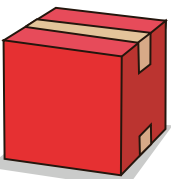


1. Look at the picture and use the words in the box to answer the questions:

ball	box
------	-----

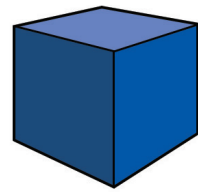


- a) Which object is to the left of the books?  
 b) Which object is to the right of the books?
2. Tick (✓) or cross (X).

Copy the table into your book. Do not copy the pictures.

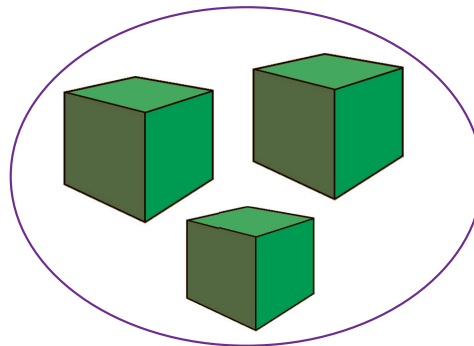
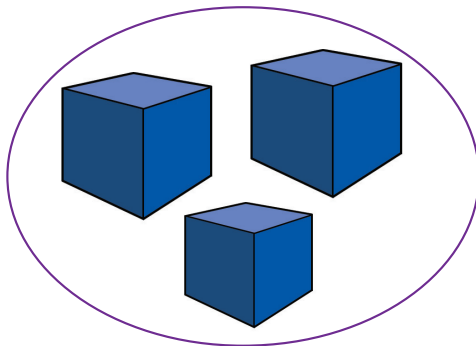
		Ball	Roll	Box	Slide
a)					
b)					
c)					
d)					

3. Look at the 3-dimensional object.  
It is shaped like a box.

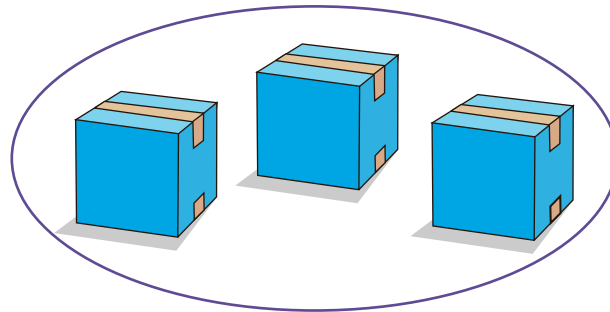
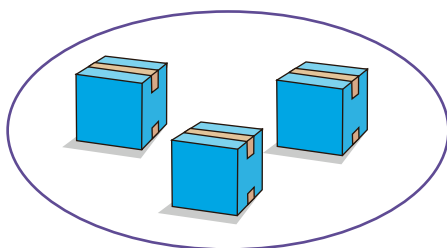


- a) Will it slide?
- b) Will it roll?
- c) Can you stack two boxes on top of each other?

4. Look at the boxes. How are they sorted?

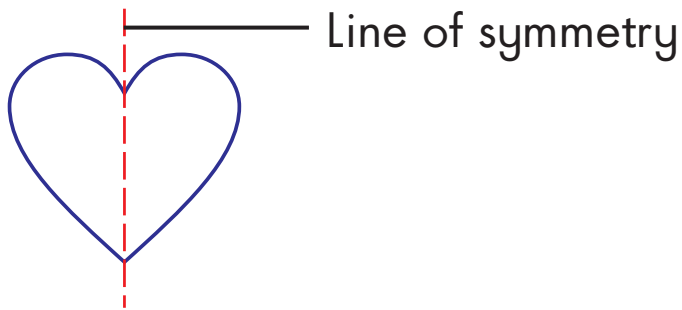


5. Look at the boxes. How are they sorted?



# Symmetry

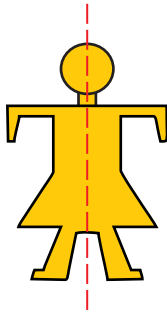
An object has symmetry when the two halves are exactly the same.



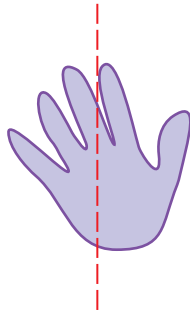
## Example

Look at the pictures. Is the dotted line a line of symmetry? Say yes or no.

a)



b)



c)



## Answer

a) yes

b) no

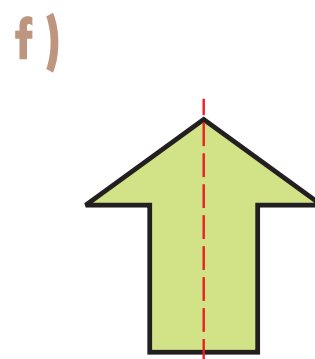
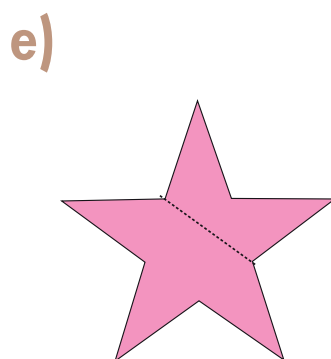
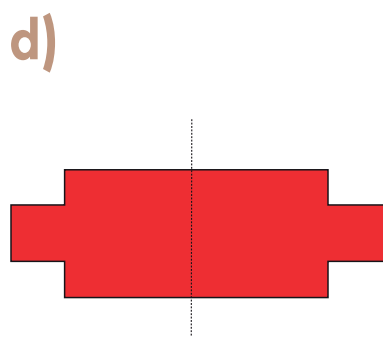
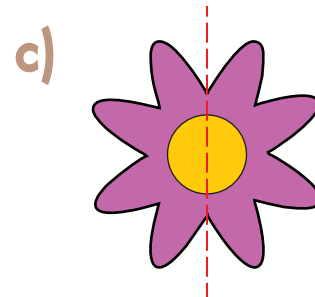
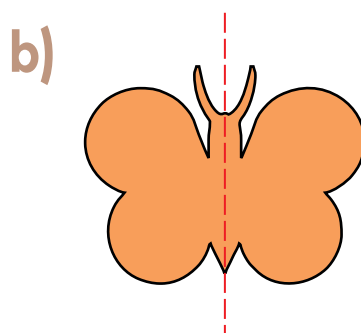
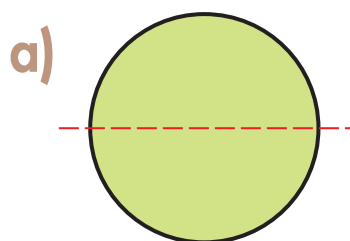
c) yes

## Note

Some shapes have no line of symmetry.

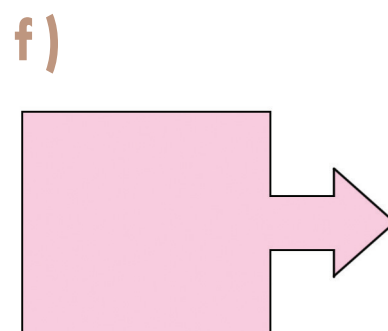
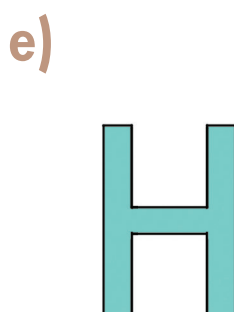
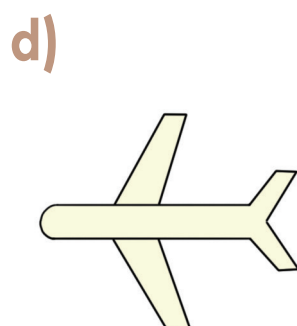
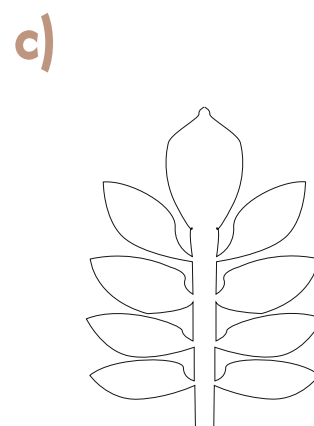
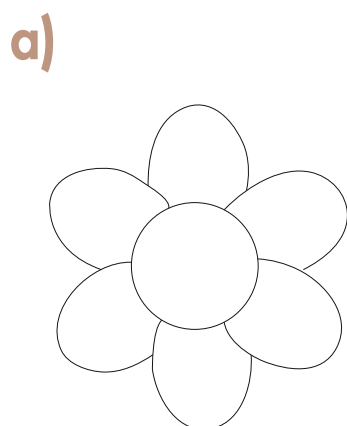
## Activity 18

1. Is the dotted line on each shape a line of symmetry? Say yes or no.



TERM 3

2. Use a ruler to find the line of symmetry?



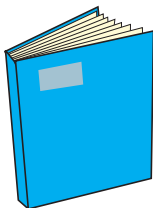

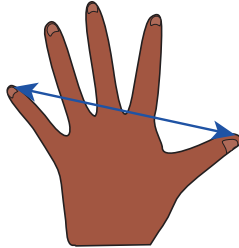
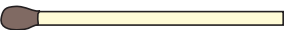
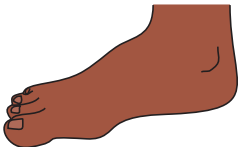
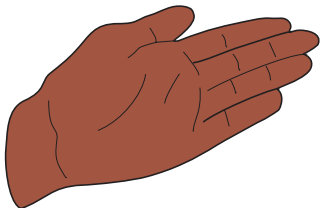


# Measuring length

When we measure length we want to know how long something is.

We can use objects to measure length.

## Examples of objects we can use to measure length

A book	A paperclip	A handspan
		
A matchstick	A foot	A hand
		

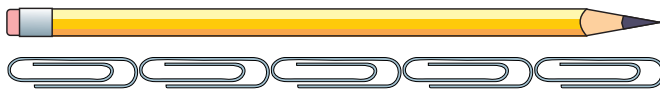
## Practical activity

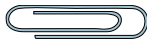
- Work in pairs.
- You will need 2 pencils, 10 matchsticks, 10 small paperclips.

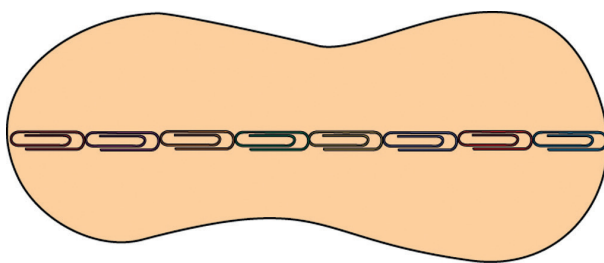
1. Use the matchsticks to measure 1 pencil. Write how many matchsticks long the pencil is.
2. Use paper clips to measure how long the other pencil is. Write how many small paperclips long the pencil is.
3. Compare your results with other groups.


### Activity 19

1. What is the length of the pencil?



- a) How many small paperclips are needed to measure the length of the pencil?
  - b) The pencil is \_\_\_\_  long.
2. What is the length of the board?

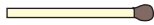


- a) How many small paperclips are needed to measure the length of the board?
- b) The board is \_\_\_\_  long.

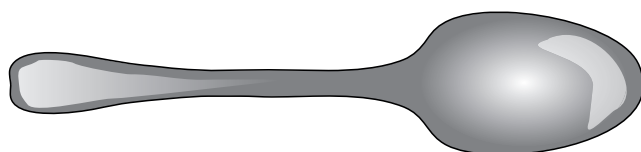
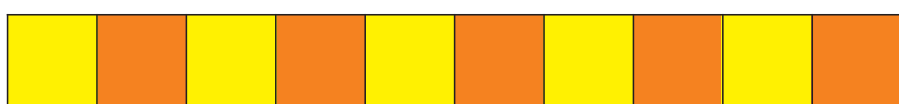
3. What is the length of the shape?



a) How many matchsticks are needed to measure the length of the shape?

b) The table is \_\_\_\_\_  long.

4.



a) How many blocks are needed to measure the length of the pen?

b) How many blocks are needed to measure the length of the spoon?

c) How many blocks are needed to measure the length of the plank?

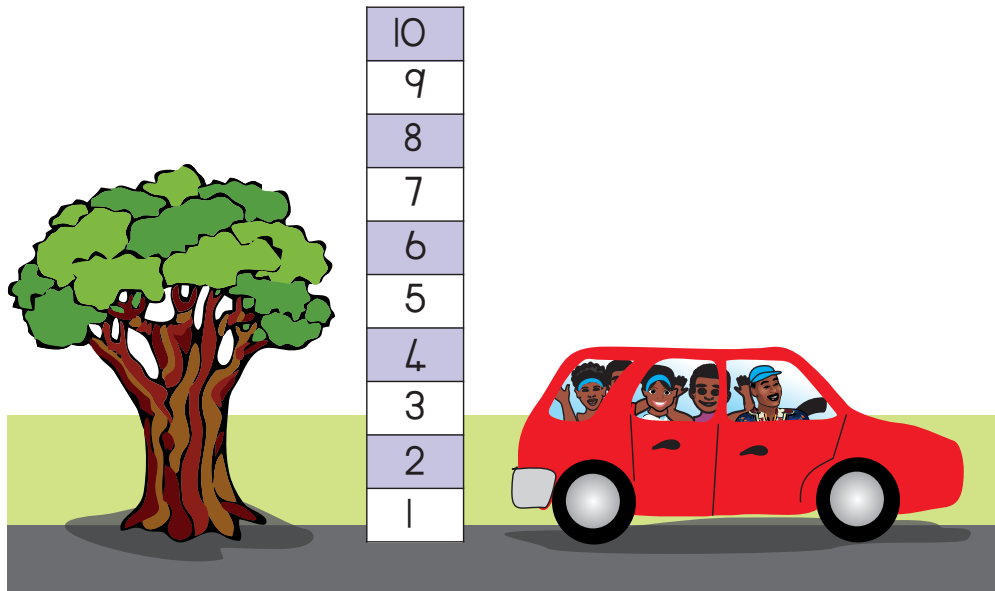
d) The plank is \_\_\_\_\_ blocks long.

e) The pencil is \_\_\_\_\_ blocks long.

f) The spoon is \_\_\_\_\_ blocks long.

g) The plank is \_\_\_\_\_ blocks longer than the spoon.

## 5. Which is taller?



- How many blocks are needed to measure the height of the tree?
- How many blocks are needed to measure the height of the car?
- The tree is \_\_\_\_ blocks tall.
- The car is \_\_\_\_ blocks tall.
- The tree is (taller/shorter) than the car.

## 6. Amanda is measuring the length of her classroom with her pace.



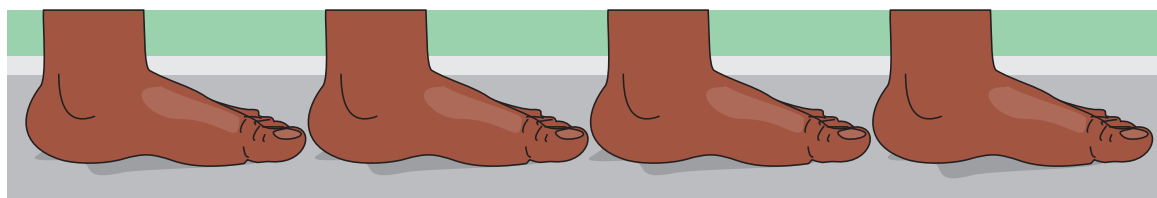
- a) Measure the length of your classroom by pacing. Copy and complete the table below.

	Estimate	Check
Number of my paces		

- b) Measure the width of your classroom by pacing. Copy and complete the table below.

	Estimate	Check
Number of my paces		

7. a) Measure the length of your classroom by using your foot length as shown below.



Copy and complete the table.

	Estimate	Check
Number of my foot lengths		

- b) Measure the width of your classroom with your feet. Copy and complete the table below.

