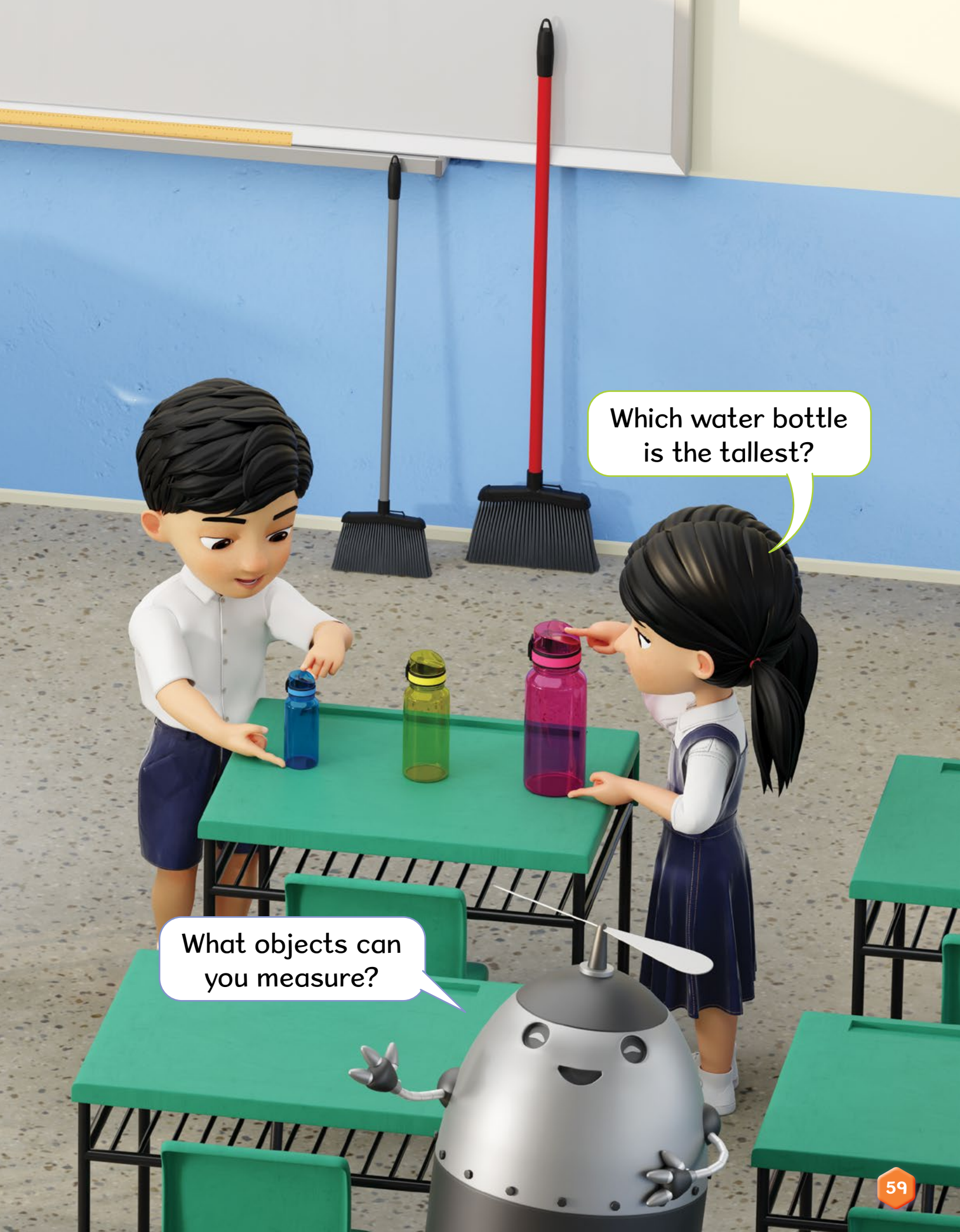
12 Length


EXERCISE BOOK
I can measure these objects with a ruler.
EXERCISE BOOK
Crayon

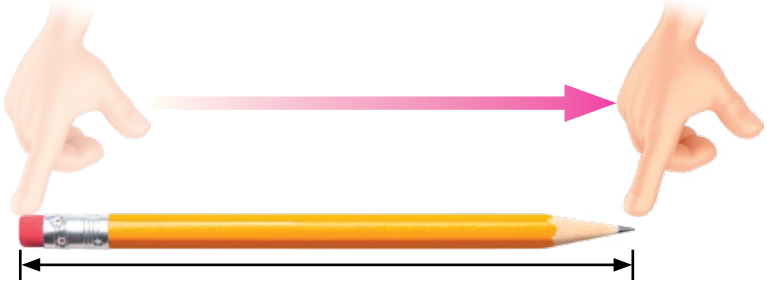

Which water bottle is the tallest?
What objects can you measure?

