## Measure length

1 What is the length of each line?

a)

4 cm

b)

7 cm

c)

2 cm

2 Write the length of each line to the nearest millimetre.

a)

60 mm

b)

87 mm

c)

35 mm

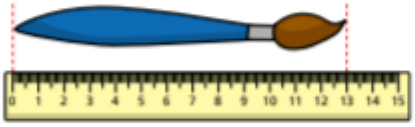
3 Use a ruler to draw lines of these lengths.

a) 5 cm

b) 75 mm

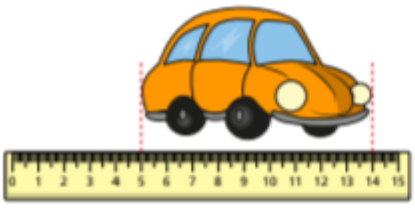
c) 42 mm

4 How long is the paintbrush?



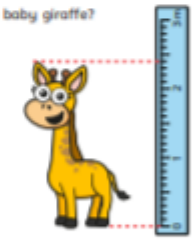
The paintbrush is 13 cm long.

5 How long is the toy car?



The toy car is 9 cm long.

6 How tall is the baby giraffe?



The baby giraffe is 2 m and 40 cm tall.

7 Tick the most sensible estimate for the height of a classroom door.

| 20 cm | 2 m | 20 m |
|---|---|---|
| ☐ | ☑ | ☐ |

8 Find items in the classroom that are the following lengths.

Write your answers in the table.

| Less than 10 cm long | Between 10 cm and 1 m long | More than 1 m tall |
|---|---|---|
| | | |

Compare with a partner.

## Equivalent lengths – m and cm

**1** There are 100 centimetres (cm) in 1 metre (m).
Use the bar models to complete the sentences.

| 1 m |
|---|
| 100 cm |

a)

| 1 m | 1 m | 1 m |
|---|---|---|
| 100 cm | 100 cm | 100 cm |

There are 300 cm in 3 m.

b)

| 1 m | 1 m | 1 m | 1 m | 1 m | 1 m |
|---|---|---|---|---|---|
| 100 cm | 100 cm | 100 cm | 100 cm | 100 cm | 100 cm |

There are 600 cm in 6 m.

c)

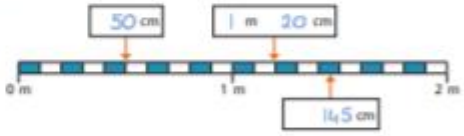
| 1 m | 1 m | 1 m | 1 m | 1 m |
|---|---|---|---|---|
| 100 cm | 100 cm | 100 cm | 100 cm | 100 cm |

There are 500 cm in 5 m.

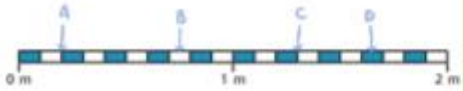
**2** Complete the table to show equivalent lengths and continue the pattern.

| cm | m and cm |
|---|---|
| 310 cm | 3 m and 10 cm |
| 320 cm | 3 m and 20 cm |
| 330 cm | 3 m and 30 cm |
| 340 cm | 3 m and 40 cm |
| 350 cm | 3 m and 50 cm |
| 360 cm | 3 m and 60 cm |
| 370 cm | 3 m and 70 cm |

**3** Write the missing measurements.




**4** Draw an arrow to show the position of each measurement.




| A | B | C | D |
|---|---|---|---|
| 20 cm | 0 m 75 cm | 130 cm | 1 m 65 cm |

**5** Complete the bar models.

a)

| 160 cm | |
|---|---|
| 1 m | 60 cm |

b)

| 268 cm | |
|---|---|
| 2 m | 68 cm |

c)

| 410 cm | |
|---|---|
| 4 m | 10 cm |

d)

| 205 cm | |
|---|---|
| 2 m | 5 cm |

**6** Complete the sentences.

a) 240 cm = 2 m and 40 cm

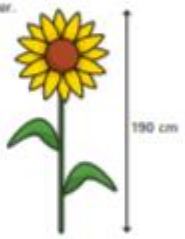
b) 319 cm = 3 m and 19 cm

c) 508 cm = 5 m and 8 cm

d) 2 m and 15 cm = 215 cm

e) 8 m and 3 cm = 803 cm

**7** Here is Huan's sunflower.




Dani's sunflower is 2 m and 30 cm.

Tom's sunflower is exactly halfway between Huan's and Dani's.

How tall is Tom's sunflower?

Write your answer in metres and centimetres.

