

# Using a Ruler

## Adult Guidance with Question Prompts



Children apply the skills and knowledge gained from measuring length and height with non-standard units to measuring with rulers. They understand that standard units are used because objects such as hands differ in length, so using objects as non-standard units to measure length may not lead to consistent results. Children are introduced to centimetres/cm. Make sure that children measure from 0 marked on the ruler and read the number that the object has reached, rather than the next number. Please note: the rulers shown on the activity card are not to scale.

What do the numbers on the ruler mean?

Can you point to the letters 'cm' on the ruler? What do they mean?

Where should we begin to measure from?

Why don't we just start at the beginning of the ruler?

Has the paintbrush been placed correctly next to the ruler? How do you know?

Can you count how many centimetres it measures?

Where do you need to stop?

How long is the pen? Explain how you know.

What is the difference between 'long' and 'tall'?

Can you think of an example when we would use each word?

Which number should the objects be placed next to so we can measure accurately?

Which is the tallest/shortest object?

Do rulers help us compare objects? How?

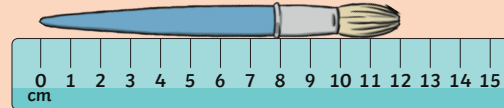
Find two things that you can measure with your ruler. How long is each item?

Which is the longer? Which is the shorter?

# Using a Ruler



How long is the paintbrush?



The paintbrush is \_\_\_\_ cm long.

How long is the pen?



The pen is \_\_\_\_ cm long.

How tall is the pack of pencils?



The pack of pencils is \_\_\_\_ cm tall.

How tall is the pack of crayons?



The pack of crayons is \_\_\_\_ cm tall.

The \_\_\_\_\_ are shorter than the \_\_\_\_\_ .

The \_\_\_\_\_ are taller than the \_\_\_\_\_ .

## Using a Ruler

### Adult Guidance with Question Prompts



Children apply the skills and knowledge gained from measuring length and height with non-standard units to measuring with rulers. They understand that standard units are used because objects such as hands differ in length, so using objects as non-standard units to measure length may not lead to consistent results. Children are introduced to centimetres/cm. Emphasise that children should measure from 0 marked on the ruler and read the number that the object has reached, rather than the next number. Children reason about whether these objects have been correctly measured using the ruler. Please note: the rulers shown on the activity card are not to scale.