Measuring Length in Centimetres

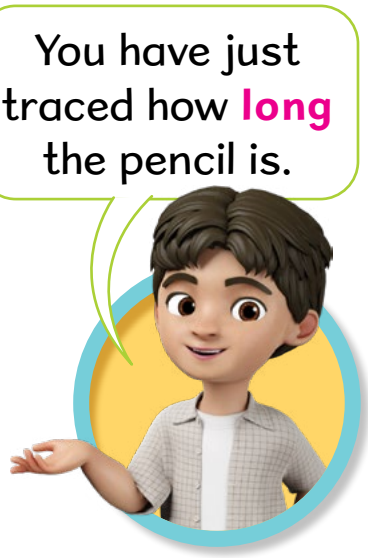
Let's Learn

1 Objects may have different types of length.
We can measure how **long**, **high**, **wide** or **thick** an object is.

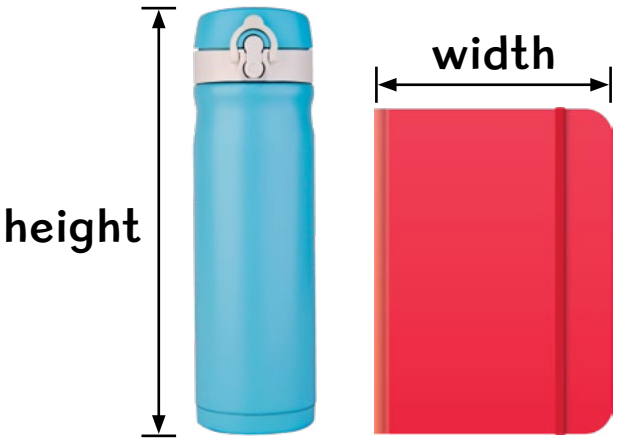
(a) Move your finger from one end to the other end of the pencil.



length of pencil



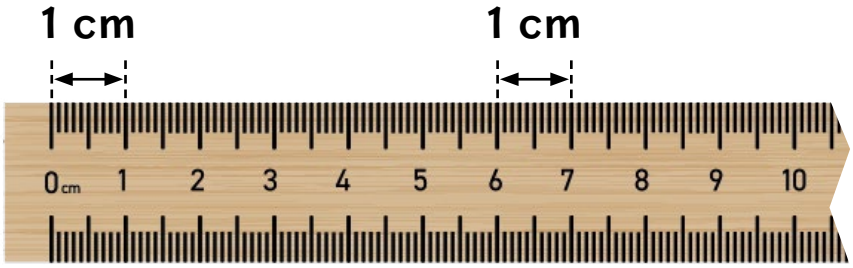
(b) Move your finger from one end to the other end of the object.



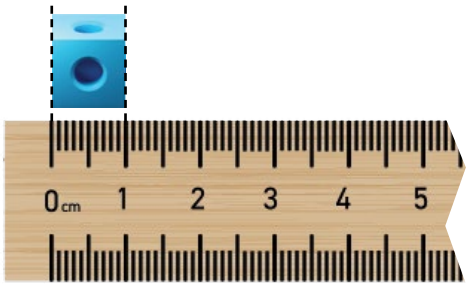
⟷ shows the lengths of different objects.

2 We use a ruler to measure length.
The **centimetre** is a unit of length.
We write **cm** for centimetre.
We read 1 cm as 1 centimetre.