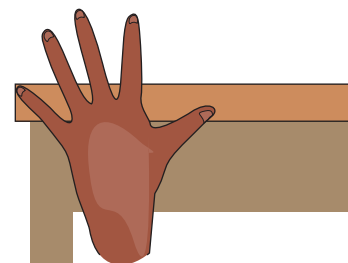
	Estimate	Check
Number of my foot lengths		

8. Complete the table.

	Number of foot lengths	Number of paces
a) Length of my classroom		
b) Width of my classroom		

TERM 3

9. a) Measure the length of your desk with your hand span, as shown.



Complete the table.

	Estimate	Check
Number of hand span units		

- b) Measure the width of your desk with your hand span.

Complete the table.

	Estimate	Check
Number of hand span units		

10. a) Use one of your textbooks to measure the length of your desk.

Complete the table.

	Estimate	Check
Number of textbook units		



- b) Measure the width of your desk with your textbook.

	Estimate	Check
Number of textbook units		

- II. Complete the table.

	Length of the classroom	Width of the classroom
Number of hand span units		
Number of textbook units		

TERM 3

**12.** Which unit of measurement will you choose to measure the following:

	<b>Object to measure</b>	<b>Hand span unit</b>	<b>Foot unit</b>	<b>Pace unit</b>
a)	Width of your chair			
b)	Length of the school ground			
c)	Width of the classroom door			
d)	Distance from your classroom to the Principal's office			












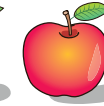















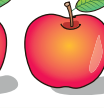




## Data handling


We can organise the data we collect by representing it on a pictograph.

A **pictograph** represents data as pictures.

### Example

Look at the pictograph that represents the number of apples sold at the tuckshop at the school.

Monday	    
Tuesday	      
Wednesday	      
Thursday	        
Friday	   

Key:  = one apple


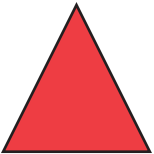

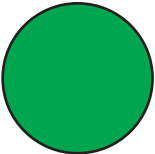
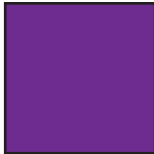
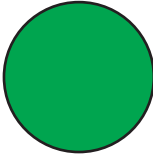
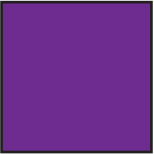
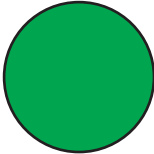
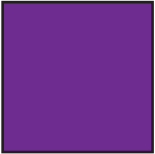
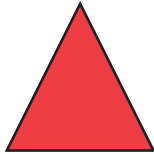
- How many apples were sold on Tuesday?
- On what day were the most apples sold?

### Answer

- 7 apples
- Thursday

## Activity 20




1. The teacher asked a group of 10 learners in the class to choose their favourite shape. The learners chose from a circle, a triangle and a square. She recorded the answers in this table.

Complete the tally table:

	Number of learners
Triangle	
Circle	
Square	

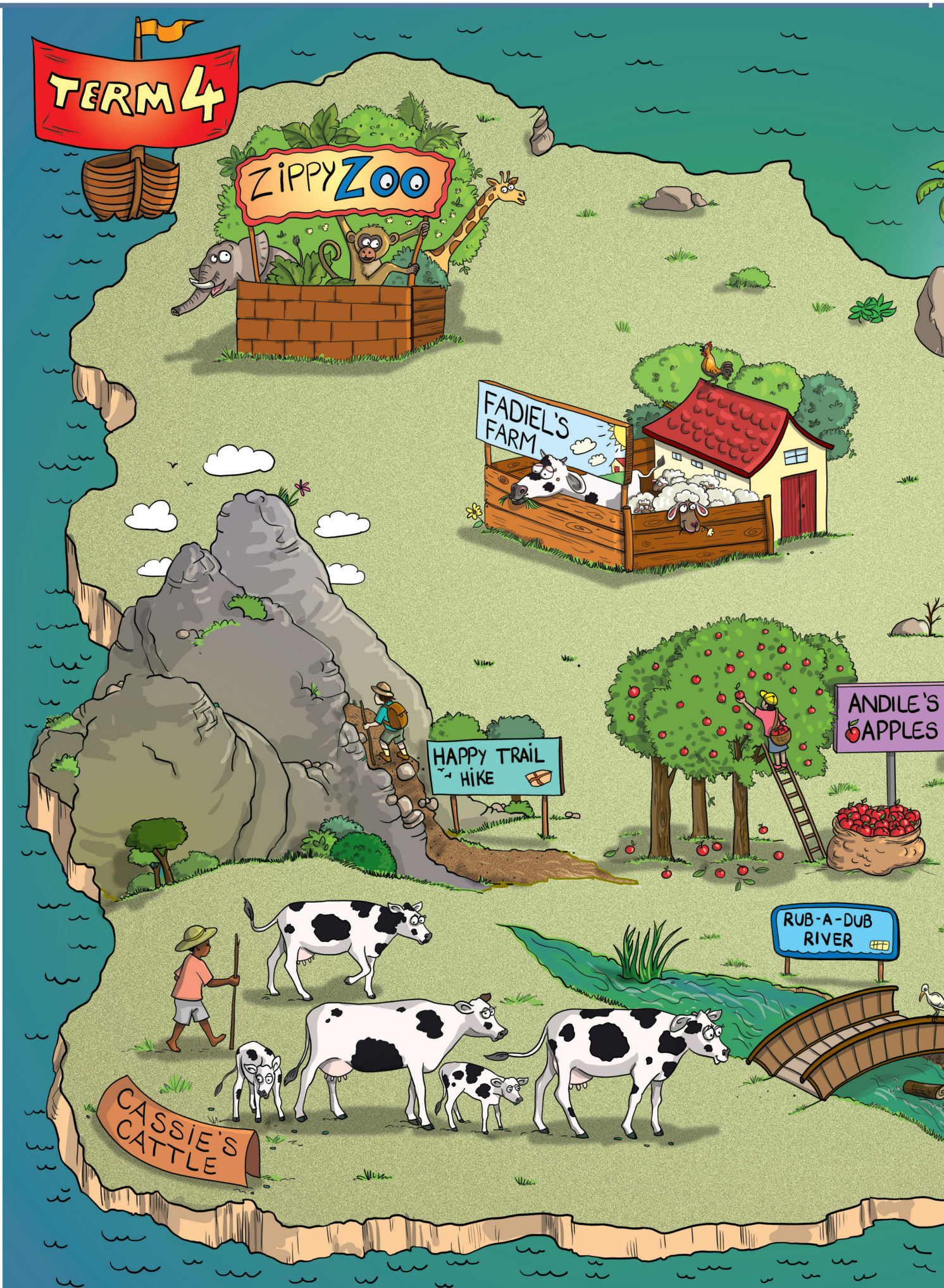
2. Use the information to draw a pictograph. On the next page you will find an example of a pictograph that you can copy and complete.

Number of learners	Favourite shapes		
	10		
	9		
	8		
	7		
	6		
	5		
	4		
	3		
	2		
	1		
	Triangle 	Circle 	Square 
KEY: 1 shape = 1 learner			

TERM 3

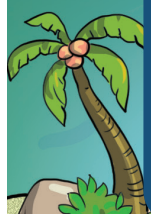
- Which shape was the favourite?
- How many more squares than circles?
- How many more triangles do you need to have the same number as the squares?
- Which two shapes can you add to get the same number as the squares?







*We've had lots of fun and learnt lots and lots, both numbers and many other things ... Now we're off to a new Mathematics journey!*



BRINY BEACH



VUSI'S VEGGIES



GRADE 2

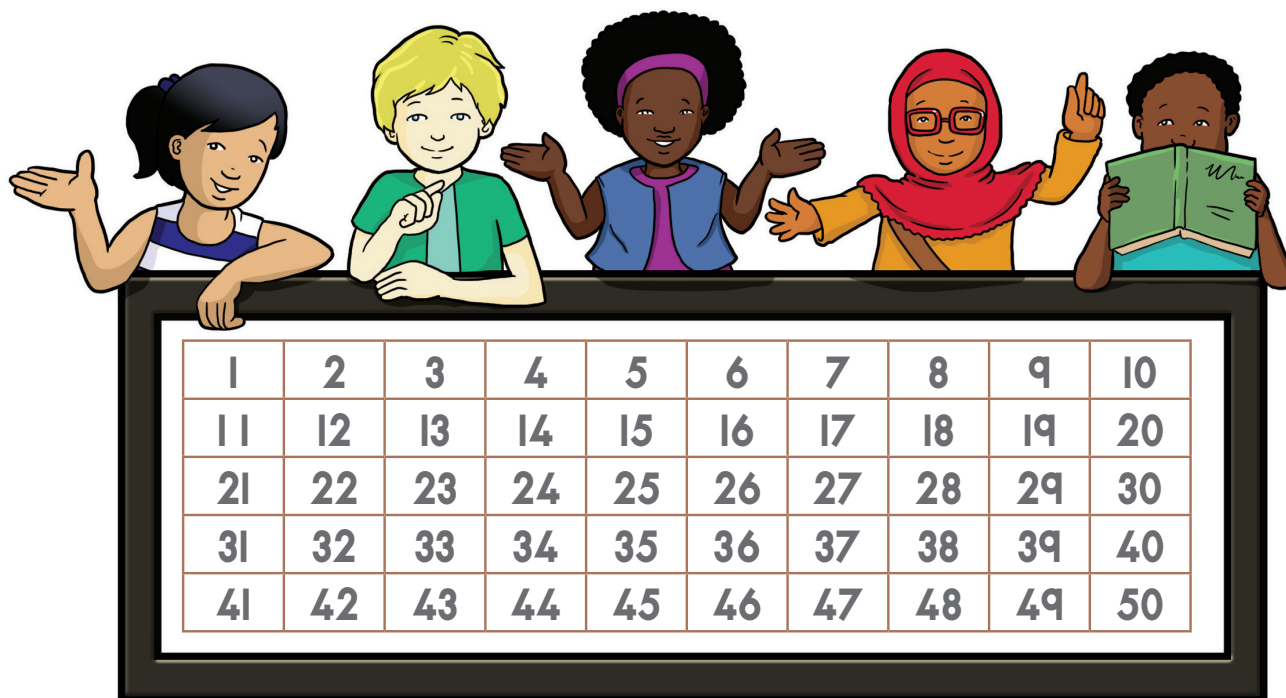


TERM 4



# Counting to 50

Continue to practise your counting.

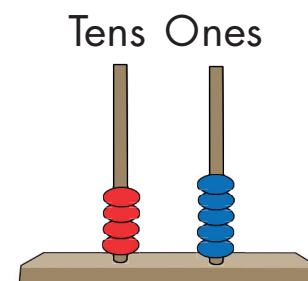


## Example

Which number does the abacus show?

## Answer

$$4 \text{ tens} + 5 \text{ ones} = 45$$



## Activity 1

- I. Count to your friend. Take turns to count different counters.
  - a) Count from 1 – 50.
  - b) Count in 2's from 24 – 40.
  - c) Count in 2's from 36 – 40

- d) Count in 5's from 25 – 45.
- e) Count backwards in 10's from 50 – 0.

2. Which number are missing?

- a) \_\_, 9, 10, \_\_, 12, \_\_, 14, \_\_
- b) 34, \_\_, 38, 40, 42, \_\_, \_\_, 48
- c) \_\_, 20, \_\_, 30, 35, \_\_, 45, \_\_
- d) 10, \_\_, \_\_, 40, \_\_

3. Which number comes before, after or between?

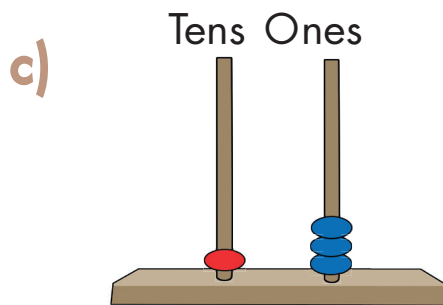
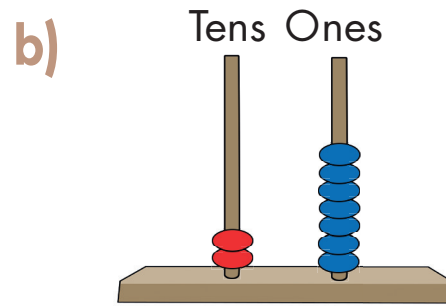
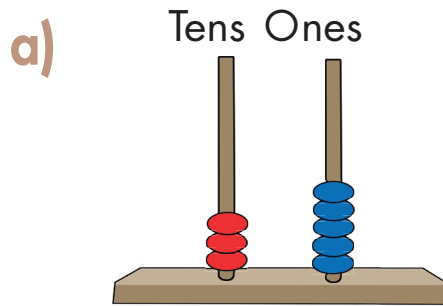
- a) 23      25
- b)    38   39
- c) 18   17
- d) 50   49

4. Find the answer.

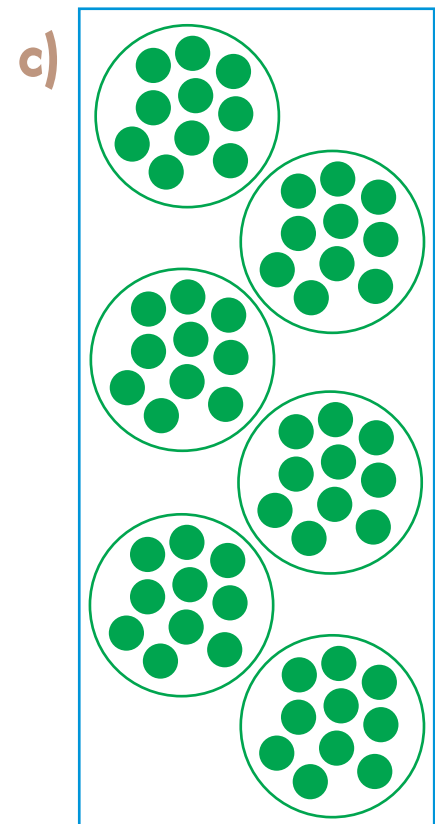
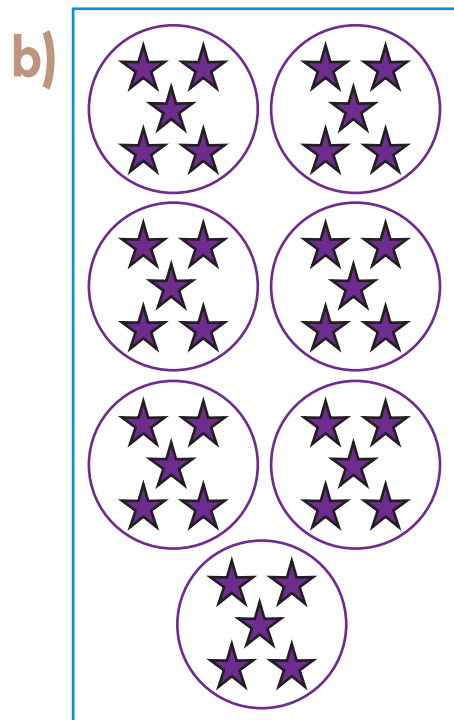
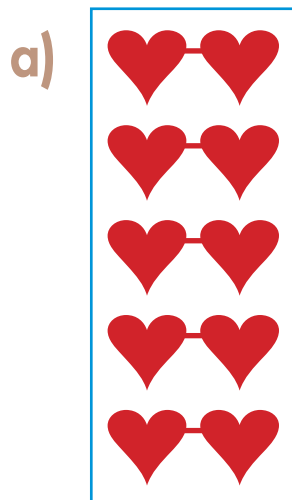
- a) Which number is 2 greater than 30?
- b) Which number is 2 smaller than 28?
- c) Which number is 1 greater than 35?
- d) Which number is 1 smaller than 47?
- e) Which number is 2 smaller than 28?

5. a) Which number is 1 more than 49?  
 b) Which number is 1 less than 30?  
 c) Which number is 2 less than 20?