**Do you agree with the statement about the scissors?**

**Can you explain why?**

**What do we need to remember when using a ruler to measure length or height?**

**Is the statement about the book correct?**

**Explain why/why not.**

**What do we need to remember when using a ruler to measure length or height?**

**Can you show your friends how to measure length and height with a ruler correctly?**

**Where do the ribbons begin? Where do they end?**

**So are they both 15 centimetres long?**

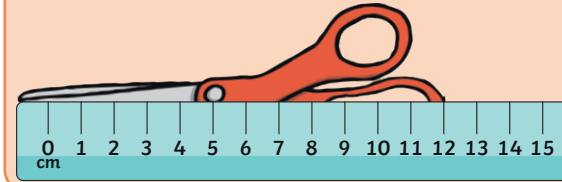
**Can you find a way to prove it?**

**Can you explain the top tips that you have learnt today? Tell your partner.**

## Using a Ruler

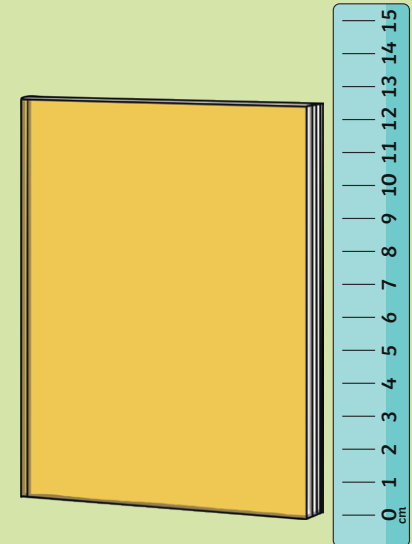


**The scissors are 12cm long.**



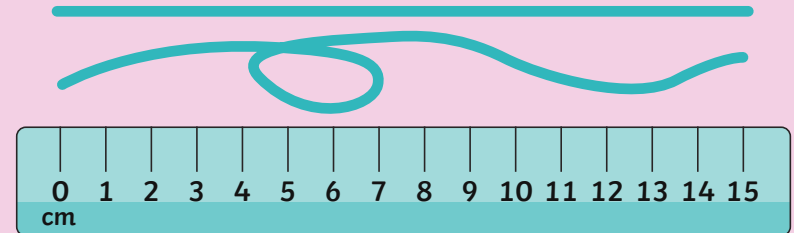
**Do you agree?  
Explain why or  
why not.**

**The book is 13cm tall.**



**Is this correct?  
Tell me about  
your answer.**

**The ribbons are both 15cm long.**



**Is this true? Can you find a way to prove it?**

## Using a Ruler

### Adult Guidance with Question Prompts



Children apply the skills and knowledge gained from measuring length and height with non-standard units to measuring with rulers. They understand that standard units are used because objects such as hands differ in length, so using objects as non-standard units to measure length may not lead to consistent results. Children are introduced to centimetres/cm. Make sure that children measure from 0 marked on the ruler and read the number that the object has reached, rather than the next number. Children measure items around the classroom and sort them by length. They investigate the height of towers and may need blocks and rulers to support them with this activity.

Please note: the rulers shown on the activity card are not to scale.

**Can you collect objects from around the classroom and measure them carefully?**

**Show me how you can sort them into groups: shorter than 15cm, the same as 15cm and longer than 15cm.**

**Can you tell me the top tips for measuring?**

**How tall are the towers?**

**If you built a tower shorter than the blue tower but taller than the yellow tower, how tall could it be?**

**What can we do to solve this puzzle?**

**Can you show me with blocks and a ruler?**

**Is there more than one possible answer? How do you know?**

**Can you make a similar challenge for your friend?**

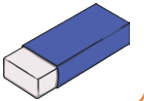
## Using a Ruler



### 15cm Challenge

**Measure the length of objects around the classroom and sort them into groups.**

Shorter than 15cm



The same as 15cm

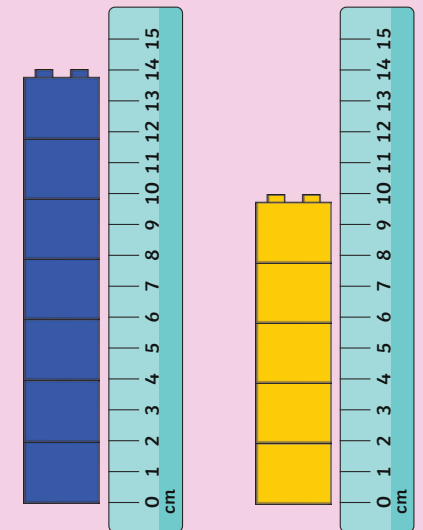


Longer than 15cm



**Measure the height of the towers.**

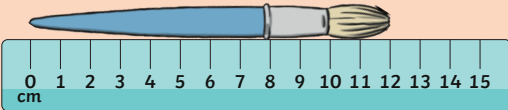
**If you built a tower shorter than the blue tower but taller than the yellow tower, how tall could it be?**



## Using a Ruler



How long is the paintbrush?



The paintbrush is \_\_\_\_ cm long.

How long is the pen?



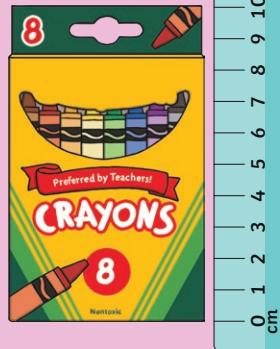
The pen is \_\_\_\_ cm long.

How tall is the pack of pencils?