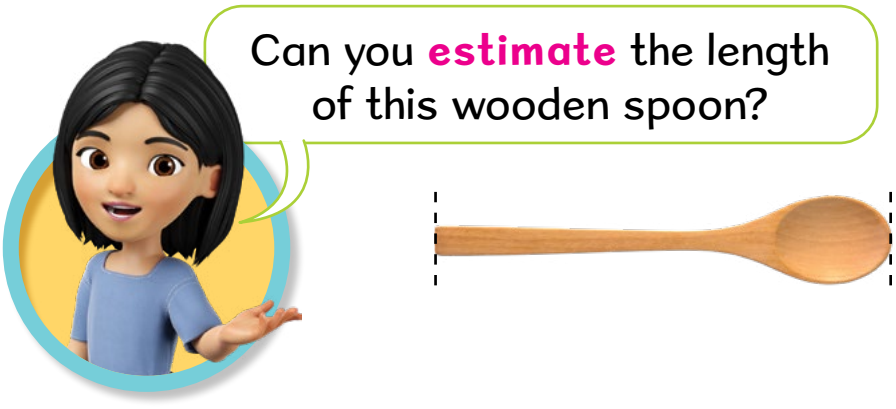
3 The distance from 0 to 1 is 1 cm in length.

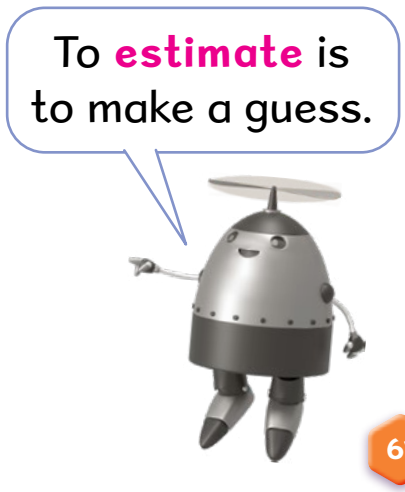


The cube is 1 cm wide.

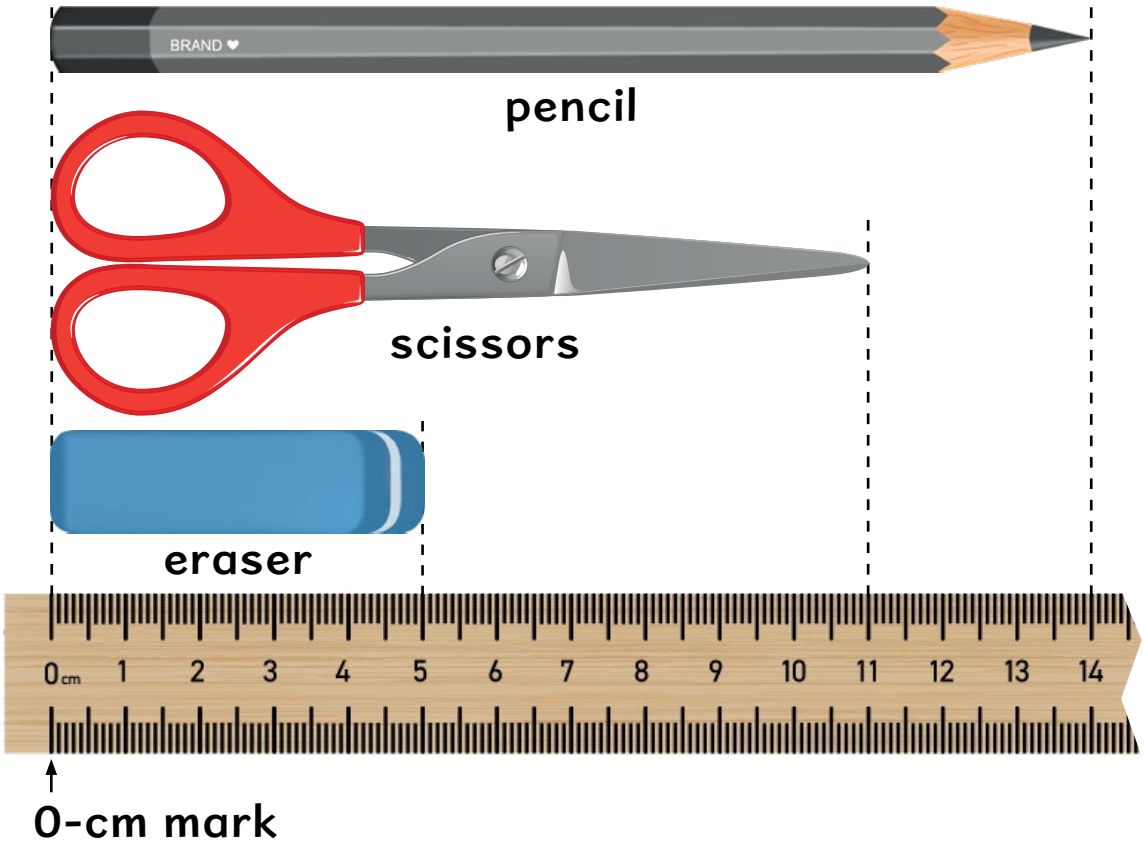


The width of your thumb is about 1 cm.