6. Which number does each abacus show?



7. How many in each group?

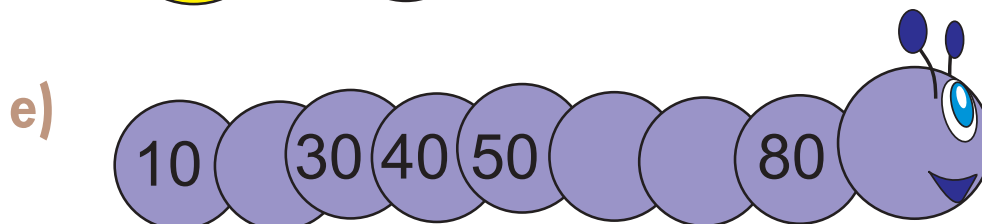
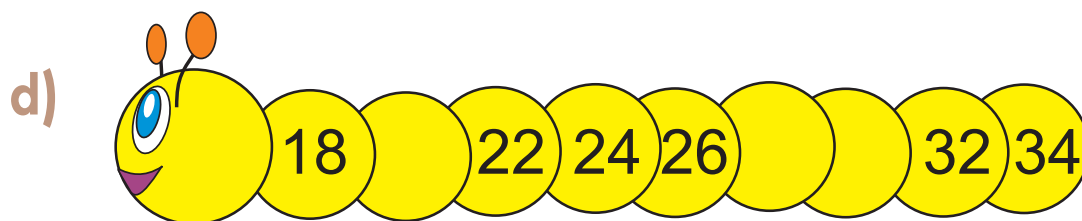
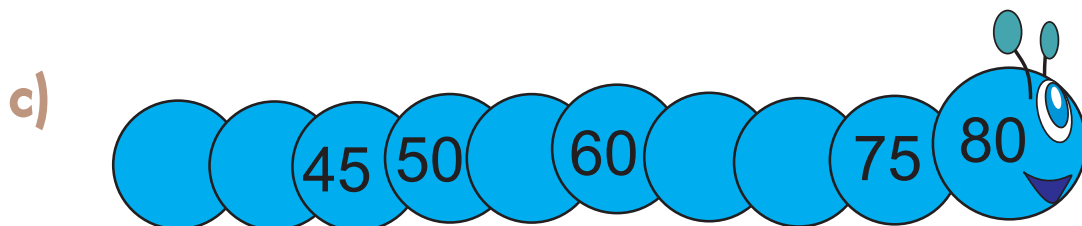
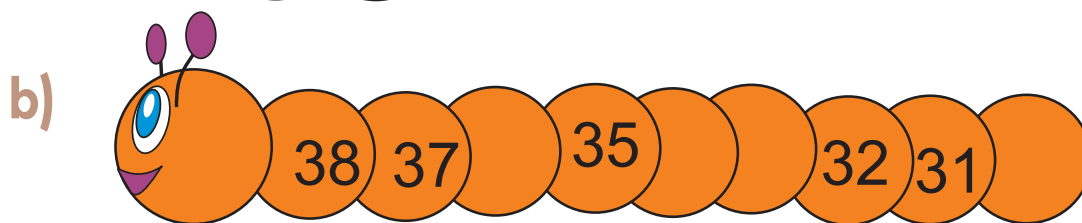
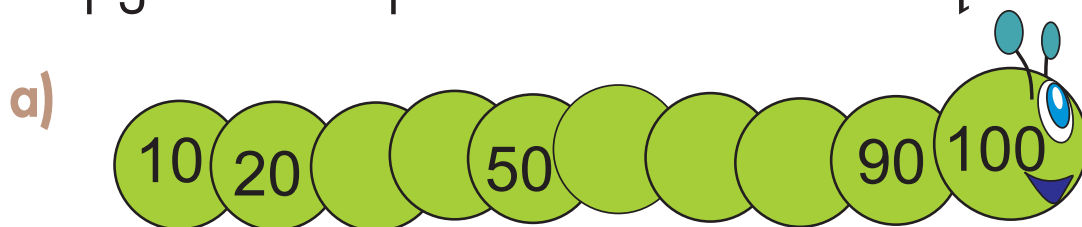


# Counting forwards and backwards

Let's do some more counting.

## Activity 2

1. Count forwards in 1's from 43 up to 84.
2. Count backwards in 1's from 97 up to 65.
3. Copy and complete each number sequence.

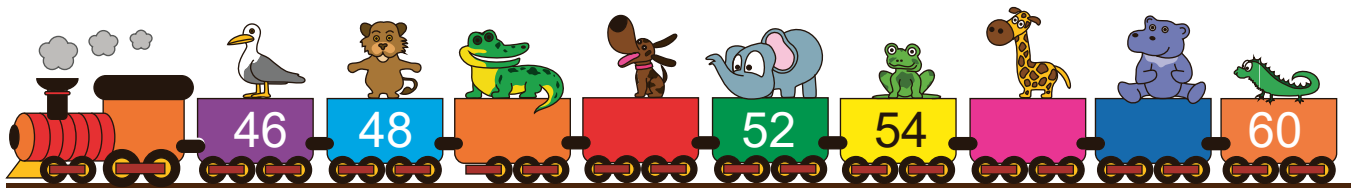


4. Complete the number patterns.

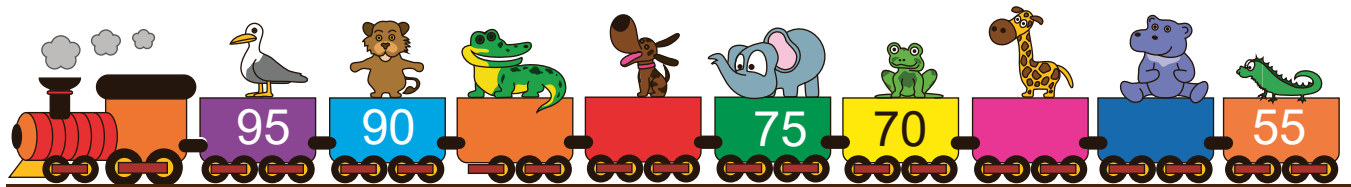
a)



b)



c)



d)



5. Tell your partner which number is missing.

a) 45  47

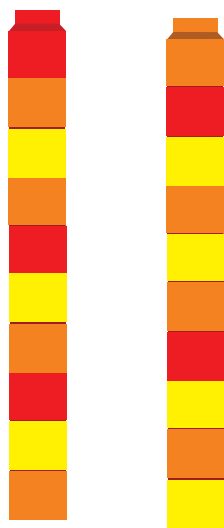
b)  89 90

c) 58 60

d) 39  43

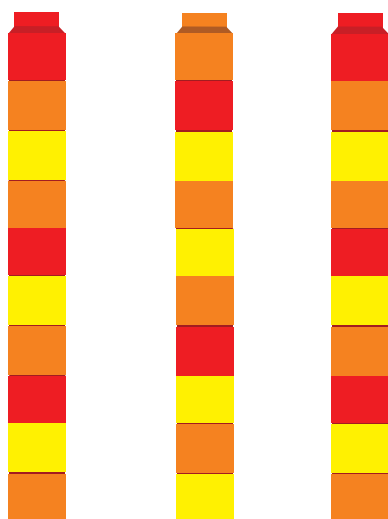
6. Count, then tell your partner how many in each group.

a)



How many altogether?

b)









How many altogether?

TERM 4

# Describe, compare and order numbers

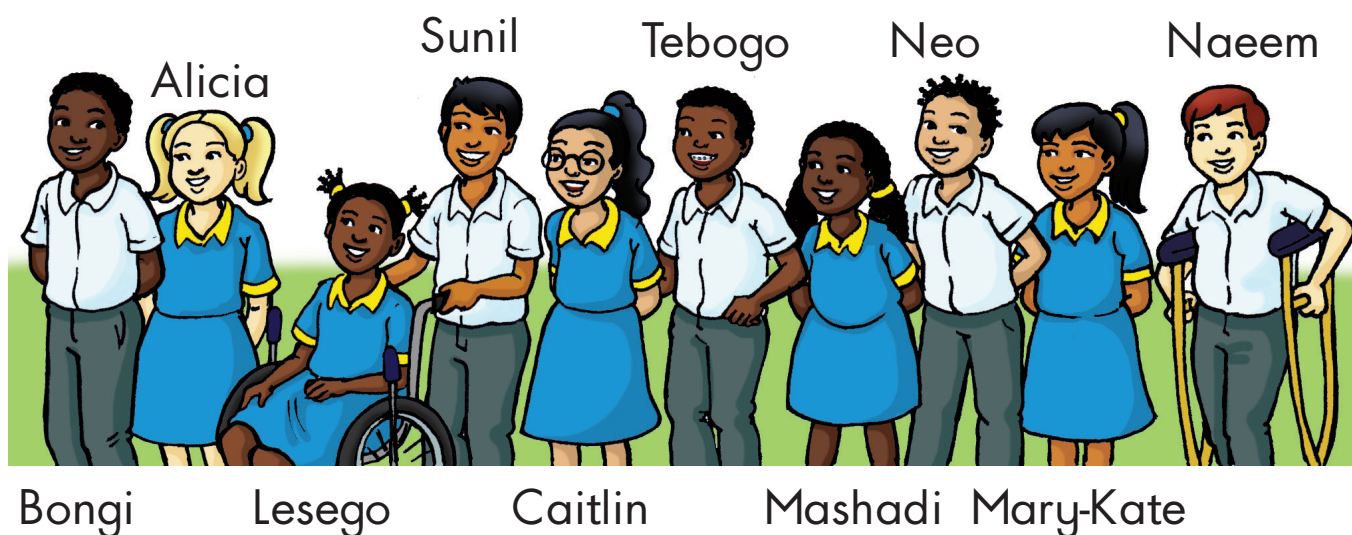
## Activity 3

I. Complete the table.

	one	
		2
		3
	four	
		5
	six	
		7
		8
	nine	9
	ten	

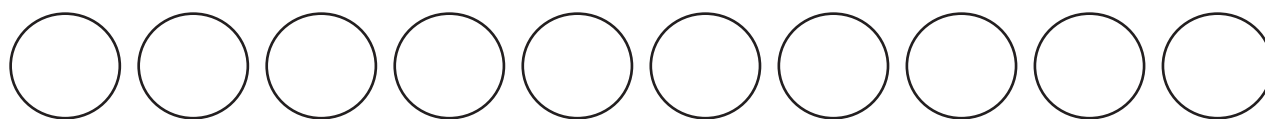


## 2. Look at the learners.



- a) Bongoi is \_\_\_\_\_ in the line.
- b) Naeem is \_\_\_\_\_ in the line.
- c) Caitlin is \_\_\_\_\_ in the line.
- d) Mashadi is \_\_\_\_\_ in the line.
- e) Lesego is \_\_\_\_\_ in the line.
- f) Mary-Kate is \_\_\_\_\_ in the line.
- g) Neo is \_\_\_\_\_ in the line.
- h) Sunil is \_\_\_\_\_ in the line.
- i) Alicia is \_\_\_\_\_ in the line.
- j) Tebogo is \_\_\_\_\_ in the line.
- k) Who is last in the line?

3. Copy the circles into your classwork books.



a) Colour the fifth circle yellow.

b) Colour the first circle blue.

c) Colour the eighth circle red.

d) Colour the second circle green.

4. Tebogo has 12 pencil crayons. Cally has 8 pencil crayons. Who has fewer pencil crayons?

5. Give a number:

a) between 15 and 17

b) one less than 17

c) two more than 8

d) between 18 and 20

e) two less than 20

6. Write down the numbers between 14 and 20.

7. Write down the missing numbers.

Before	Number	After
	8	
	13	
	16	
	6	
	18	

8. Arrange from smallest to largest.

a) 3, 19, 6, 15, 12, 5

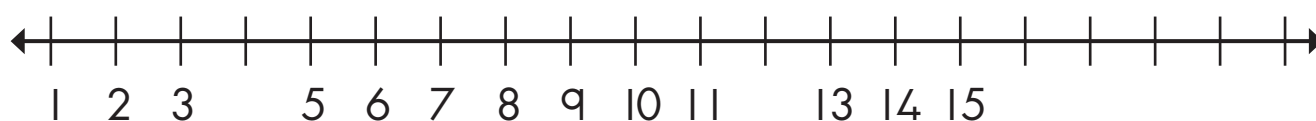
b) 16, 5, 14, 6, 12, 20

9. Order from largest to smallest.

a) 20, 8, 2, 16, 11, 9

b) 3, 12, 16, 5, 18, 8, 14

10. Complete the number line below.



a) Which numbers are between 10 and 15?

b) Which number is 1 more than 3?

c) Which number is 2 more than 12?

d) Which number is 1 less than 15?

e) Which number is 2 less than 14?

11. Complete using the words **less** and **more**.

a) 14 is \_\_\_\_\_ than 15

b) 13 is \_\_\_\_\_ than 7

c) 11 is \_\_\_\_\_ than 15

d) 13 is \_\_\_\_\_ than 15

# Understanding place value

The **value** of a digit depends on its **place** in the number.

## Example

Explain the value of 13.

## Answer

1 ten and 3 ones = 13

## Example

Complete: 1 ten and 7 ones = \_\_\_\_

## Answer

1 ten and 7 ones = 17

## Activity 4

1. Copy and complete.

a) 19 = \_\_\_\_ ten and \_\_\_\_ ones

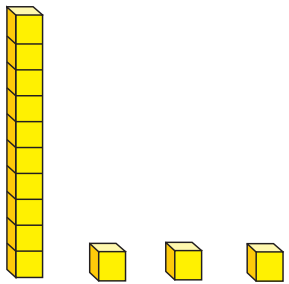
b) 16 = \_\_\_\_ ten and \_\_\_\_ ones

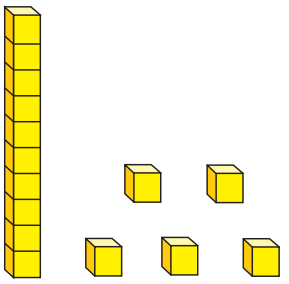
c) 11 = \_\_\_\_ ten and \_\_\_\_ ones

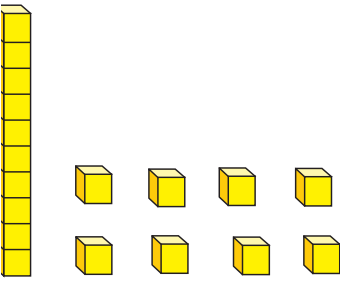
d) 15 = \_\_\_\_ ten and \_\_\_\_ ones

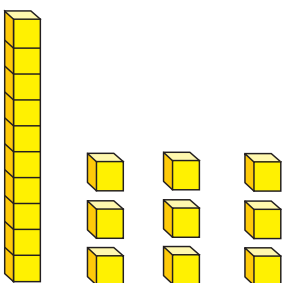
e) 13 = \_\_\_\_ ten and \_\_\_\_ ones

## 2. Complete the number sentence.

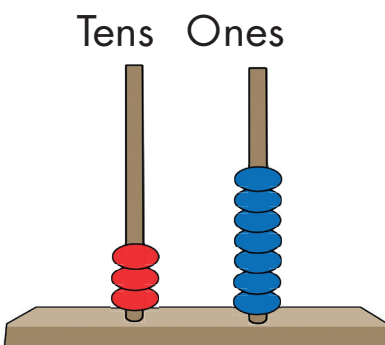
a)  \_\_\_\_\_ ten and \_\_\_\_\_ ones  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

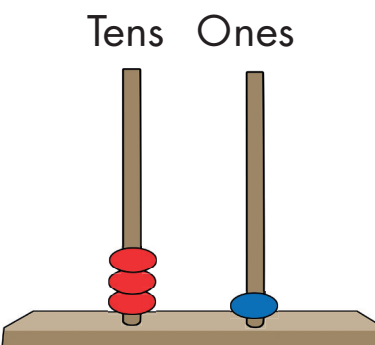
b)  \_\_\_\_\_ ten and \_\_\_\_\_ ones  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

c)  \_\_\_\_\_ ten and \_\_\_\_\_ ones  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

d)  \_\_\_\_\_ ten and \_\_\_\_\_ ones  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

## 3. What number does each abacus show?

a)  Tens Ones

b)  Tens Ones

4. Complete.

a) 1 ten and 6 ones = \_\_\_\_

b) 1 ten and 4 ones = \_\_\_\_

c) 2 tens and 0 ones = \_\_\_\_

5. Write the tens and ones.

a) 14

b) 16

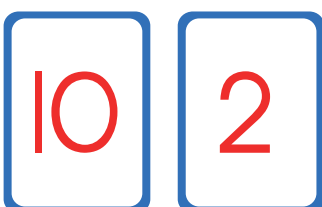
c) 18

d) 13


e) 12


f) 10

6. Write the number you will get when you add the tens and ones on the cards.

a) 

b) 

c) 

d) 

7. a) Is the 1 in  a ten or a one?

b) Is the 6 in  a ten or a one?