The pack of pencils is \_\_\_\_ cm tall.

How tall is the pack of crayons?



The pack of crayons is \_\_\_\_ cm tall.

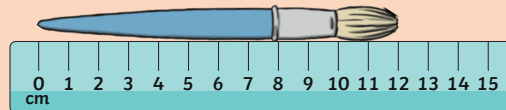
The \_\_\_\_\_ are shorter than the \_\_\_\_\_.

The \_\_\_\_\_ are taller than the \_\_\_\_\_.

## Using a Ruler

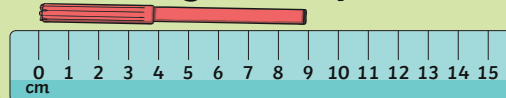


How long is the paintbrush?



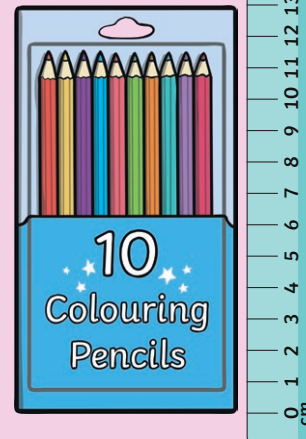
The paintbrush is \_\_\_\_ cm long.

How long is the pen?



The pen is \_\_\_\_ cm long.

How tall is the pack of pencils?



The pack of pencils is \_\_\_\_ cm tall.

How tall is the pack of crayons?



The pack of crayons is \_\_\_\_ cm tall.

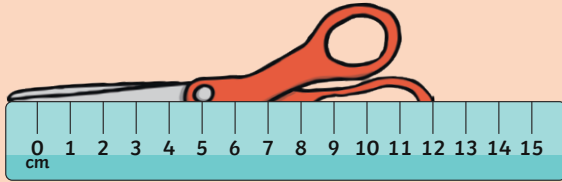
The \_\_\_\_\_ are shorter than the \_\_\_\_\_.

The \_\_\_\_\_ are taller than the \_\_\_\_\_.

## Using a Ruler

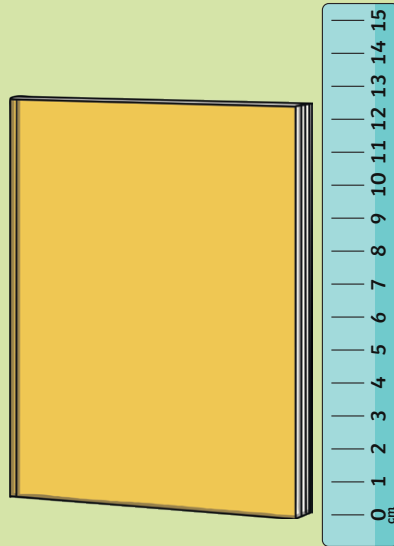


The scissors are 12cm long.



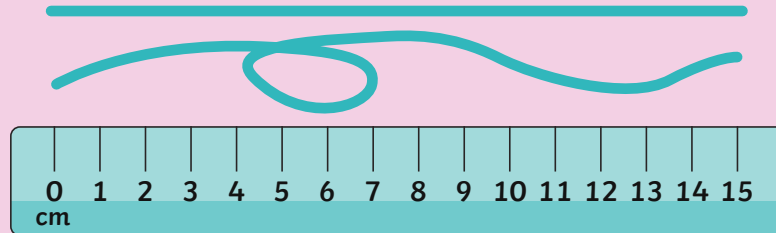
Do you agree?  
Explain why or  
why not.

The book is 13cm tall.



Is this correct?  
Tell me about  
your answer.

The ribbons are both 15cm long.

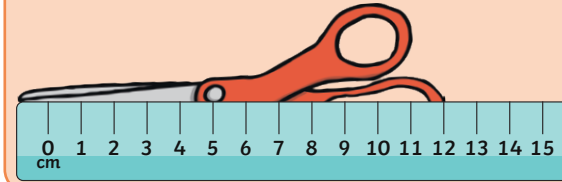


Is this true? Can you find a way to prove it?