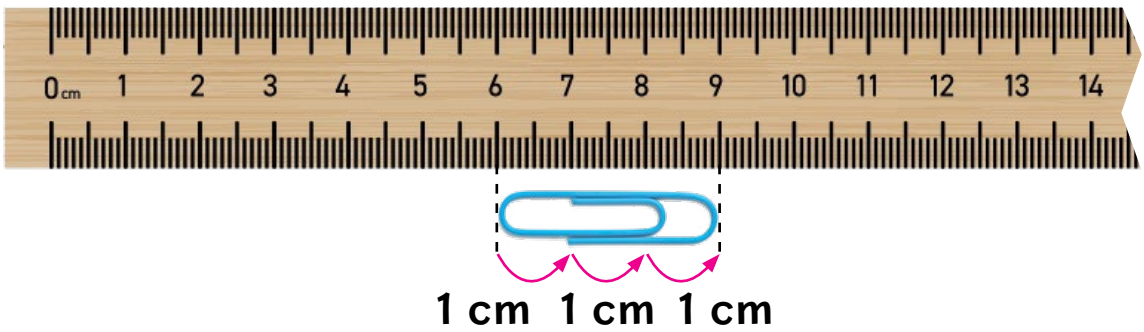


4 **(a)** It is easier to measure the length of an object when we start from the zero centimetre (0-cm) mark.



The eraser is 5 cm long.
The pair of scissors is 11 cm long.
The pencil is 14 cm long.

(b) We can also find the length of an object when one of its ends is not placed at the 0-cm mark.

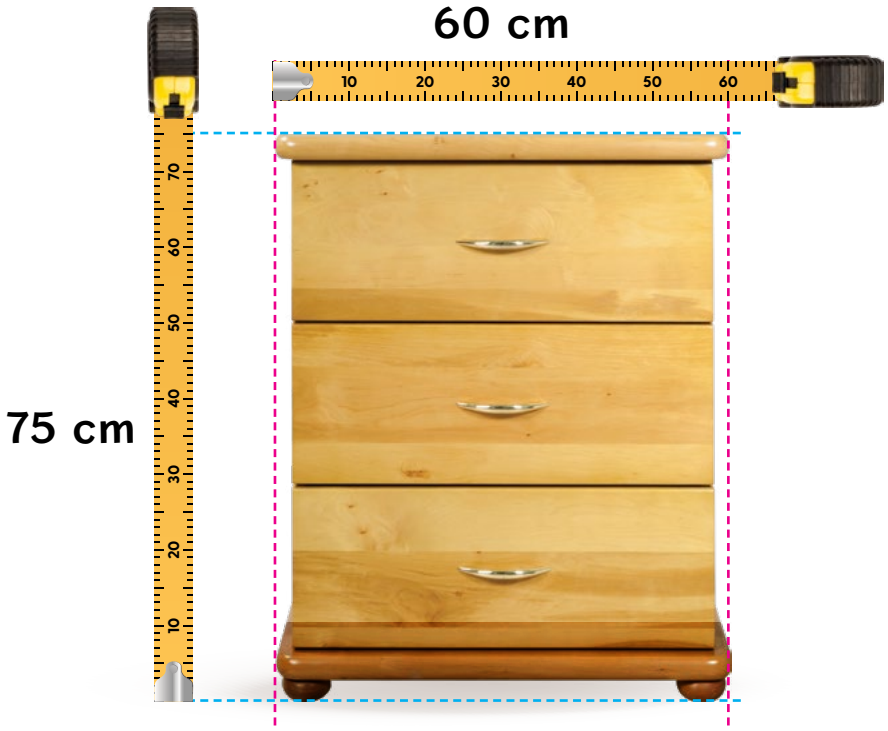


9 cm – 6 cm = 3 cm

The paper clip measures 3 centimetres.