# Addition and subtraction

Let's add up to 20.

## Example

$$11 + 7 = \square$$

## Answer

$$11 + 4 + 3$$

$$11 + 4 \rightarrow 15 + 3 = 18$$

## Example

$$11 + 7 = \square$$

## Answer

$$11 + 5 + 2$$

$$11 + 5 \rightarrow 16 + 2 = 18$$

## Example

$$17 - 9 = \square$$

## Answer

$$17 - (7 + 2)$$

$$17 - 7 \rightarrow 10 - 2 = 8$$



## Activity 5

1. Find the solution.

a)  $10 + 5 = \square$

b)  $12 + \square = 20$

c)  $\square + 3 = 16$

d)  $8 + 9 = \square$

e)  $12 + 7 = \square$

f)  $15 + \square = 18$

g)  $\square + 8 = 19$

h)  $16 + \square = 19$

2. Find the solution.

a)  $19 - 8 = \square$

b)  $\square - 6 = 13$

c)  $10 - 5 = \square$

d)  $12 - \square = 20$

e)  $\square - 9 = 8$

f)  $\square - 7 = 5$

g)  $20 - \square = 12$

h)  $20 - \square = 20$

3. What numbers are the bananas hiding?



# More addition and subtraction

Let's do some more addition and subtraction.

## Activity 6

- Find all the number bonds of 10. Two examples are shown.

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

TERM 4

- Rearrange so the bigger number is first and then add.

### Example

$$4 + 12 = \square$$

### Answer

Rearrange:  $12 + 4 = \square$

Count on:  $12 + 4 = 16$

a)  $5 + 13 = \square$

b)  $3 + 17 = \square$

c)  $6 + 12 = \square$

d)  $6 + 14 = \square$

3. Identify near doubles, then add.

**Example**

$$8 + 7 = \square$$

**Answer**

Can be written as  $8 + 8 - 1$  or  $7 + 7 + 1$

$$8 + 8 \rightarrow 16 - 1 = 15 \text{ or } 7 + 7 \rightarrow 14 + 1 = 15$$

a)  $7 + 6 = \square$

b)  $9 + 8 = \square$

c)  $7 + 8 = \square$

d)  $10 + 9 = \square$

4. Change one number to a ten and then add or subtract.

### Example

$$9 + 6 = \square$$

### Answer

Can be written as  $10 + 5 = 15$

### Example

$$15 - 9 = \square$$

### Answer

Can be rewritten as an addition sum

$$9 + \square = 15$$

$$\text{So, } 10 + \square = 15$$

$$10 + 5 = 15$$

$$\text{So, } 15 - 9 = 6$$

a)  $8 + 9 = \square$

b)  $12 + 7 = \square$

c)  $16 - 8 = \square$

d)  $18 - 9 = \square$

# Different strategies for doing calculations

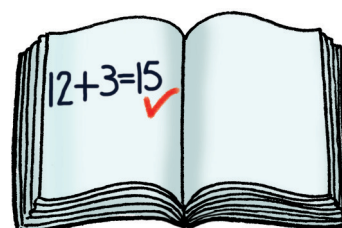
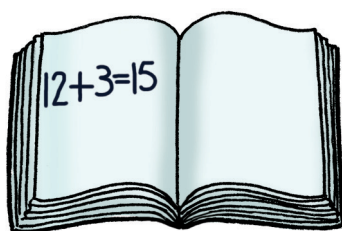
This year you have learnt different ways of doing calculations. These include:

- using drawings
- using building up and breaking down numbers
- using doubling and halving
- using number lines.

Use any of the strategies to help you solve these problems. Remember to follow these steps when solving problems.

## How to solve problems

Read carefully.    Do calculations.    Check your answers.



## Activity 7

1. Use drawings or counters to help you solve these problems.
  - a) Abbi and Amarah have a list of the stationery they need to buy for Grade 2. They need 5 pencils, 2 erasers and a pack of 12 pencil crayons. How many items does each girl need?
  - b) Abbi says she still has 5 pencil crayons. How many new pencil crayons will she need?
  - c) Amarah says she has 2 pencils and 3 pencil crayons. How many items of stationery does she still need?
2. Use the building up or breaking down technique numbers to solve these problems.
  - a) Ethan and Khaya want to exchange games for the holidays. Ethan has 5 video games. Khaya has 8 video games. How many video games do they have altogether?
  - b) If Khaya's mom buys him 2 more video games, how many will he have in total?
  - c) If Khaya gives 4 games to Ethan, how many will he have left over?
  - d) If Ethan gives 3 games to Khaya, how many will he have left over?

3. Use doubling and halving to solve these problems.

- a) Tshepiso has a muffin tray that can hold 8 muffins. If she bakes 2 trays, how many muffins will there be?



- b) Lungi has 16 oranges that she must share between 4 learners. How many oranges will each learner get?

4. Use a number line to help you solve the following problem.

- a) Ntokozo buys a bag of onions for R8 and a bag of potatoes for R10. She pays with a R20 note. How much change will she get?





- b) Mpho counts the number of days until his birthday. In the first week there are 3 more days left. In the second week there are 7 days, and in the third week there are 2 days before his birthday. How many days before his birthday?

2017 SEPTEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Use any method you choose to solve these problems.

- Talia gets 5 stars for good work in 1 week. She gets 7 more stars for good work the next week. How many stars altogether?
- Ugo's rugby team scored the following tries during the rugby season.



Week 1      3 tries

Week 2      6 tries

Week 3      4 tries

Week 4      5 tries

- a) How many tries did they score altogether?
- b) If 6 tries were not allowed, how many tries did they score?

7. Tahlyn and Nkosinathi are collecting old toys from their friends to donate to a charity. Here is what they have collected so far.



- a) How many teddy bears and dolls together?
- b) How many toy trucks and toy boats?
- c) How many toy cars, dolls and dinosaurs?
- d) How many toys altogether?

8. It's Mishka's birthday in December. She is very excited. Her mother bakes these cupcakes:



- a) How many cupcakes are there altogether?
  - b) If 4 cupcakes are eaten, how many cupcakes are left?
  - c) If 3 more cupcakes are eaten, how many cupcakes are left?
9. Fidel and Tebogo are playing with their marbles. Fidel has 12 marbles and Tebogo has 8 marbles.
- a) Fidel wins 3 marbles from Tebogo. How many marbles does he have now?
  - b) Tebogo then wins back 6 marbles from Fidel. How many marbles does he have now?
  - c) Who has the most marbles now?

## Work with repeated addition

In repeated addition we make use of equal groups and add them together. Let's practise more repeated addition.

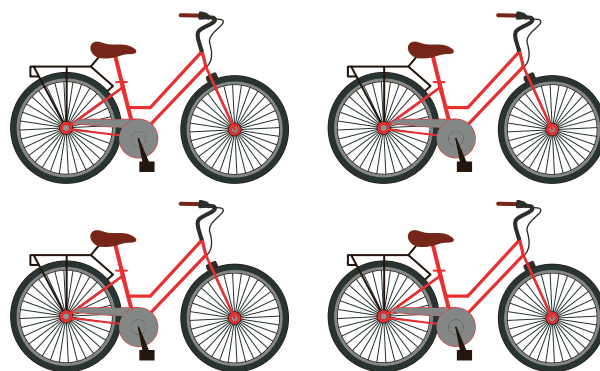
### Example

How many wheels do 4 bicycles have?

### Answer

You can use a drawing to help you solve this problem.

$$2 + 2 + 2 + 2 = 8$$



### Example

Thami drinks 2 glasses of milk every day. How many glasses of milk does he drink in a week?

### Answer

You can use a drawing to help you solve this problem.

$$2 + 2 + 2 + 2 + 2 + 2 + 2 = 14$$



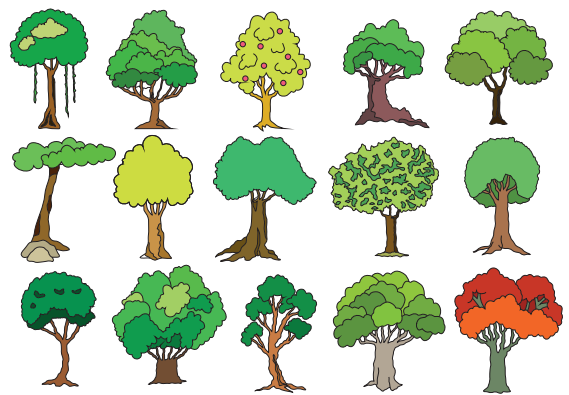
## Example

Mr Khumalo plants 3 rows of trees. There are 5 trees in each row. How many trees altogether?

## Answer

You can use a drawing to help you solve this problem.

$$5 + 5 + 5 = 15$$



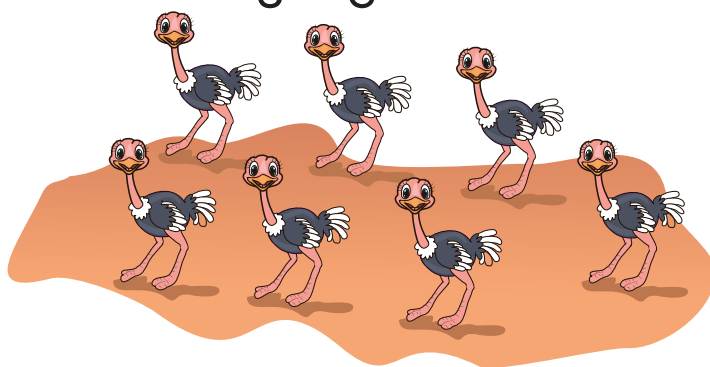
## Activity 8

Complete the following:

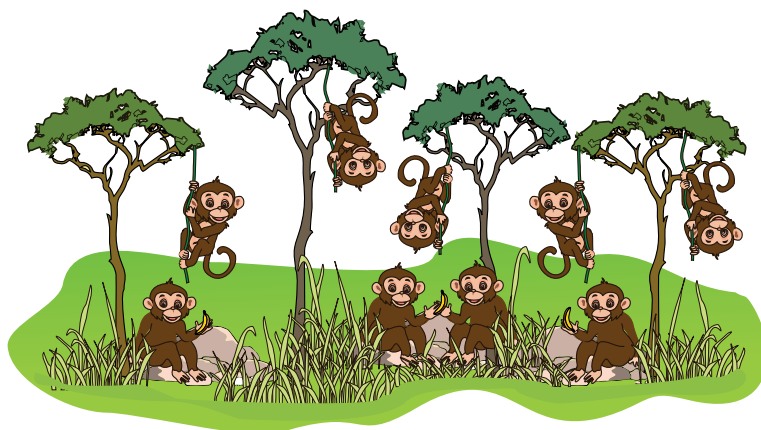
TERM 4

	How many wheels?	Number sentence
e.g.		$2 + 2 = 4$
a)		$2 + 2 + 2 = \square$
b)		$2 + 2 + 2 + 2 = \square$
c)		$2 + 2 + 2 + 2 + 2 = \square$

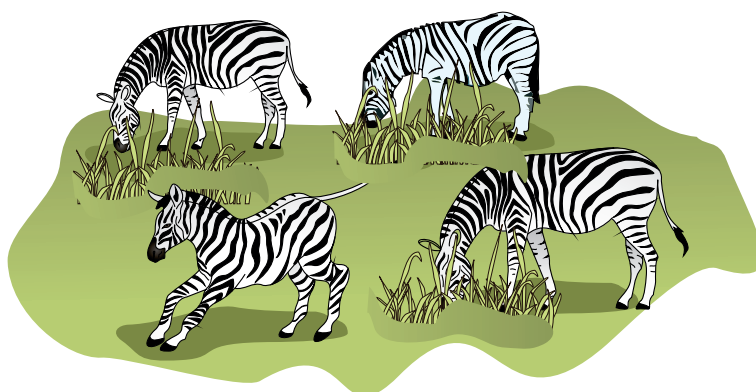
l. a) How many legs are on the ostriches?



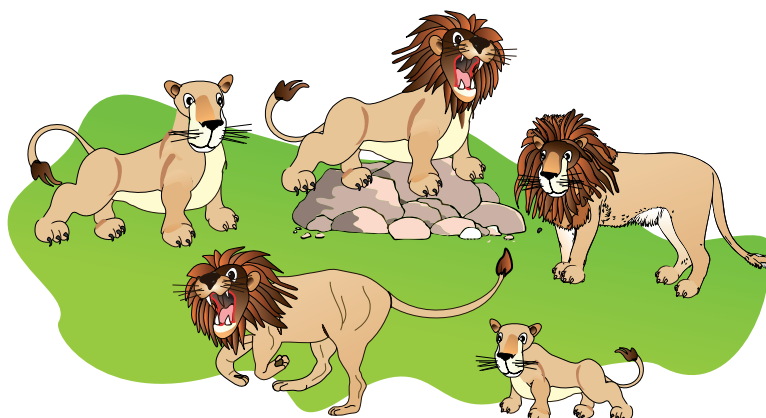
b) How many legs are on the monkeys?



c) How many legs are on the zebras?

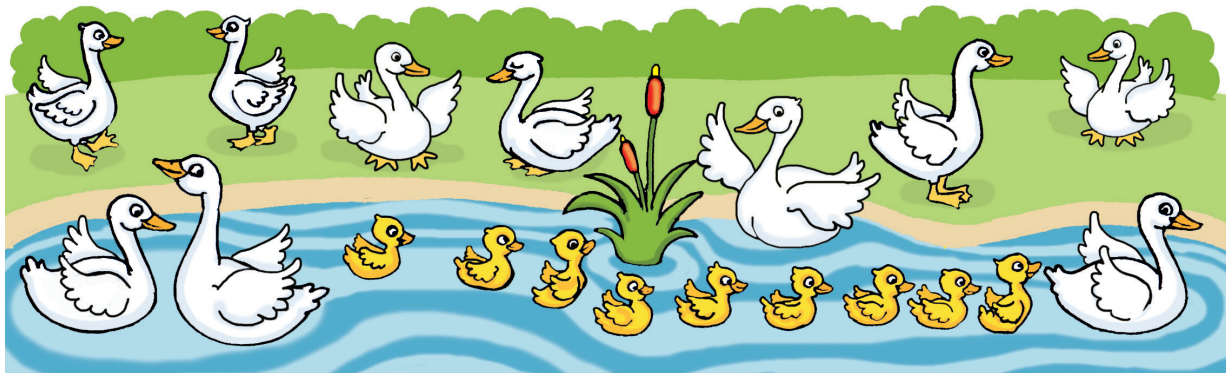


d) How many legs are on the lions?





2. How many wings does 1 bird have?  
Copy and complete the table.



birds	4	6	8	10
wings	8			
sum	$2 + 2 + 2 + 2$			

3. There are 5 houses in a street. Each house has 4 windows. How many windows are there altogether?



4. Make 8 groups with 3 counters in each group.  
How many counters do you have in all?  
Write a number sentence to find the answer.



# Grouping and sharing

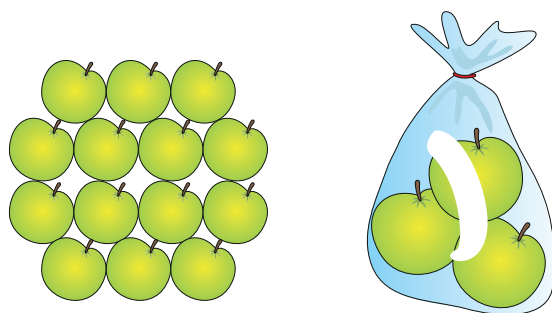
## Work with grouping

We can group objects that may have a remainder which we can either **discard** or add into our answer.

### Example

Stella sells apples in bags of 3 apples each. She has 14 apples. How many bags of 3 apples can she make up?

