

Measure in millimetres

Notes and guidance

This small step builds on children's understanding from the previous step by introducing millimetres as another unit of measurement.

Children need to understand that 1 mm is smaller than 1 cm and that millimetres can be used to measure lengths that are not an exact number of centimetres. Allow children time to explore a ruler with millimetre markings to see that there are 10 mm in 1 cm. Children could be encouraged to count in 10s and add on the remaining 1s when finding lengths. For example, when measuring a line that is 8 cm and 3 mm long, they can count in 10s to 80 mm and then add on the extra 3 mm to give a total length of 83 mm. However, at this stage children are not required to formally convert between centimetres and millimetres.

Children may find measuring oblique lines more difficult than horizontal or vertical lines. Model how rotating the page can make it easier to measure.

Things to look out for

- Children may measure from the end of the ruler or measuring tape rather than measuring from zero.
- Children may give answers to the nearest centimetre rather than counting the millimetre intervals.

Key questions

- Why is it important to start measuring from zero on your ruler?
- How many intervals are there between 0 and 1 cm? So how many millimetres are there in 1 cm?
- Where is the 5 mm mark on your ruler?
- What is the same and what is different about measuring a length in centimetres and measuring a length in millimetres?
- What is the length of _____ in millimetres?
- Would you measure the height of the door in millimetres?

Possible sentence stems

- The _____ is _____ mm long.
- 1 mm is _____ than 1 cm.
- 1 mm is _____ than 1 m.

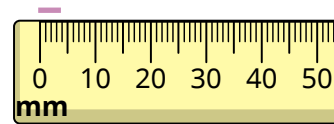
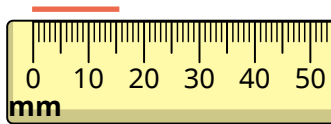
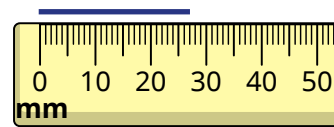
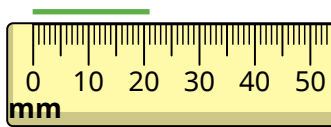
National Curriculum links

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

Measure in millimetres

Key learning

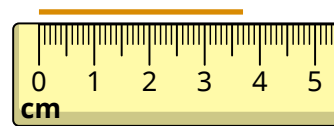
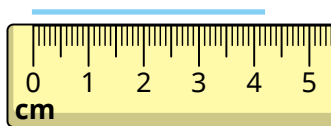
- What are the lengths of the lines in millimetres?



- What lengths are the arrows pointing to?



- What are the lengths of the lines in millimetres?



- Choose a phrase to complete each sentence.

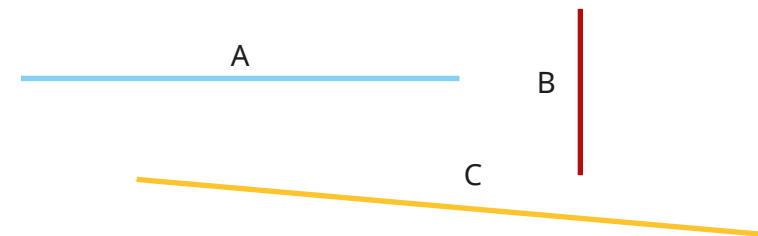
less than

greater than

▶ 1 mm is _____ 1 cm.

▶ 1 m is _____ 1 mm.

- Measure these lines to the nearest millimetre.



- Find five things in your pencil case that you can measure in millimetres.

List them in order of size, starting with the smallest.

- Use a ruler to draw lines with these lengths.

▶ 80 mm

▶ 25 mm

▶ 51 mm

▶ 30 mm

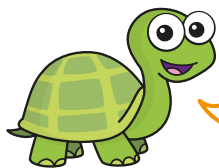
▶ 75 mm

▶ 67 mm

Measure in millimetres

Reasoning and problem solving

Tiny is thinking about measuring a table.

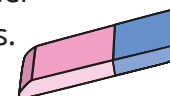


I cannot measure the table in millimetres, because it is too big.

Do you agree with Tiny?
Explain your answer.

Tiny could measure the table in millimetres, but it is not the most efficient unit to use.

Whitney measures her rubber in millimetres.



My rubber is less than 60 mm. Its length is in the 5 times-table. The digits add up to 9



45 mm

Work out the length of Whitney's rubber.

Measure these two lines in millimetres.



Which line did you find easier to measure? Why?



lines measured accurately

Is the statement true or false?

A length measured in millimetres is always shorter than a length measured in centimetres.

Talk about it with a partner.



False