## Using a Ruler

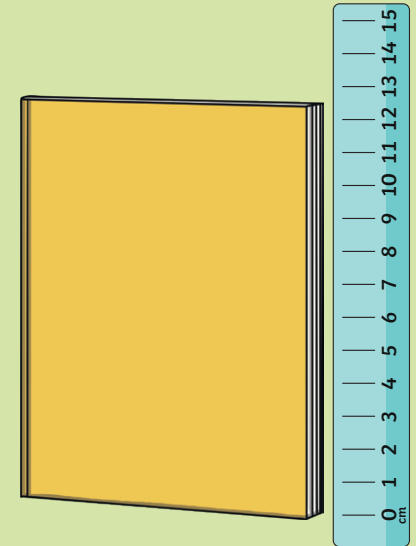


The scissors are 12cm long.



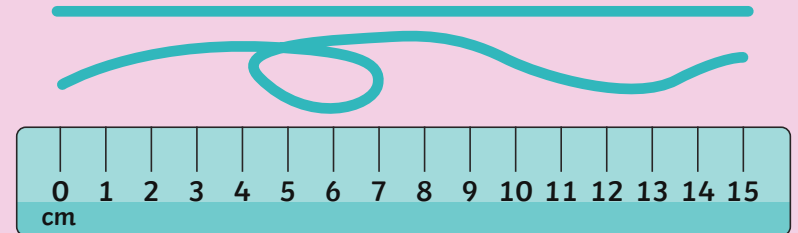
Do you agree?  
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The book is 13cm tall.



Is this correct?  
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your answer.

The ribbons are both 15cm long.



Is this true? Can you find a way to prove it?

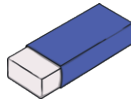
## Using a Ruler



### 15cm Challenge

Measure the length of objects around the classroom and sort them into groups.

Shorter than 15cm



The same as 15cm

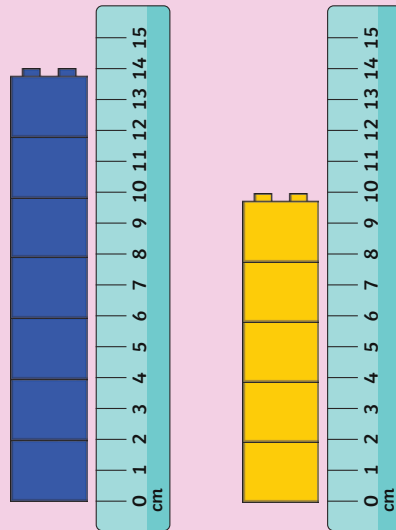


Longer than 15cm



Measure the height of the towers.

If you built a tower shorter than the blue tower but taller than the yellow tower, how tall could it be?



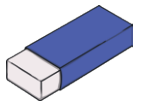
## Using a Ruler



### 15cm Challenge

Measure the length of objects around the classroom and sort them into groups.

Shorter than 15cm



The same as 15cm

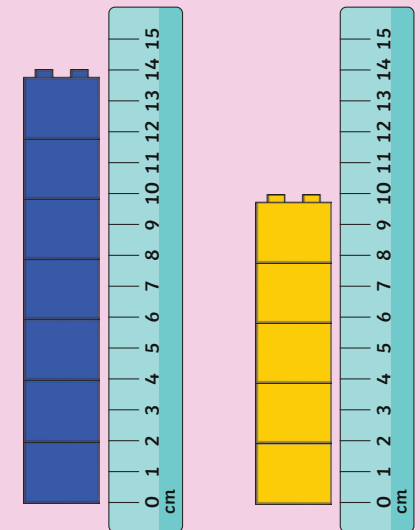


Longer than 15cm



Measure the height of the towers.

If you built a tower shorter than the blue tower but taller than the yellow tower, how tall could it be?