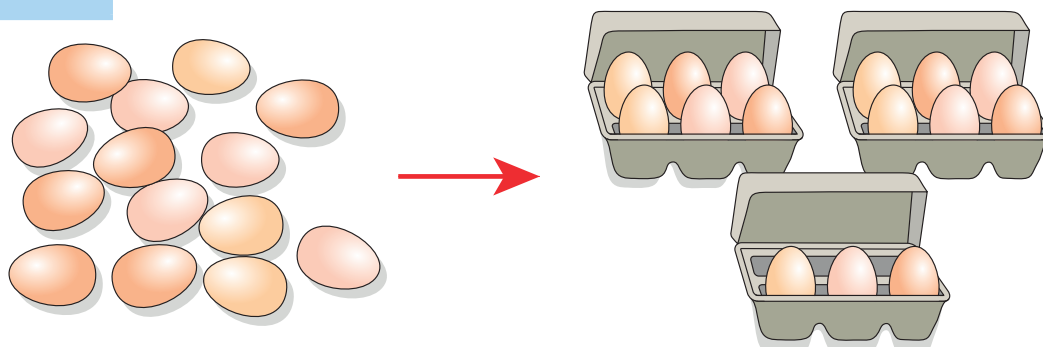
### Answer



### Example

Ben wants to take 15 eggs to his grandmother. Each box can take 6 eggs each. How many boxes does he need to pack all the eggs?

### Answer



## Activity 9

1. Megan packs 3 pairs of sandals in a bag. How many bags of sandals can she pack if she has 10 pairs of sandals?
2. Mpho needs to pack 5 apples into bags. He has 38 apples. How many bags can he pack?
3. Leah wants to take 20 muffins to her grandmother. Each container holds 6 muffins. How many containers does she need to pack all the muffins?



TERM 4

4. Buhle gets 15 strawberries to take with her to a play date. She packs them into containers that hold 4 strawberries each. How many containers will she need to pack all the strawberries?

## Work with sharing

We can share objects that may have a remainder which we can either **discard** or add into our answer.

### Example

Share 14 sweets amongst 3 friends so that they all get the same number of sweets.



### Answer

Each friend will get 4 sweets each, with 3 sweets left over.

### Example

Share 4 chocolate bars amongst 3 friends so that they all get the same amount of chocolate bar and there is nothing left.



### Answer

Each friend will get  $1\frac{1}{3}$  chocolate bar and an equal share of the last chocolate bar.

## Activity 10

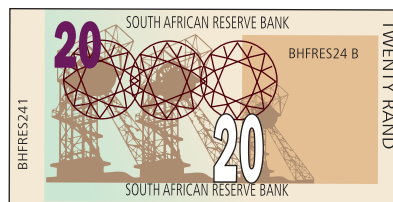
1. Share 9 oranges equally amongst 4 friends. How many will each friend get?
2. Share 15 pencils equally amongst 6 friends.
  - a) How many pencils will each friend get.
  - b) How many are left over?
3. Share 20 lucky packets equally amongst 10 friends. How many packets will each friend get?
4. Thabo, John and Wes are playing dominoes. There are 28 dominoes. Each player gets 9 dominoes. How many are left over?

# Work with money

These are the coins we use in South Africa:



Here are two notes we use in South Africa:



## Example

Natalie bought an eraser for R3 and a notebook for R5. She paid for these using a R10 note. How much change did she get?

## Answer

$R5 + R3 = R8$   
 $R10 - R8 = R2$   
She got R2 change.

## Example

Malika has two R10 notes. She sees a book that she would like to buy. The book costs R18.

- a) Will she have enough money?
- b) Will she get any change?

## Answer

- a)  $R10 + R10 = R20$   
She will have enough money
- b)  $R20 - R18 = R2$   
She will get R2 change.

## Example

Salome is saving money to buy a birthday gift for her mother. So far she saved R5 in the first week, R3 in the second week and R10 in the third week. If she needs to save R20, how much more money does she need?

## Answer

$$R5 + R3 + R10 = R18$$

$$R20 - R18 = R2$$

She needs R2 more.

## Activity II

- I. Fidel's mother sends him to the shop with a R5, R2, R1 and R10.
  - a) How much money does he have altogether?
  - b) She asks him to buy a loaf of bread costs R11 and R5 worth of potatoes. How much does it cost altogether?
  - c) How much change is left over?
  - d) Ntokozo buys a bag of onions for R8 and a bag of potatoes for R10. She pays with a R20 note. How much change will she get?



2. Sego has been saving up money so that she can buy a drawing book that she wants. This is what she saved in 1 month:

Week 1 R3 and R5

Week 2 R2, R2 and R3

Week 3 R1

How much  
have I saved  
so far?



- a) How much money did she save altogether?
  - b) If the drawing book costs R15, will she have enough money?
  - c) Will she get any change?
3. Mbali and Ally want to go to the fair when they are on holiday. They've decided that they want to do 4 rides. Each ride costs R5 each.
- a) How much would each girl need for 4 rides?
  - b) If Mbali takes only R15 with her, how many rides can she go on?
  - c) Ally has R50. She buys a hotdog that costs R11. How many rides can she go on with the money she has left over?



# Geometric patterns

## Example

Look at the pattern of the triangles below.



We can describe the pattern of the triangles by using the letters of the alphabet. We choose a letter in the place of a certain colour. Use the letters A and B to describe the pattern of triangles.

## Answer

It has the pattern of ABABABAB.

## Example

Use the letters A and B to describe the pattern of the triangles.



## Answer

ABBABBABB.

## Activity 12

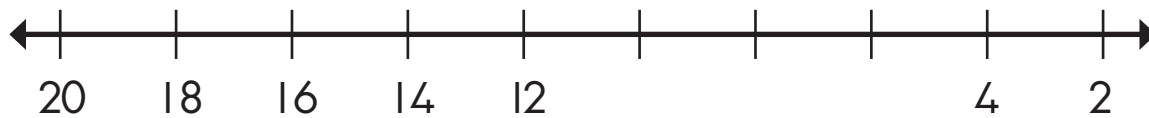
- I. Describe the following patterns by using letters of the alphabet.



# Number patterns

## Activity 13

1. Copy and fill in the missing numbers.



2. Write down all the multiples of 2 from the number line.



3. Write down all the multiples of 5 from the number line.



4. Write down all the multiples of 10 from the number line.



## 5. Group activity

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

TERM 4

- a) Read all the numbers from 67 to 30.
- b) Read all the multiples of 2.
- c) Read all the multiples of 10.

# Position and direction

## Position

To describe the position of an object we use the words:

left	right	up	down	behind
in front of		on top of	under	front
back	over	above	near	far

### Example

Look at the picture.



The green book is to the **left** of the orange book.

The purple book is to the **right** of the orange book.

The blue book is **under** the red book.

The cat lays **on top of** the yellow book.

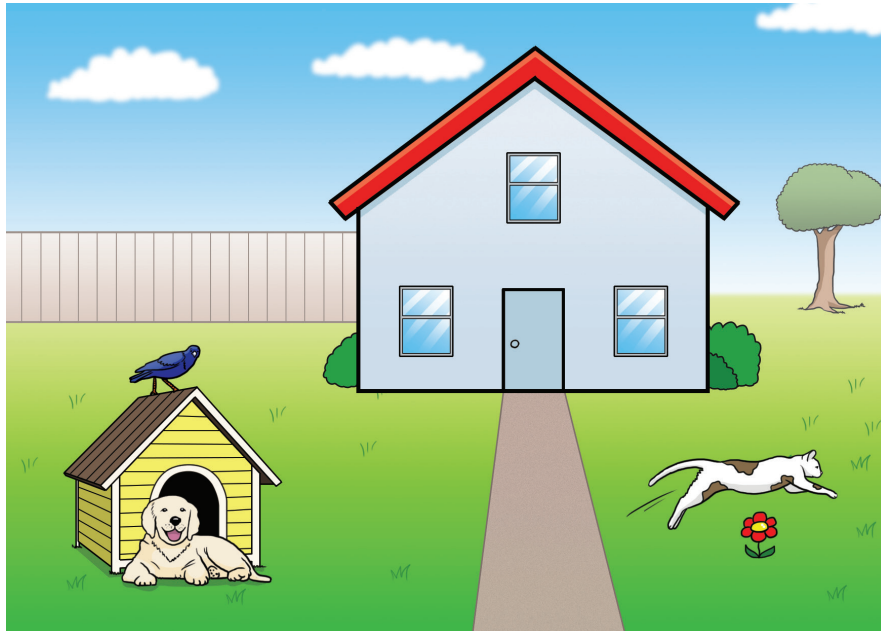
A small mouse is **behind** the books.

The butterfly is **above** the cat.

## Activity 14

1. Look at the picture. Choose the correct word to complete each statement.

near	under	far	above	over	behind	front
------	-------	-----	-------	------	--------	-------



- The dog is in \_\_\_\_\_ of the kennel.
- The fence is \_\_\_\_\_ the house.
- The cat jumps \_\_\_\_\_ the flower.
- The bird is \_\_\_\_\_ the kennel.
- The tree is \_\_\_\_\_ from the house.

2. Draw your own picture to show the meaning of these words.

front	left	back	above	near	far	right	top
-------	------	------	-------	------	-----	-------	-----

Label your picture.

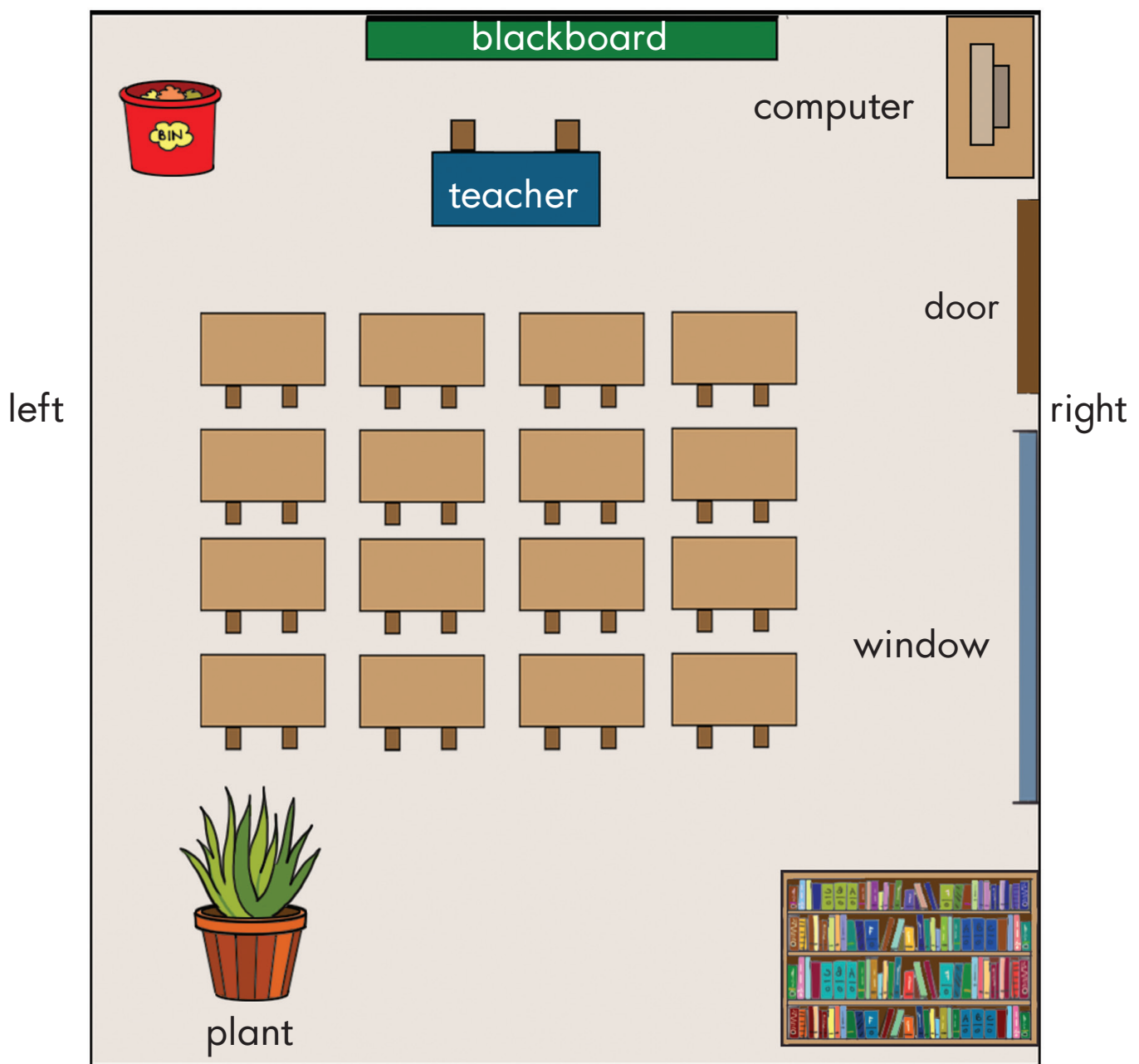
# Direction

## Practical Activity

3. Look at the classroom.

Use the words in the box to complete the sentences:

back	left	right	between	window	in front of
------	------	-------	---------	--------	-------------

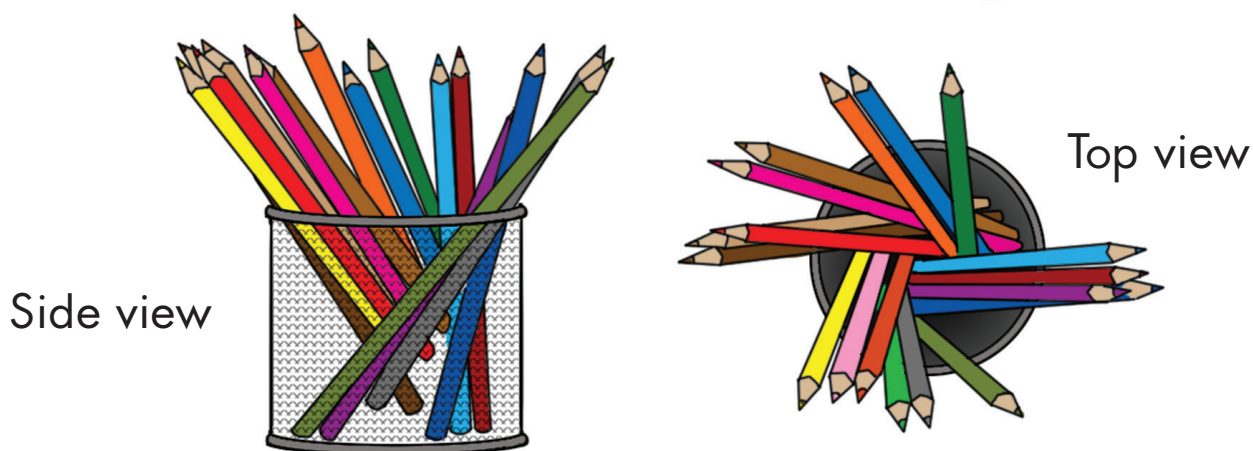


- a) The teacher's desk is \_\_\_\_\_ the black board.
- b) The door is \_\_\_\_\_ the computer and the window.
- c) The bin is to the \_\_\_\_\_ of the blackboard.
- d) The plant is at the \_\_\_\_\_ of the classroom.
- e) The teacher walked from her desk to the right and to the right and towards the back of the class. After passing three rows of desks she turns right. The teacher is in front of the \_\_\_\_\_.
- f) The teacher got up from her desk, walked to the left and passed four rows of desks, then turned right. The teacher is between the desk and the \_\_\_\_\_. She then proceeded to walk to the left until she reached the \_\_\_\_\_.
- g) Explain to your friend how the teacher could get to the computer from the last stop she made. Now set up 5 questions using your classroom.