5 A **measuring tape** is used to measure the length of large or round objects.

(a)



The chest of drawers is 75 cm tall and 60 cm wide.

(b)

Maths Talk

Gopal measures the length of the stapler.

Is the length of the stapler correct? Explain.

Hands-on Activity

Work in groups.

(a) Use a ruler to measure the length of your pencil and the height of your water bottle.

☐ cm

☐ cm

(b) Use a measuring tape to measure the length around your head and the length around your wrist.

☐ cm

☐ cm

Let's Practise

1 Find the length.

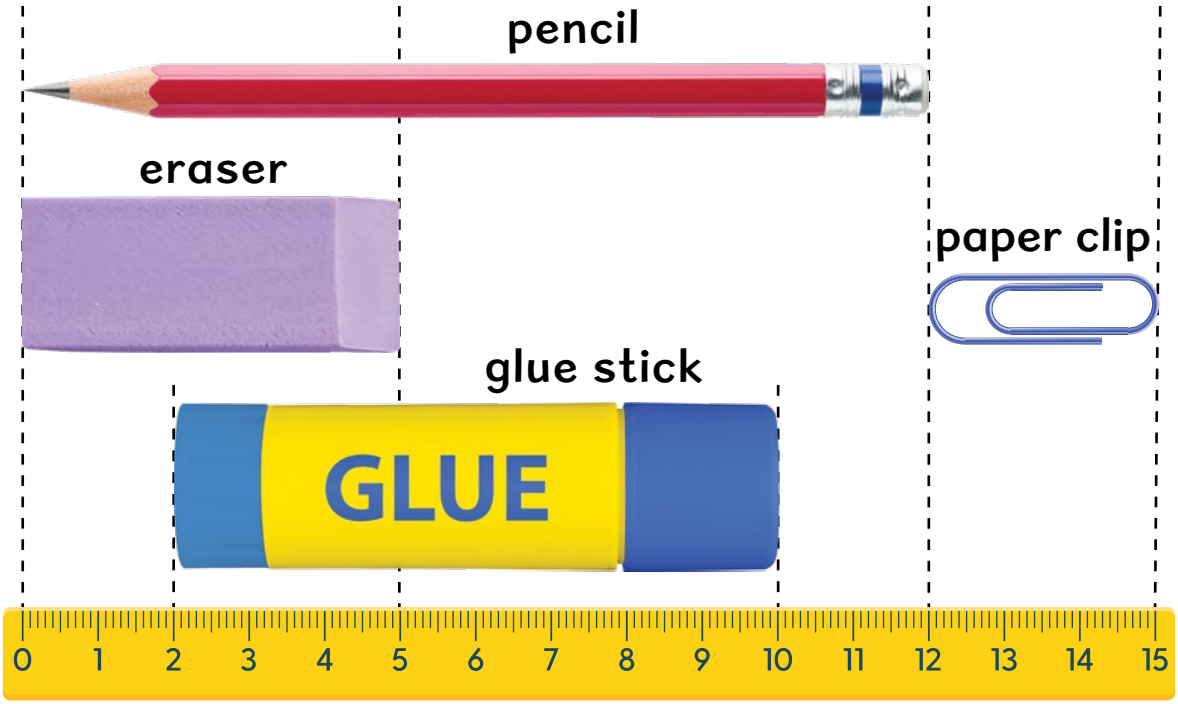
(a)

☐ cm

(b)

☐ cm

2 Find the length of the objects.



The length of the pencil is ☐ cm.

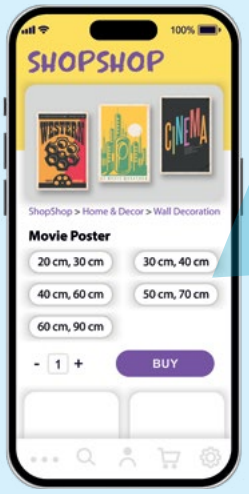
The length of the eraser is ☐ cm.

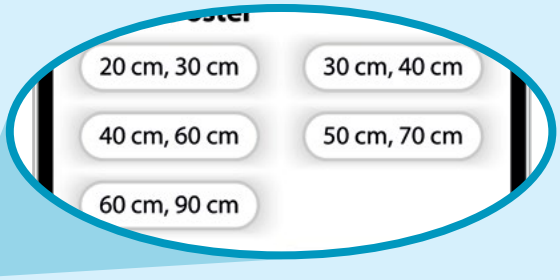
The length of the glue stick is ☐ cm.