**The paintbrush is 12cm long.**

**The pen is 9cm long.**

**The pack of pencils is 13cm tall.**

**The pack of crayons is 10cm tall.**

**The crayons are shorter than the pencils.**

**The pencils are taller than the crayons.**



**The scissors are longer than 12cm because they were placed before the 0 on the ruler.**

**The book is shorter than 13cm because it stops between 12 and 13 on the ruler.**

**The straight ribbon is 15cm. The loopy ribbon is longer.**

**This can be proved by using string or paper strips to demonstrate.**



**Children measure and sort objects accurately.**

**The tower should be shorter than 14cm but taller than 10cm: 11cm, 12cm or 13cm.**

**Please make sure that you print this resource at 100% so that all measurements are correct.**

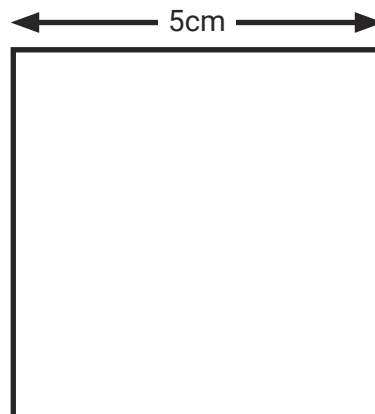
**To do this, follow the relevant steps below.**

### **Adobe Reader or Adobe Acrobat**

- Adobe Reader is a free PDF viewer, from Adobe. To install a copy of Adobe Reader, go to <https://get.adobe.com/uk/reader/>.
- Once Adobe Reader is installed, open your PDF.
- Go to File>Print.
- Under 'Page Sizing & Handling', select 'Size'.
- From here, make sure that 'Actual Size' is selected.
- Print this page as a test, making sure that the shape below is the correct size once printed.
- If the test print is correct, print your PDF.

### **Foxit Reader**

- Go to File>Print.
- Set the 'Scaling' to 'None'.





# Measuring Length and Height

To measure length and height in centimetres.

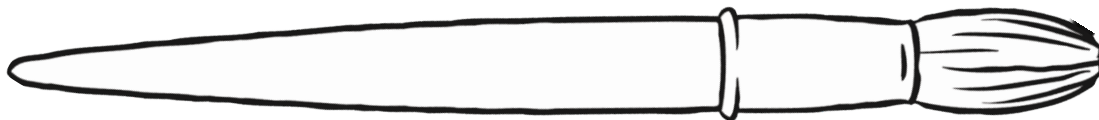


Use the ruler to measure the **length** or **height** of these objects. They are not to scale.



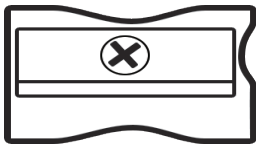
cm

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



cm

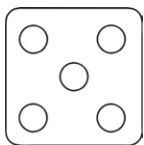
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



cm

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

cm



0 1 2 3 4 5 6 7 8 9 10

cm



0 1 2 3 4 5 6 7 8 9 10

cm



0 1 2 3 4 5 6 7 8 9 10





Use your ruler to measure the **length** of these lines. Remember to write the units (cm) in your answer.

A	_____	<input type="text" value="cm"/>
B	_____	<input type="text"/>
C	_____	<input type="text"/>
D	_____	<input type="text"/>

Finish this sentence:

The **longest** line is \_\_\_\_\_. The **shortest** line is \_\_\_\_\_.

Use your ruler to measure the height of these lines.

 E <input type="text" value="cm"/>	 F <input type="text"/>	 G <input type="text"/>	 H <input type="text"/>
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Finish this sentence:

The **tallest** line is \_\_\_\_\_. The **shortest** line is \_\_\_\_\_.

# Measuring Length and Height Answers

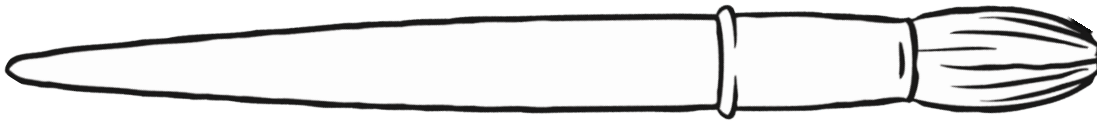
To measure length and height in centimetres.