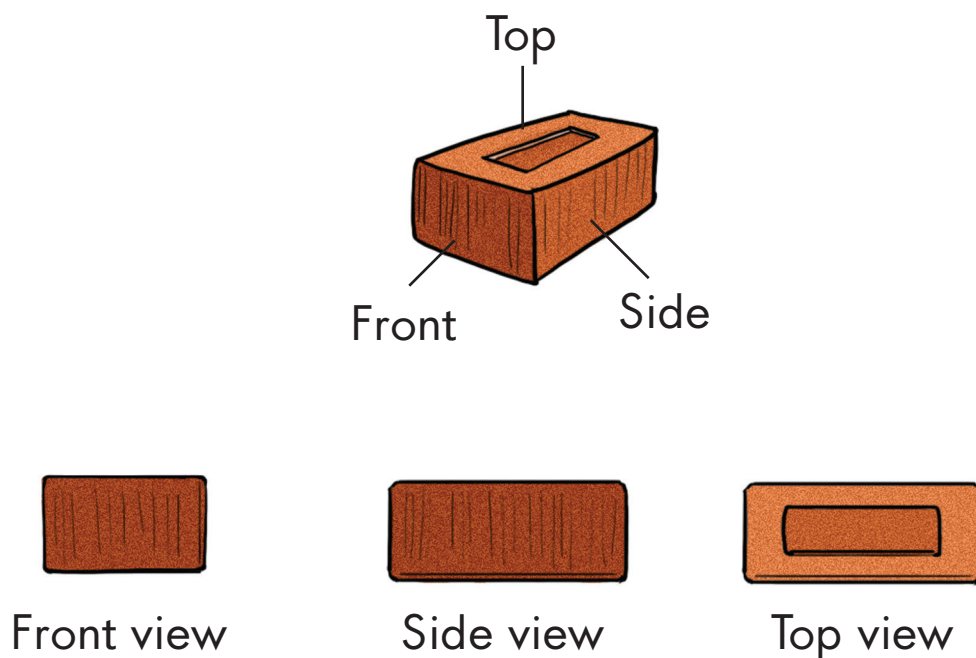
## Position and view

An object can be viewed from the front, the top or the side. The same object looks different when you view it from the different positions.



### Example

Look at the different views of a brick.



## Example

Look at the shoes.



This is the **front view** of the shoes.


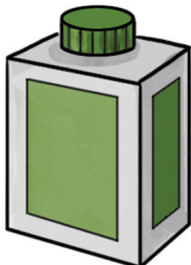
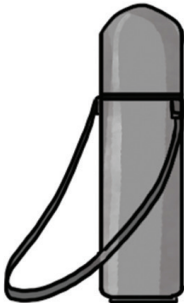





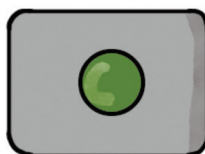



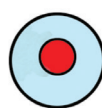



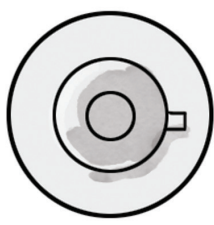
This is the **top view** of the shoes.

## Activity 15

- I. Match the object with the side view and top view.

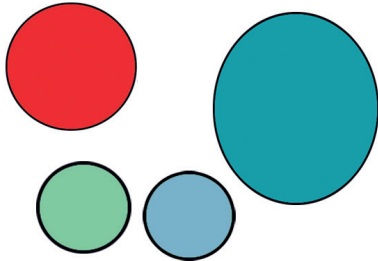
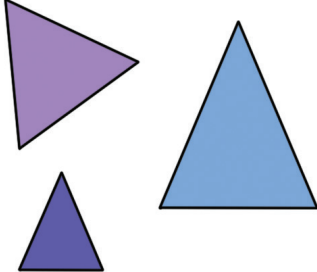
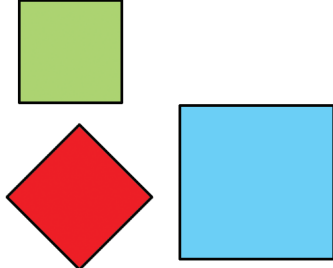
Write down the object and the letter for example: Cup A.

				
Cup	Can	Flask	Bottle	Box

	Side view	Top view
A		
B		
C		
D		
E		

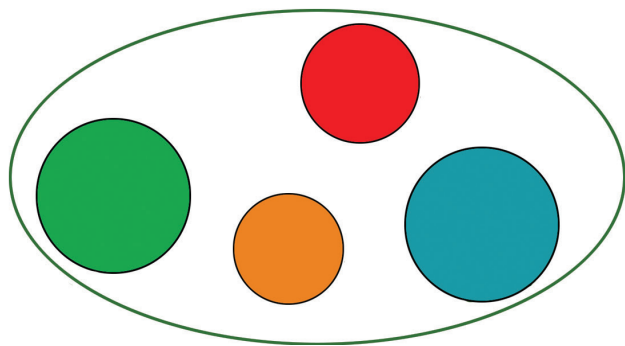
# Two-dimensional shapes

Look at the two-dimensional shapes.

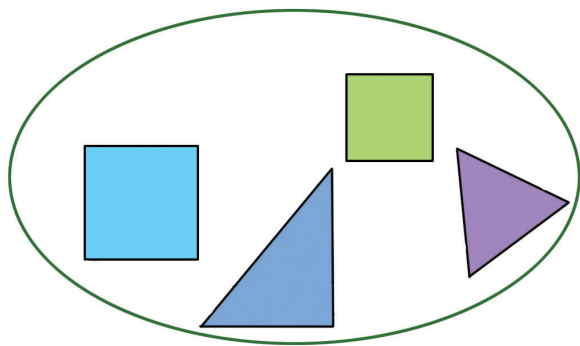
Circles	Triangles	Squares
		
A circle is round.	A triangle has 3 straight sides.	A square has 4 straight sides with the same length.

## Example

Look at the two groups. How were they sorted?



Group A






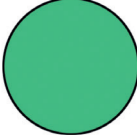


Group B

## Answer

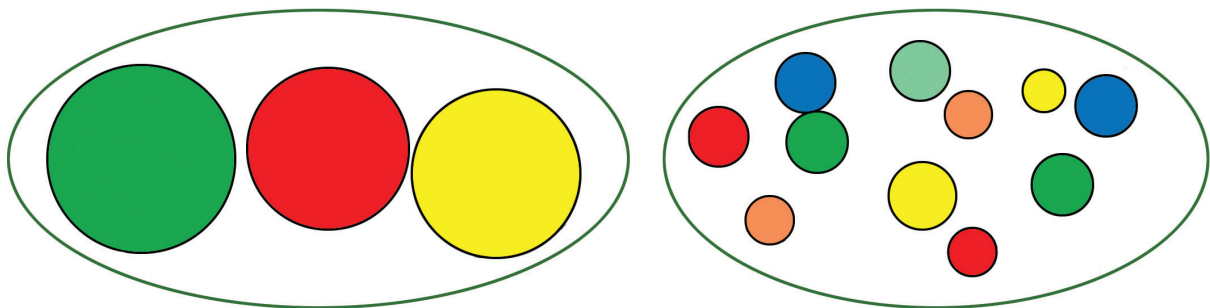
The shapes in Group A are round.  
All the shapes in Group B have straight sides.

## Activity 16

1. Look at the grid and use the words in the box to answer the questions:

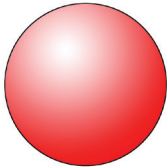

triangle	circle	square
		
		

- What shape is to the left of the black handbag?
  - What shape is to the right of the ring?
  - What shape is between the triangle and the square?
  - Name the round shape on the grid.
  - What shape will the brim of the hat be?
2. Look at the circles. How were they sorted?



# Three-dimensional objects

A three-dimensional object has height, width and length.

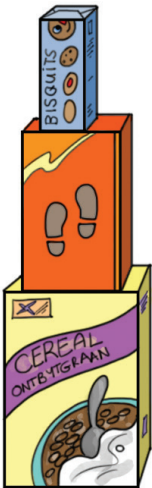
Ball	Box
	
<p>This is the shape of a <b>ball</b>.</p> <p>It will <b>roll</b> on the floor.</p>	<p>This is the shape of a <b>box</b>.</p> <p>It will <b>slide</b> on the floor.</p>

## Example

Look at the stack of boxes.  
Why can you stack the boxes?

## Answer

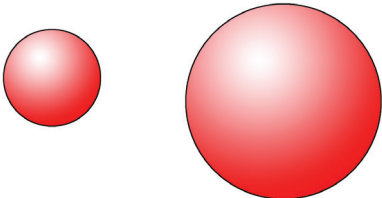
The boxes have straight sides, so it can be stacked.



TERM 4

## Example

Can you stack the small ball on top of the big ball?


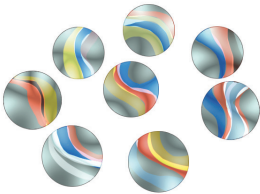
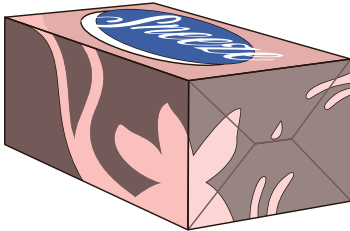
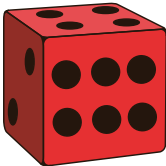


## Answer

No, you cannot stack the small ball because the balls are round.

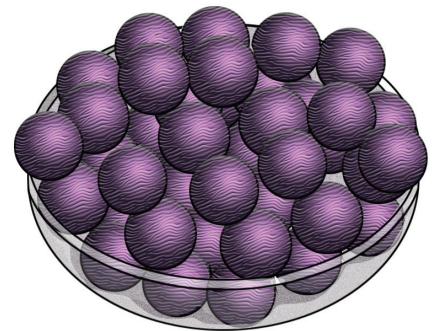
## Activity 17

1. Copy and complete the table by using a tick (✓) or cross (X). Do not copy the pictures.

		Ball	Roll	Box	Slide
a)					
b)					
c)					
d)					

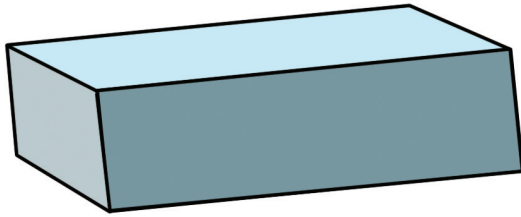
2. Look at the chocolate balls in the bowl.

- Will it slide?
- Will it roll?
- Can you stack two chocolate balls on each other?

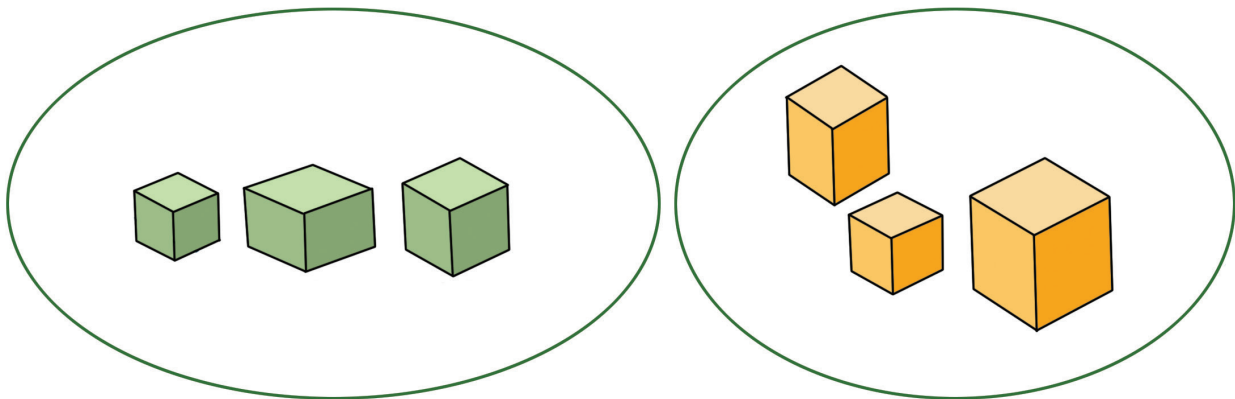




3. Look at the three-dimensional object.  
It is a shaped like a box.

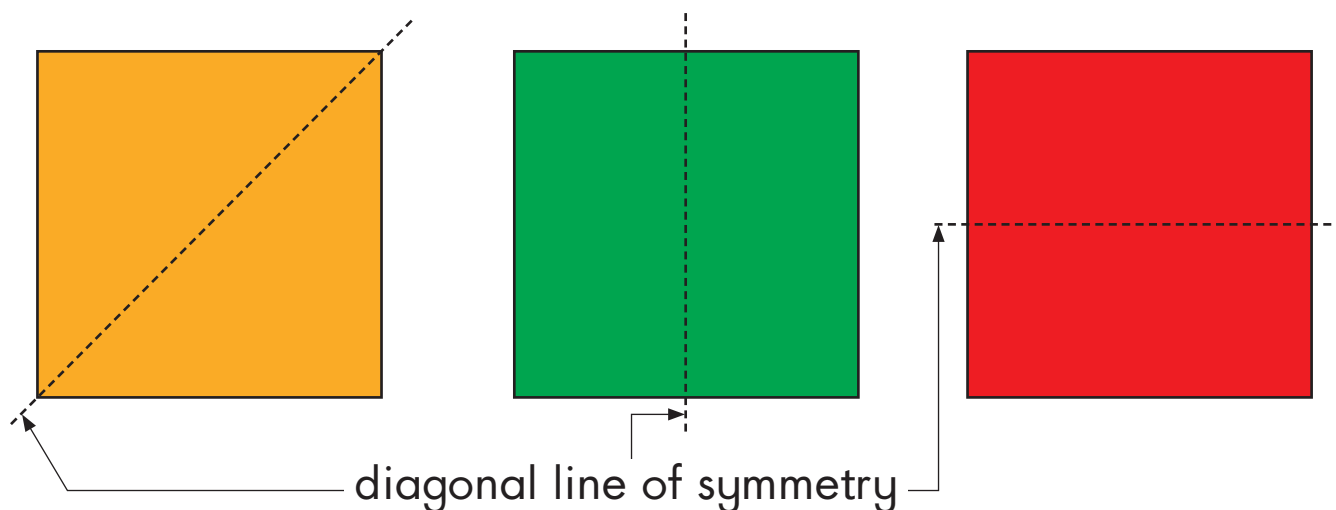


- a) Does it have straight sides or is it round?
  - b) Will it slide?
  - c) Will it roll?
  - d) Can you stack two boxes on top of one another?
4. Look at the boxes in the two groups.  
How were they sorted?



# Symmetry

A shape has symmetry when the two halves are the same. The line of symmetry divides the shape into two equal parts.

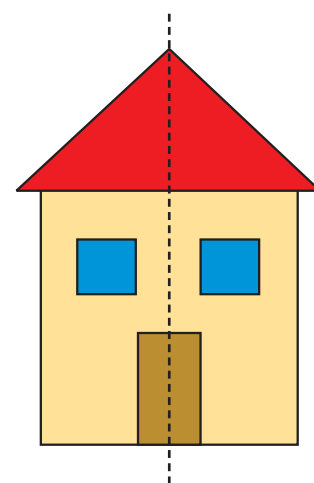


## Example

Is the dotted line on the shape a line of symmetry?

## Answer

Yes. The shapes on both the sides of the dotted line match.

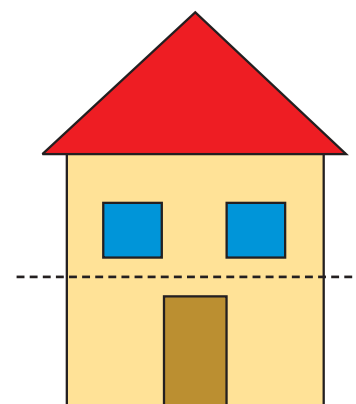


## Example

Is the dotted line on the shape a line of symmetry?

## Answer

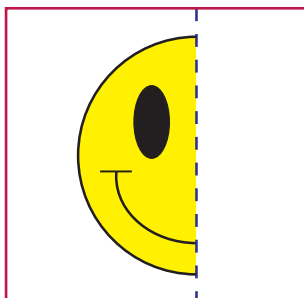
No. The two sides do not match.



