

# Compare lengths

## Notes and guidance

In this small step, children compare and order lengths using comparison language and inequality symbols. Building on the previous two steps, they need to convert all the measurements to the same unit of length before comparing.

Children can use practical equipment to justify decisions, measuring and comparing lengths of objects inside and outside the classroom to practise their measuring skills.

Children may need reminding of the meaning of the inequality symbols,  $<$  and  $>$ . Recapping how many millimetres are in a centimetre and how many centimetres are in a metre will also be useful.

Ensure children are aware that while they use the words shorter/longer when comparing lengths, they should use shorter/taller when talking about height.

## Things to look out for

- If children attempt to compare lengths without converting into the same unit of measurement, they may make mistakes.
- Children need very secure place value understanding when comparing a length in metres with a length in millimetres.

## Key questions

- How can you compare lengths given in different units?
- Why does finding equivalent lengths with the same unit make it easier to compare lengths?
- Does it matter which unit of measurement you use to compare?
- Is the unit of measurement or the size of the number more important?
- How many mm/cm are there in \_\_\_\_\_ cm/mm?

## Possible sentence stems

- \_\_\_\_\_ m \_\_\_\_\_ cm is equal to \_\_\_\_\_ cm.
- \_\_\_\_\_ cm is \_\_\_\_\_ than \_\_\_\_\_ cm, so the greater length is \_\_\_\_\_ cm.
- \_\_\_\_\_ cm is equal to \_\_\_\_\_ mm.
- \_\_\_\_\_ mm is \_\_\_\_\_ than \_\_\_\_\_ mm, so the greater length is \_\_\_\_\_ mm.

## National Curriculum links

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

# Compare lengths

## Key learning

- Jack is comparing 34 mm and 3 cm 6 mm.

Complete the sentences.

- ▶ 3 cm 6 mm = \_\_\_\_\_ mm
- ▶ 34 mm is \_\_\_\_\_ than \_\_\_\_\_ mm.

Is there another way to compare the measurements?

- Amir and Dora measure their heights.

- Amir's height is 127 cm.
- Dora's height is 1 m and 30 cm.

Write **taller** or **shorter** to complete the sentences.

- ▶ Amir is \_\_\_\_\_ than Dora.
- ▶ Dora is \_\_\_\_\_ than Amir.

- Write <, > or = to compare the lengths.

101 cm ○ 1 m 10 cm

80 mm ○ 8 cm

90 cm ○ 90 mm

500 mm ○ 1 m 50 cm

- Write the lengths in order.

Start with the shortest length.

230 cm	750 mm	2 m 25 cm
2 m	1 m 75 cm	170 cm

- Fill in the missing numbers to make the statements correct.

- ▶ 4 cm < \_\_\_\_\_ mm
- ▶ \_\_\_\_\_ m < 378 cm
- ▶ 245 mm = \_\_\_\_\_ cm + \_\_\_\_\_ mm
- ▶ 5 m > \_\_\_\_\_ m and 99 cm

- Four friends are building towers.

- Filip's tower is 22 cm and 7 mm tall.
- Tom's tower is 22 cm tall.
- Nijah's tower is 215 mm tall.
- Dani's tower is 260 mm tall.

Complete the statement to put the towers in height order.

\_\_\_\_\_ < \_\_\_\_\_ < \_\_\_\_\_ < \_\_\_\_\_

# Compare lengths

## Reasoning and problem solving

Brett has put some lengths in order from shortest to longest.

170 mm

74 cm 7 mm

$1\frac{1}{2}$  m

Fill in the missing measurement.

Find three possible answers.



between  
74 cm 8 mm and  
1 m 49 cm

Sort the lengths into the table.

1 m 65 cm

165 mm

165 m

165 cm

160 cm 5 mm

16 cm 5 mm

Longer than a metre	Shorter than a metre

Are any of the lengths equivalent?

longer than a metre:

1 m 65 cm, 165 m, 165 cm, 160 cm 5 mm

shorter than a metre:

165 mm, 16 cm 5 mm

equivalent lengths:

1 m 65 cm and 165 cm  
165 mm and 16 cm 5 mm