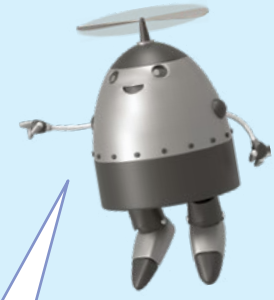
The length of the paper clip is ☐ cm.

Mathematics AROUND US

Mrs Tan wants to buy a poster online from ShopShop. The poster comes in various sizes.



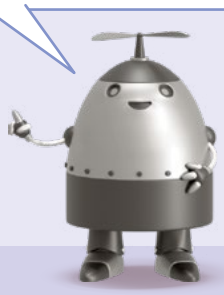




What do you think the measurements refer to? Which set of lengths should Mrs Tan choose to get the largest poster?

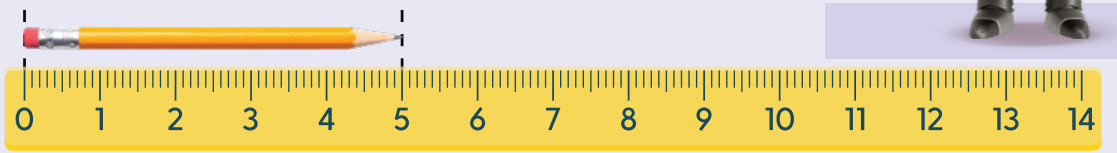
Thinking Aloud

The length of the pencil is different each time. Do you agree? Explain.

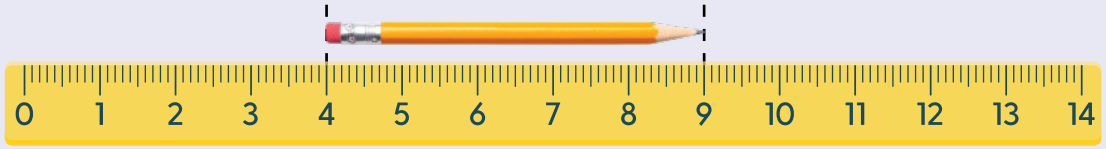


Leila places the same pencil on the same ruler at different positions as shown below and then records the length each time.

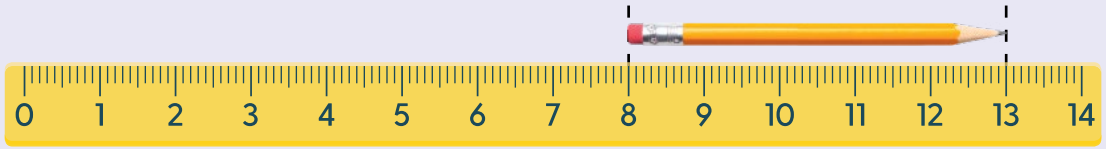
(a)



(b)



(c)



Multiplication Stories

Let's Learn

1 There are 4 groups.
Each group has 5 slices of cakes.

5 + 5 + 5 + 5 = 20
4 groups of 5 = 20

We write the **multiplication equation**.

4	×	5	=	20
four	times	five	equals	twenty

There are **20** slices of cake altogether.

"×" means multiply.
We can also say,
multiply 4 and 5.

To multiply is to add
groups of the same
number together.

2 Make a multiplication story.

(a)

There are 5 stacks.
Each stack has 6 doughnuts.

5 × 6 = 30

There are **30** doughnuts altogether.

(b)

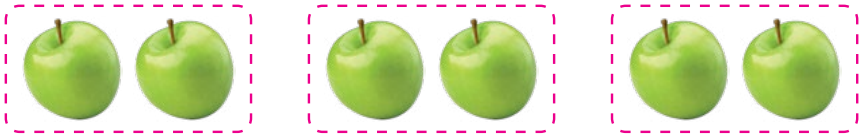
Peter has 3 bowls of fish.
Each bowl has 5 fish.

3 × 5 = 15

There are **15** fish altogether.