2 m and 10 cm

## Equivalent lengths – mm and cm

**1** There are 10 millimetres (mm) in 1 centimetre (cm).
Use the bar models to complete the sentences.

| 1 cm |
|---|
| 10 mm |

a)

| 1 cm | 1 cm | 1 cm |
|---|---|---|
| 10 mm | 10 mm | 10 mm |

There are 30 mm in 3 cm.

b)

| 1 cm | 1 cm | 1 cm | 1 cm | 1 cm | 1 cm | 1 cm |
|---|---|---|---|---|---|---|
| 10 mm | 10 mm | 10 mm | 10 mm | 10 mm | 10 mm | 10 mm |

There are 70 mm in 7 cm.

c)

| 1 cm | 1 cm | 1 cm | 1 cm |
|---|---|---|---|
| 10 mm | 10 mm | 10 mm | 10 mm |

There are 40 mm in 4 cm.

**2** Match the equivalent lengths.

| | | | | |
|---|---|---|---|---|
| 1 cm 3 mm | 3 cm 1 mm | 30 mm | 33 mm | 30 cm |
| 300 mm | 13 mm | 31 mm | 3 cm 0 mm | 3 cm 3 mm |

**3** How long are the scissors?

The scissors are 8 cm and 4 mm long.

The scissors are 84 mm long.

**4** Find three items in your classroom.
Measure them and complete the table.
One has been done for you.

| Item | Length in cm and mm | Length in mm |
|---|---|---|
| toy car | 9 cm 6 mm | 96 mm |
| | | |
| | | |
| | | |

**5** Filip and Kim are building towers using cubes.
Each cube is 3 cm high.

a) Filip uses 6 cubes.
How tall is Filip's tower?
Give your answer in millimetres.

Filip's tower is 180 mm tall.

b) Kim's tower is 300 mm tall.
How many cubes does she use?

Kim uses 10 cubes.

**6** Complete the bar models.

a)

| 62 mm | |
|---|---|
| 6 cm | 2 mm |

b)

| 4 mm | |
|---|---|
| 0 cm | 4 mm |

c)

| 301 mm | |
|---|---|
| 30 cm | 1 mm |

d)

| 310 mm | |
|---|---|
| 30 cm | 10 mm |

## Compare lengths

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

a) 60 mm (=) 6 cm  c) 5 cm (>) 45 mm

b) 1 m 50 cm (>) 115 cm  d) 100 mm (<) 1 m

How did you work this out?

2 Eva, Mo, Alex and Dexter have each built a tower.

Use the table to complete the sentences.

| Child | Height of tower |
|---|---|
| Eva | 1 m 5 cm |
| Mo | 135 cm |
| Alex | 1 m 45 cm |
| Dexter | 1 m 25 cm |

a) Alex 's tower is the tallest.

b) Eva 's tower is the shortest.

c) Mo's tower is taller than Dexter's.

d) Eva's tower is shorter than Alex's.

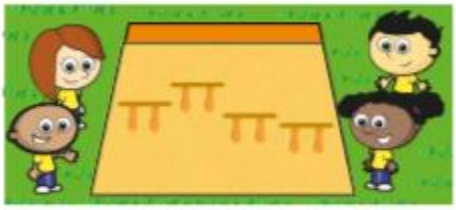
3 Write the following lengths in order from shortest to longest.

160 cm | 950 mm | 1m 50 mm | 200 cm | 1 m 25 cm

950mm | 1m 50mm | 1m 25cm | 160cm | 200cm

shortest ... longest

4 Jack, Tommy, Rosie and Whitney have a jumping competition.



Here are the results.

| Jack | Tommy | Rosie | Whitney |
|---|---|---|---|
| 870 mm | 105 cm | 1 m and 30 mm | 1 m and 10 cm |

The person who jumped the furthest wins the competition.

Put the children in order from 1st to 4th place.

Whitney (1st), Tommy (2nd), Rosie (3rd), Jack (4th)

5 Measure the height of four of your classmates.

Measure their foot length and then complete the table.

| Name | Height in cm | Foot length in cm |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

What have you found? Do taller people have longer feet?

6 Measure the height of four of your classmates.

Measure how far they can jump and then complete the table.

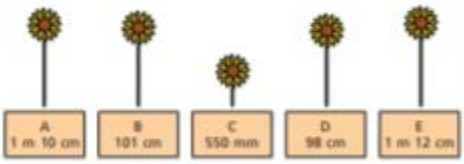
| Name | Height in cm | Jump length in cm |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

Talk about what your results show.

Can taller people jump further?

7 Teddy, Mo, Amir, Dora and Annie have each grown a sunflower.

Use the clues below to work out which sunflower belongs to which child.



Write the owner of each sunflower.

sunflower A: Amir  sunflower D: Mo

sunflower B: Dora  sunflower E: Annie

sunflower C: Teddy