Use the ruler to measure the **length** or **height** of these objects. They are not to scale.



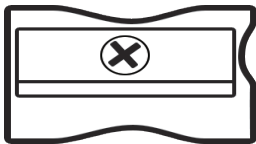
9cm

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



13cm

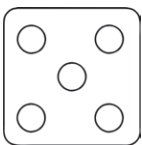
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



3cm

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

2cm



0 1 2 3 4 5 6 7 8 9 10

7cm



0 1 2 3 4 5 6 7 8 9 10

8cm



0 1 2 3 4 5 6 7 8 9 10

## Measuring Length and Height Answers

Use your ruler to measure the **length** of these lines. Remember to write the units (cm) in your answer.

A \_\_\_\_\_

5cm

B \_\_\_\_\_

12cm

C \_\_\_\_\_

14cm

D \_\_\_\_\_

11cm

Finish this sentence:

The **longest** line is **C**. The **shortest** line is **A**.

Use your ruler to measure the height of these lines.

\_\_\_\_\_

E

6cm

\_\_\_\_\_

F

4cm

\_\_\_\_\_

G

8cm

\_\_\_\_\_

H

10cm

Finish this sentence:

The **tallest** line is **H**. The **shortest** line is **F**.

# Measuring Length and Height

To measure length and height in centimetres.



Use your ruler to measure the **length** of these lines.

A \_\_\_\_\_

cm

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

Finish this sentence:

The **longest** line is \_\_\_\_\_. The **shortest** line is \_\_\_\_\_.

Use your ruler to measure the **height** of these lines.

E

cm

F

G

H

Finish this sentence:

The **tallest** line is \_\_\_\_\_. The **shortest** line is \_\_\_\_\_.

Use your ruler to find the lengths and heights of these objects. Then, compare the lengths and heights of them.

longer                  shorter                  taller                  the same

Straw A





Straw B



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		<hr/> <hr/> <hr/> <hr/> <hr/>
superhero	doll	

Pencil A



Pencil B

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# Measuring Length and Height Answers

To measure length and height in centimetres.



Use your ruler to measure the **length** of these lines.

A \_\_\_\_\_

5cm

B \_\_\_\_\_

12cm

C \_\_\_\_\_

14cm

D \_\_\_\_\_

11cm

Finish this sentence:

The **longest** line is **C**. The **shortest** line is **A**.

Use your ruler to measure the **height** of these lines.



E

6cm



F

4cm



G

7cm



H

10cm

Finish this sentence:

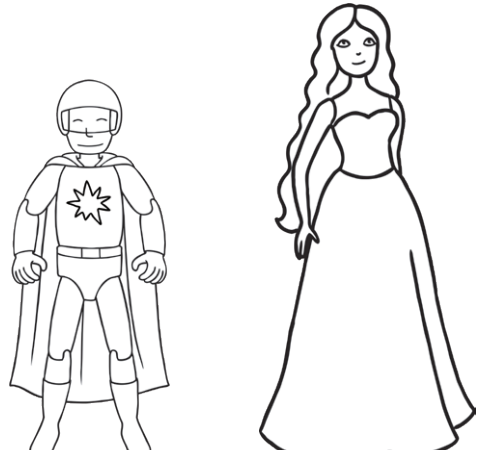
The **tallest** line is **H**. The **shortest** line is **F**.

Use your ruler to find the lengths and heights of these objects. Then, compare the lengths and heights of them.

longer                      shorter                      taller                      the same



**Straw A is 15cm long. Straw B is 13cm long. Straw A is longer than straw B. Straw B is shorter than straw A.**



The doll is 6cm tall. The superhero is 5cm tall. The doll is taller than the superhero. The superhero is shorter than the doll.

superhero                      doll



**Both pencils are 7cm. They both have the same length.**



# Measuring Length and Height

To measure length and height in centimetres.