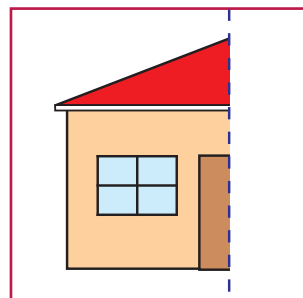
## Activity 18

1. Complete the shape using the line of symmetry.

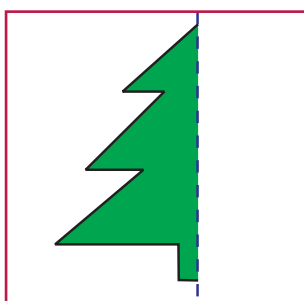
a)



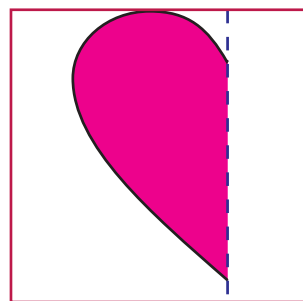
b)



c)



d)



2. Is the South African flag symmetrical?

Draw a line of symmetry that divides the South African flag into two equal parts.



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3. Show the line of symmetry on each of these drawings. Use a ruler.

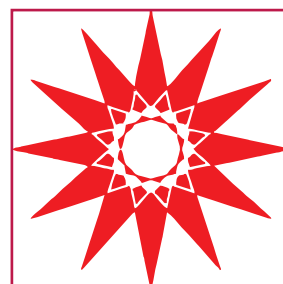
a)



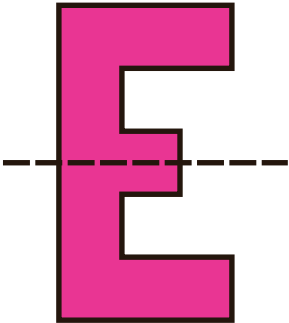
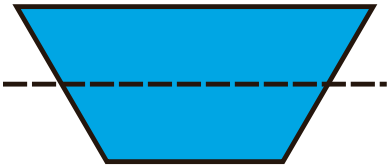
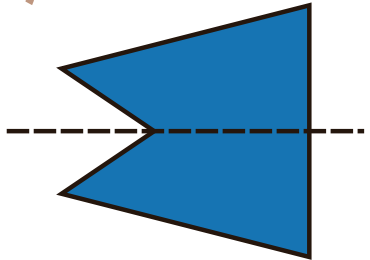
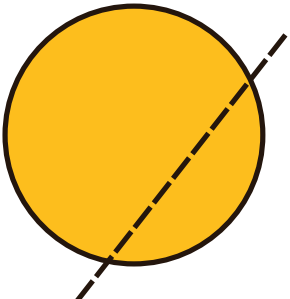
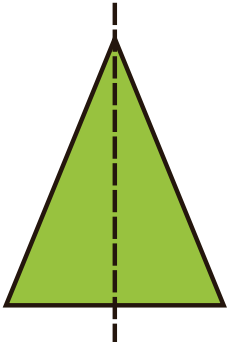
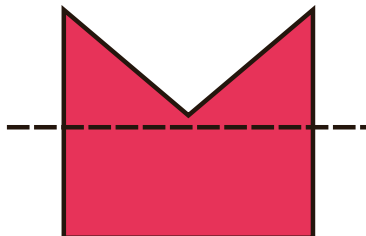
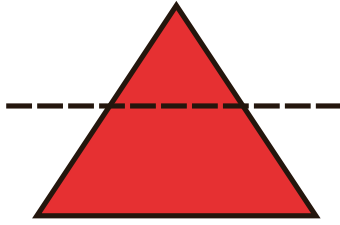
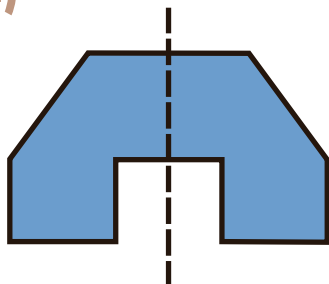
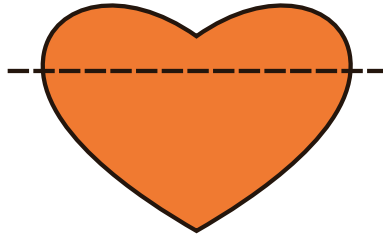
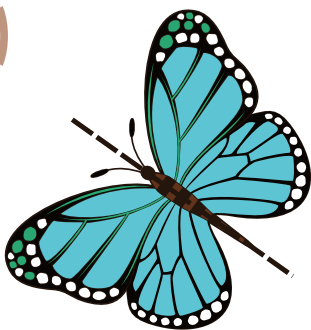
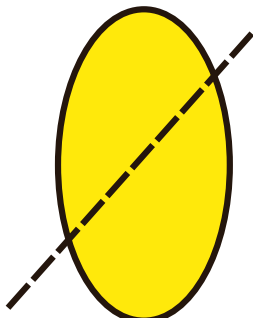

b)



c)







3. State if the dotted line on each shape is a line of symmetry or not. Write yes or no.

a) 	b) 	c) 
d) 	e) 	f) 
g) 	h) 	i) 
j) 	k) 	l) 

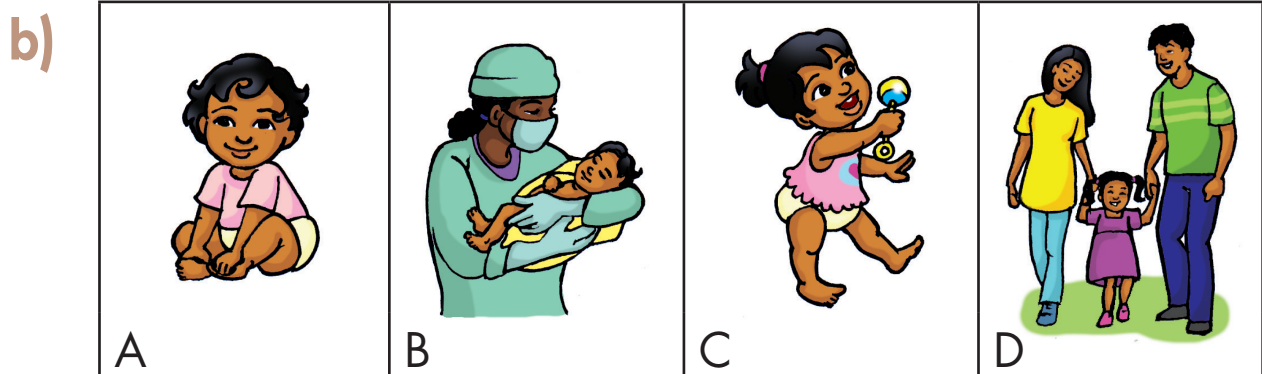
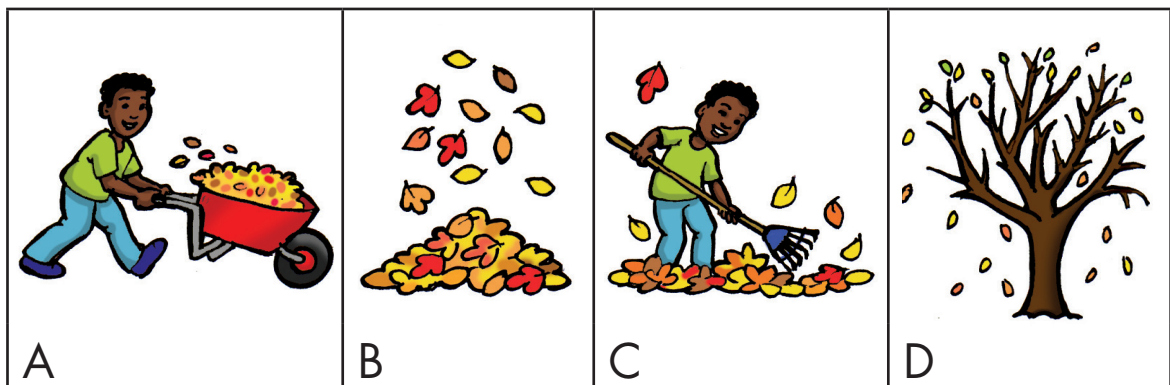
# Sequencing events

The life cycle of a frog has four stages.  
The stages are shown with pictures below.

<p>A</p>  <p>Eggs</p>	<p>B</p>  <p>Tadpole</p>	<p>C</p>  <p>Froglet</p>	<p>D</p>  <p>Adult frog</p>
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## Activity 19

1. a) What is the order in which the following pictures should be arranged?



It takes less time to run than to walk to school.

2. Which activity takes more time?

a) To count the seats in a bus or to count the seats in a car?

b) To fill a 1 litre water bottle or to fill a glass?

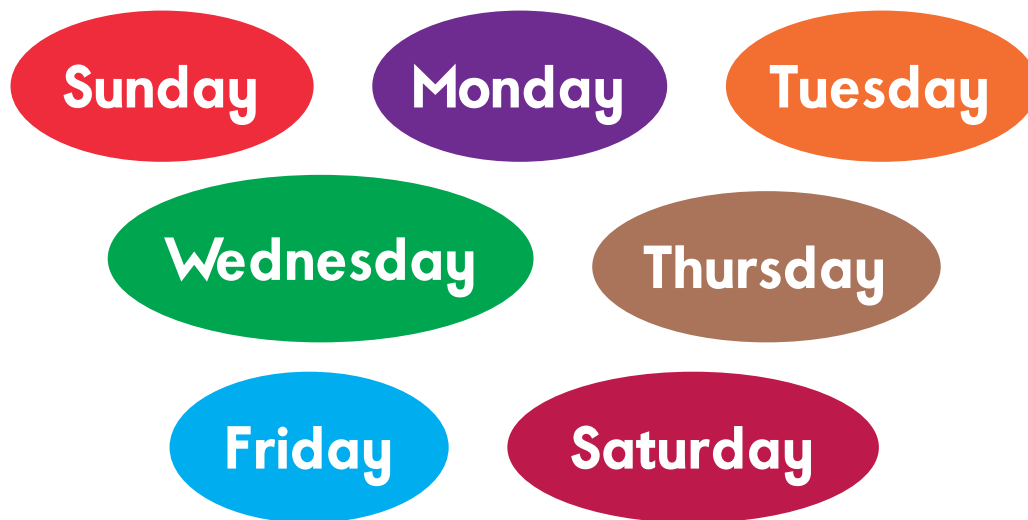
c) To switch on the television or to dig a deep hole?



3. Tell your partner what time of the day you usually do the following :

	What time do you ...	Morning	Afternoon	Evening
a)	wake up?			
b)	watch television?			
c)	play with friends?			
d)	go to the library?			
e)	brush your teeth?			
f)	go to bed?			
g)	polish your shoes?			
h)	brush your hair?			
i)	see the stars?			
j)	go to school?			

4. Below are the days of the week

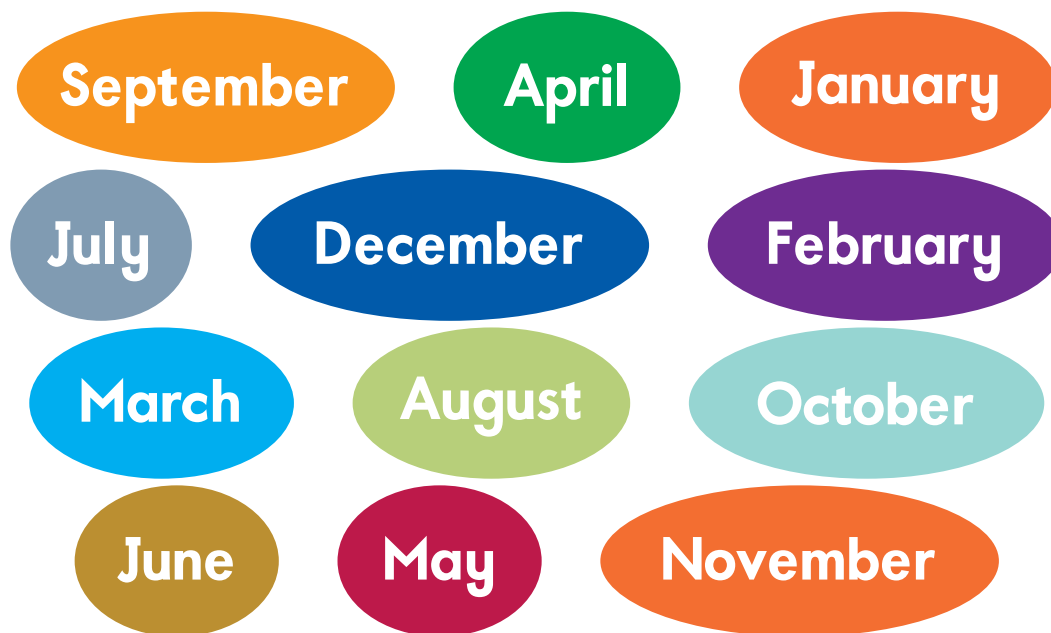


Copy and complete the table.

	Yesterday was....	Today is....	Tomorrow will be....
a)	Thursday	Friday	
b)		Monday	
c)		Wednesday	
d)		Saturday	
e)		Sunday	



5. Below are the names of the months.  
Complete or fill in.



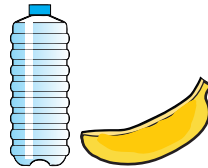
- a) \_\_\_\_\_ is the first month of the year.
- b) \_\_\_\_\_ is the second month of the year.
- c) \_\_\_\_\_ is the third month of the year.
- d) \_\_\_\_\_ is the fourth month of the year.
- e) \_\_\_\_\_ is the fifth month of the year.
- f) \_\_\_\_\_ is the sixth month of the year.
- g) \_\_\_\_\_ is the seventh month of the year.
- h) \_\_\_\_\_ is the eighth month of the year.
- i) \_\_\_\_\_ is the ninth month of the year.
- j) \_\_\_\_\_ is the tenth month of the year.
- k) \_\_\_\_\_ is the eleventh month of the year.
- l) \_\_\_\_\_ is the twelfth month of the year.

# Mass

We can compare objects by looking at their mass.

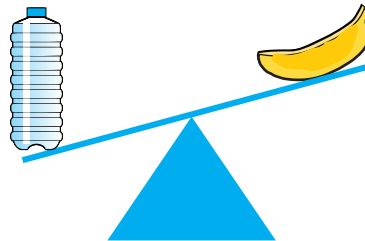
## Example

Which is heavier: a full bottle of water or the banana?



## Answer

The bottle of water causes the balance scale to move down.









We say that the water bottle is heavier than a banana.

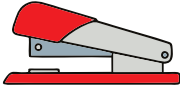



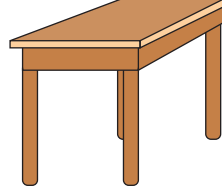
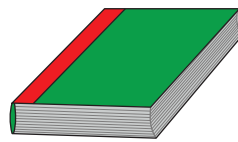
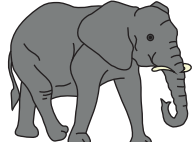

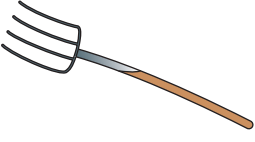
TERM 4

## Activity 20

1. Put these objects in order from light to heavy. Use numbers 1, 2 or 3.

For example, the answer for number a) is: 2 3 1

	1	2	3
a)			
b)			

c)			
d)			
e)			

Use the balance scale to answer the questions.  
Work as a group of 5 for these tasks.

2. How many paper clips are needed to balance:
  - a) a small marble
  - b) 3 small marbles
  - c) a bottle top
  - d) 4 bottle tops?
3. How many pencils are needed to balance:
  - a) 4 marbles
  - b) 8 bottle tops
  - c) 5 erasers?
4. Use the balance scale to answer the questions.
  - a) 8 dice have the same mass as \_\_\_\_ marbles.
  - b) 5 bottle tops have the same mass as \_\_\_\_ marbles.

- c) 10 drinking straws have the same mass as \_\_\_\_ marbles.
- d) 3 pegs have the same mass as \_\_\_\_ marbles.