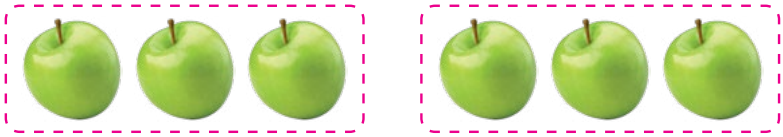
3 We can show multiplication with different groupings of objects.

(a) There are 3 groups of apples.
Each group has 2 apples.



Multiplication equation: **3 × 2 = 6**

There are 2 groups of apples.
Each group has 3 apples.



Multiplication equation: **2 × 3 = 6**

(b) There are 2 strawberries in each group.
There are 4 groups.

Multiplication equation: **4 × 2 = 8**

There are 4 strawberries in each group.
There are 2 groups.

Multiplication equation: **2 × 4 = 8**

Fun with Maths!

Make a multiplication story.
Write the multiplication equation for each story.

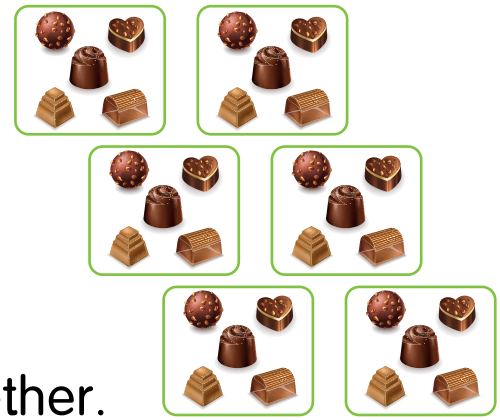
Let's Practise

1. There are 7 plates.
There are 3 curry puffs on each plate.

☐ × ☐ = ☐

There are ☐ curry puffs altogether.

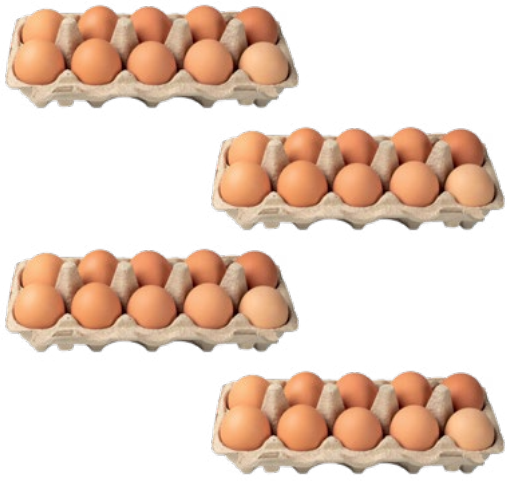
2. There are 6 groups.
Each group has 5 chocolates.



☐ × ☐ = ☐

There are ☐ chocolates altogether.

3. There are ☐ cartons.
Each carton has ☐ eggs.



☐ × ☐ = ☐

There are ☐ eggs altogether.

Thinking Aloud

There are 15 stickers on each page.

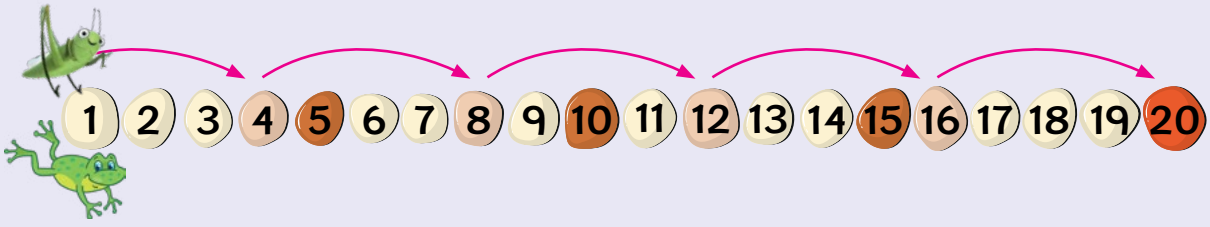
We see that $5 \times 3 = 3 \times 5$.

5 groups of 3
5 × 3 = 15

3 groups of 5
3 × 5 = 15

In the example below, the grasshopper jumps in **steps of 4** to reach 20. There are 5 fours.

$5 \times 4 =$ ☐



Draw arrows to show how the frog jumps in **steps of 5** to reach 20. Then complete the equations below.

$4 \times 5 =$ ☐

$5 \times$ ☐ $= 4 \times$ ☐