Use your ruler to measure the **longest** and **shortest** lines.

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

The **longest** line is \_\_\_\_\_, it is \_\_\_\_\_ long.

The **shortest** line is \_\_\_\_\_, it is \_\_\_\_\_ long.

Use your ruler to measure the **height** of these lines.



E



F



G



H

Order the lines from **shortest** to **tallest**. \_\_\_\_\_

Measure the length of these objects. Tick the 2 that are the same length.

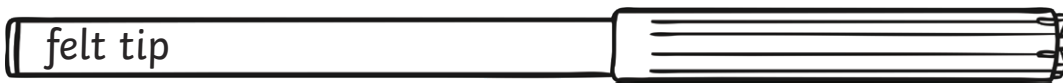
A



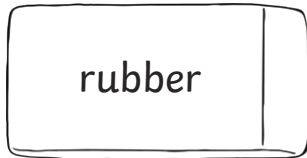
B



C



D



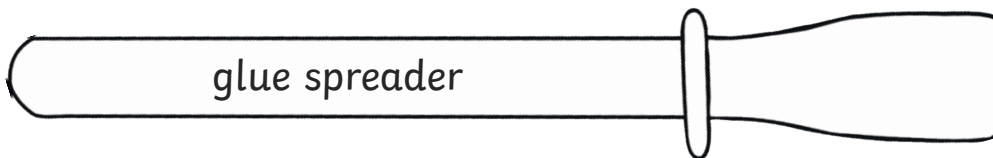
E



G



F



The longest object is the \_\_\_\_\_.

The shortest object is the \_\_\_\_\_.

Which object is 9cm long? \_\_\_\_\_.

# Measuring Length and Height Answers

To measure length and height in centimetres.



Use your ruler to measure the **longest** and **shortest** lines.

A 

B 

C 

D 

The **longest** line is **D**, it is **8cm** long.

The **shortest** line is **A**, it is **5cm** long.

Use your ruler to measure the **height** of these lines.



E

6cm



F

8cm



G

4cm



H

9cm

Order the lines from **shortest** to **tallest**. **G, E, F, H**

## Measuring Length and Height Answers

Measure the length of these objects. Tick the 2 that are the same length.

A



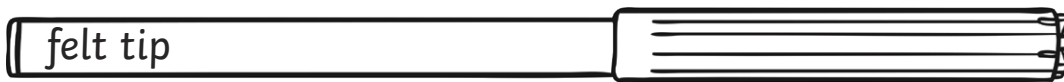
12cm

B



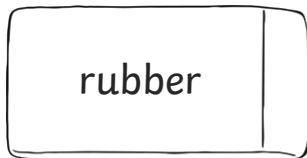
✓ 13cm

C



14cm

D



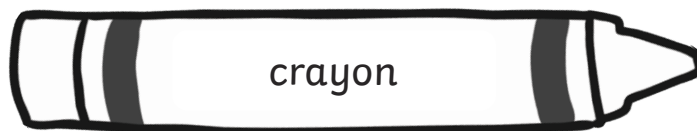
4cm

E



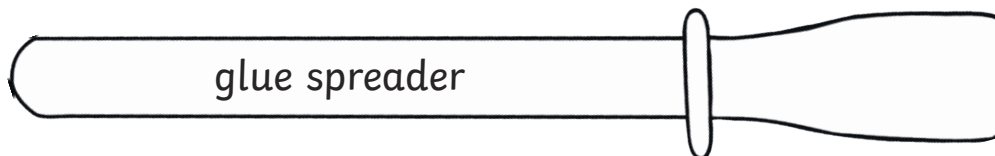
3cm

G



9cm

F



✓ 13cm

The longest object is the **felt tip**.

The shortest object is the **paperclip**.

Which object is 9cm long? **The crayon.**