5. Estimate the mass of the object in marbles.  
Use the balance scale to check your estimates.  
Then measure the mass.

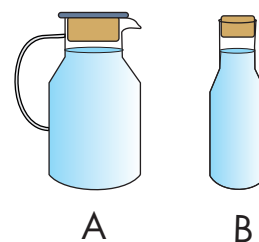
	Object	Unit of measure	Estimate	Measurement
a)	Pair of scissors	marbles	____ marbles	____ marbles
b)	Pencil case	marbles	____ marbles	____ marbles
c)	An exercise book	marbles	____ marbles	____ marbles
d)	A stapler	marbles	____ marbles	____ marbles
e)	A wrist watch	marbles	____ marbles	____ marbles

6. Order the objects in the table according to their mass from light to heavy.

# Measuring and comparing capacity

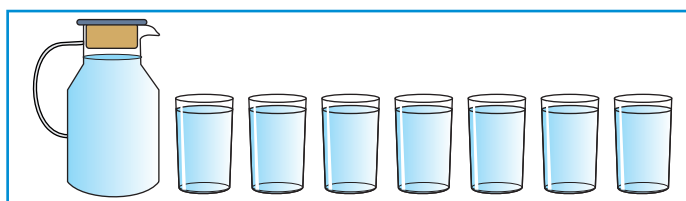
Which jug has more capacity?

We can answer this question by asking another question.

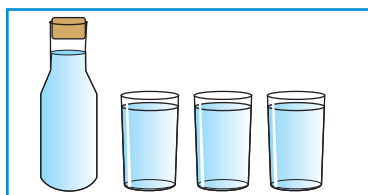


The new question is: How many glasses that are the same size can each jug fill?

The jug can fill 7 glasses of water.



This jug can fill 3 glasses of water.

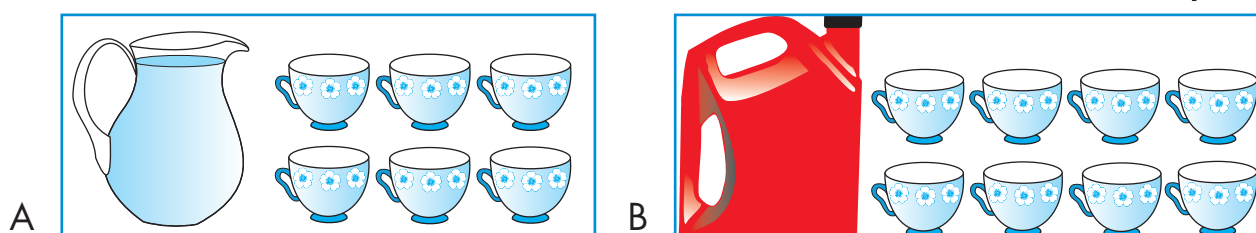


The capacity of jug 1 is more than the capacity of jug 2.

We can also say the capacity of jug 2 is less than the capacity of jug 1.

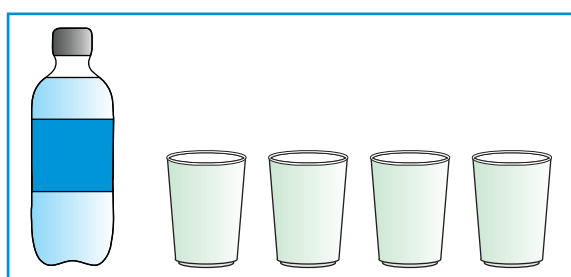
## Activity 21

1. The two containers below can each fill these cups.

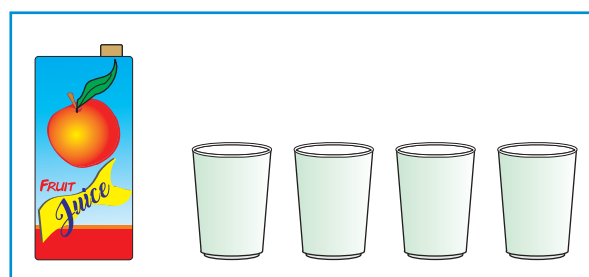


- a) How many cups can be filled from container A?
- b) How many cups can be filled from container B?
- c) Container A has (more/less) capacity than the Container B?

2.



A

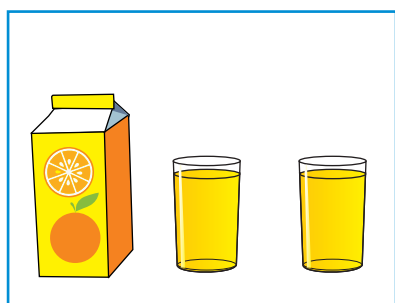


B

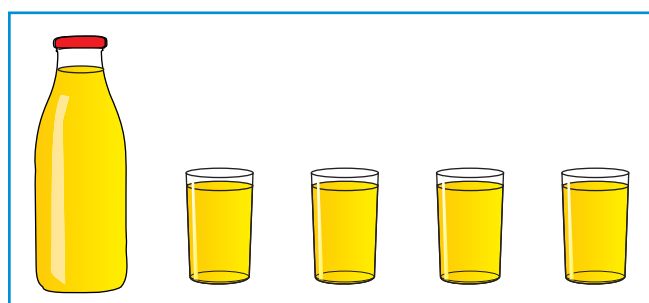
- a) How many paper cups can be filled from container A?
- b) How many paper cups can be filled from container B?
- c) What can you say about the capacities of the two containers?

TERM 4

3. Which container below holds more?

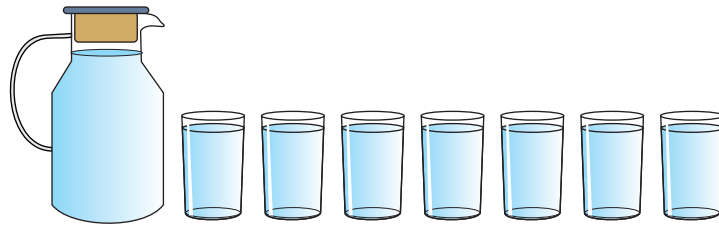


A



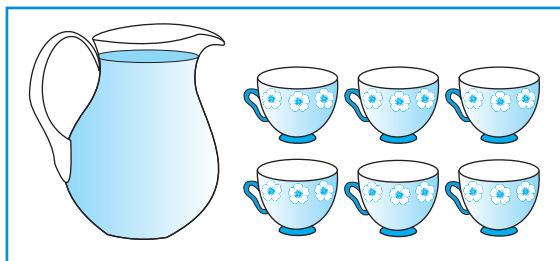
B

## Example



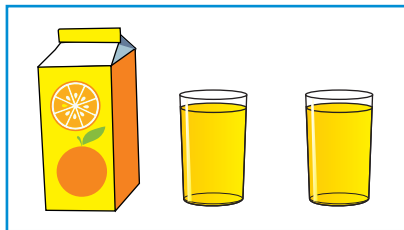
Seven glasses can be filled from the jug. We say there are 7 glasses of water in the jug.

4. a)



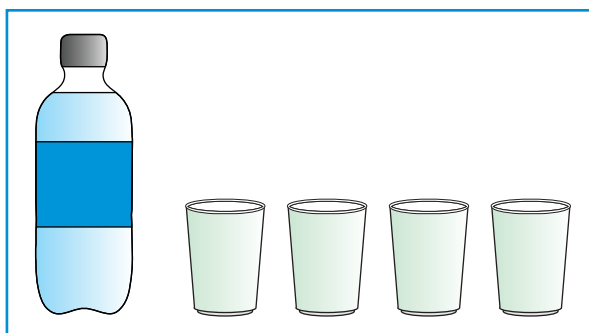
There are \_\_\_\_ cups of water in the jug.

b)



There are \_\_\_\_ glasses of juice in the carton.

c)




























There are \_\_\_\_ paper cups in the bottle.



# Data handling

## Example

The pictograph shows 20 learners' favourite fruit.

Fruit	Number of learners
Apple 	      
Strawberry 	     
Pear 	  
Banana 	   
Key:  represents one learner	

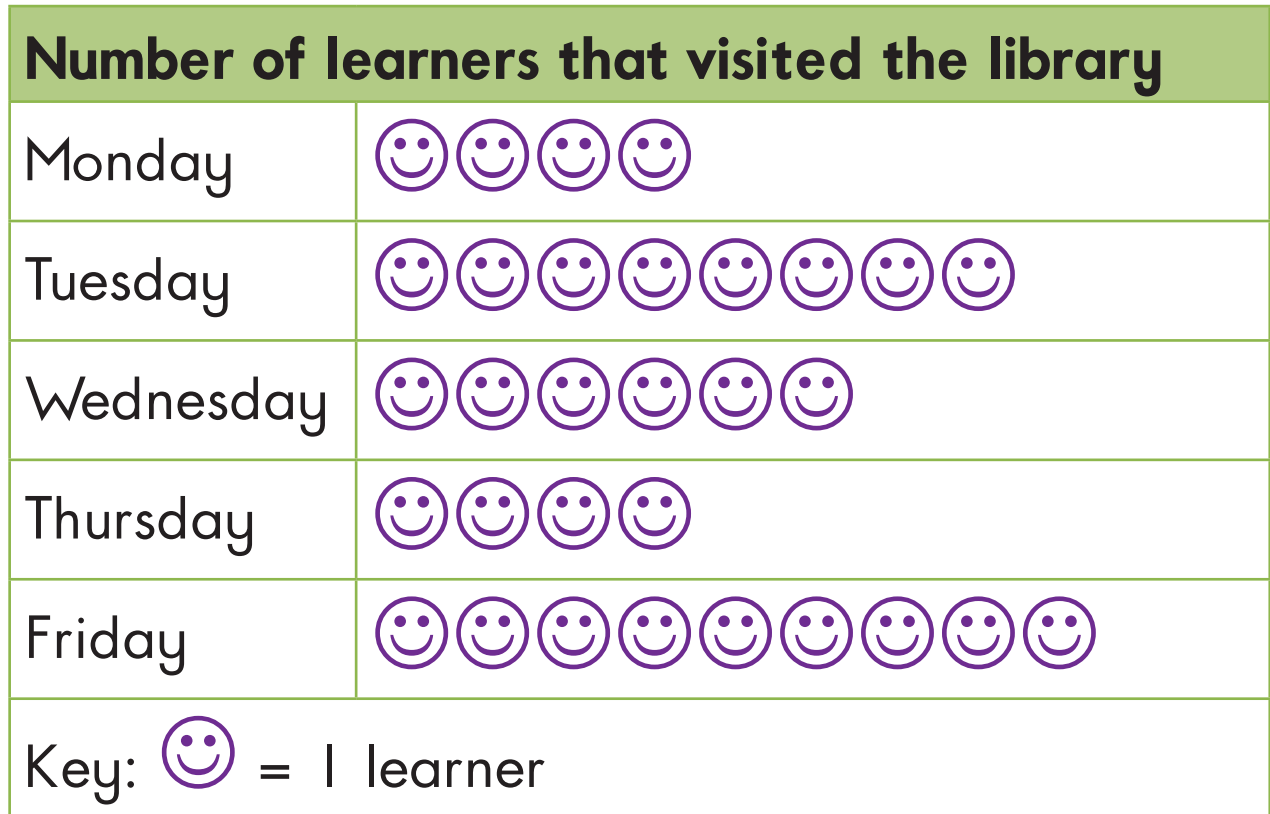
- What is the most popular fruit?
- How many learners chose bananas as their favourite fruit?
- How many learners chose pears and strawberries as their favourite fruit?

## Answer

- apple
- 4 learners
- $6 + 3 = 9$  learners

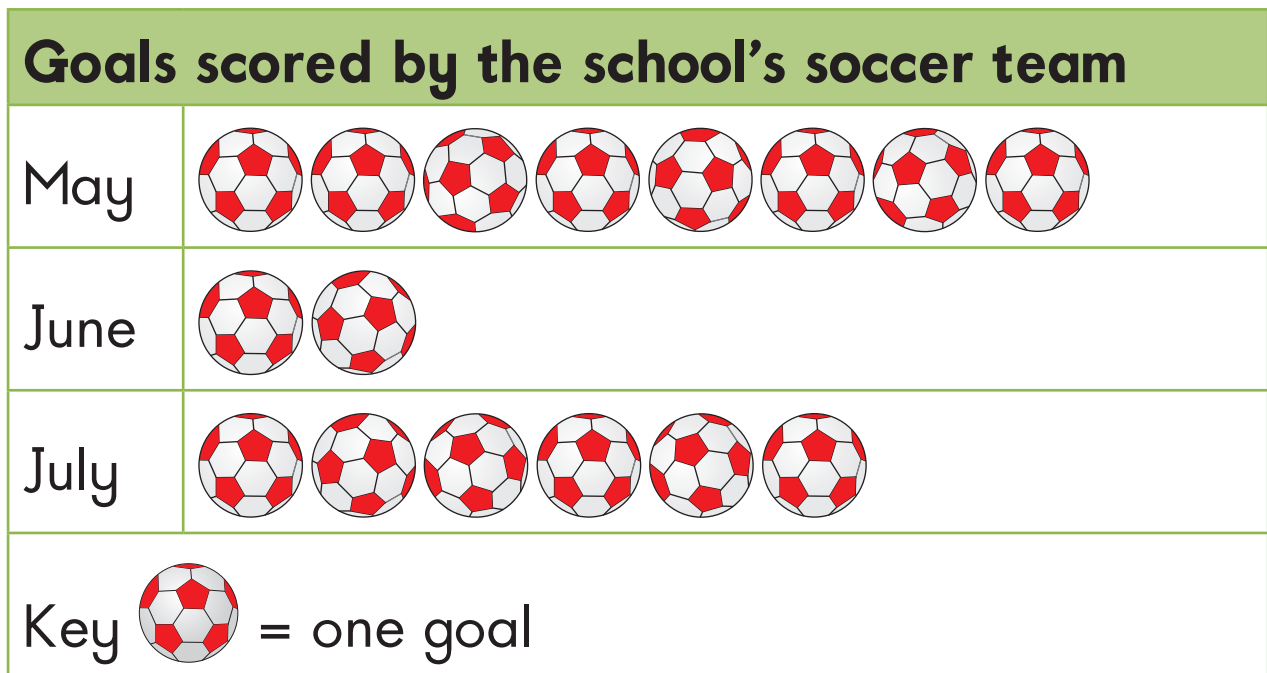
## Activity 22

1. The librarian used a pictograph to display the number of learners who visited the library.



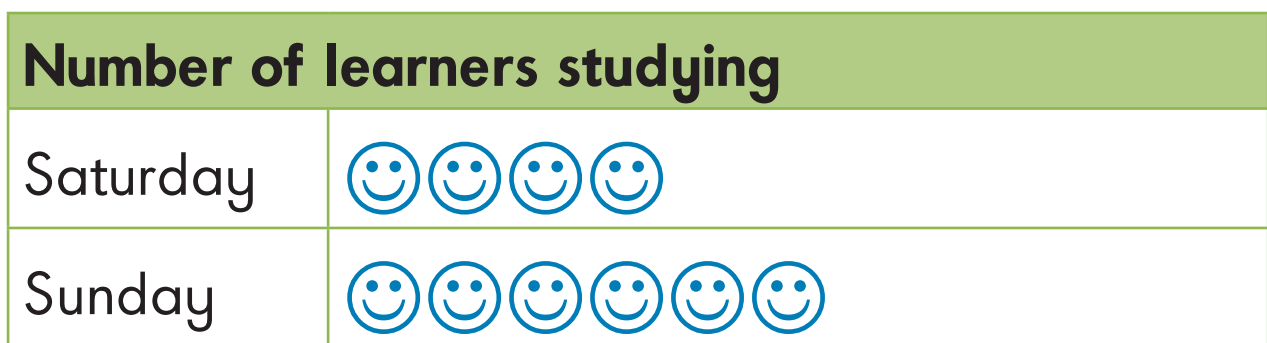
- a) How many learners visited the library on Tuesday?
- b) How many learners visited the library on Monday?
- c) On which day did most learners visit the library?
- d) How many learners visited the library on Thursday and Friday?

2. Look at the pictograph.



- In which month did the soccer team score the most goals?
- How many goals did the soccer team score in July?

3. Look at the pictograph.



- How many learners studied on Saturday?
- How many learners studied on Sunday?

# 100-number grid



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100











Also available in the Foundation Phase

