

Varied Fluency

Step 3: Equivalent Lengths – mm and cm

National Curriculum Objectives:

Mathematics Year 3:(3M1a) [Compare lengths \(m/cm/mm\)](#)

Mathematics Year 3:(3M2a) [Measure lengths \(m/cm/mm\)](#)

Differentiation:

Developing Questions to support converting from mm to cm and vice versa. Lengths in multiples of 5mm. Scaffolding provided and all increments shown on a ruler.

Expected Questions to support converting from mm to cm and vice versa. Lengths in increments of 1mm. All increments shown on a ruler.

Greater Depth Questions to support converting from mm to cm and vice versa. Lengths in increments of 1mm, using 0 as a place holder in the tens columns for some lengths and use of halves. Some ruler increments shown and some use of unconventional partitioning.

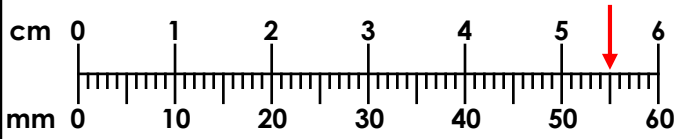
More [Year 3 Length and Perimeter](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Equivalent Lengths – mm and cm

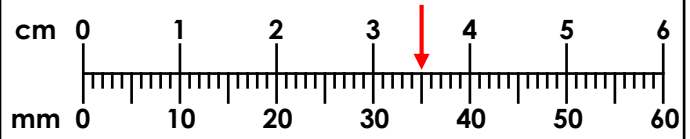
Equivalent Lengths – mm and cm

1a. Complete the measurement to match the length shown on the ruler.



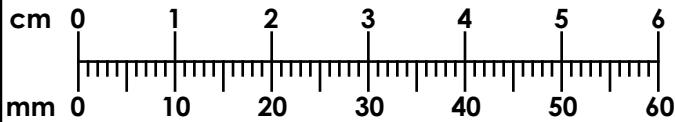
★ _____ cm 5 mm VF

1b. Complete the measurement to match the length shown on the ruler.



★ _____ cm 5 mm VF

2a. Join the equivalent lengths.



30mm

60mm

40mm

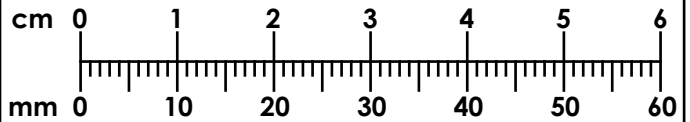
3cm

6cm

4cm

★ VF

2b. Join the equivalent lengths.



50mm

20mm

30cm

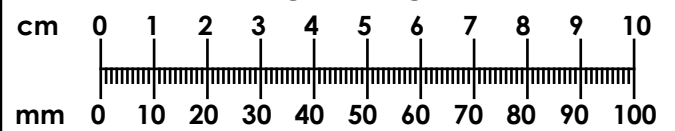
5cm

2cm

300mm

★ VF

3a. Circle the longest length.



5cm 5mm

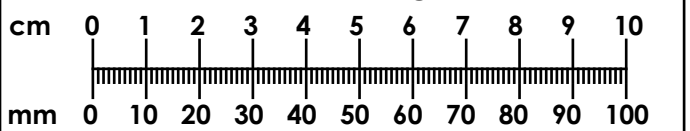
60mm

80mm

8cm 5mm

★ VF

3b. Circle the shortest length.



2cm

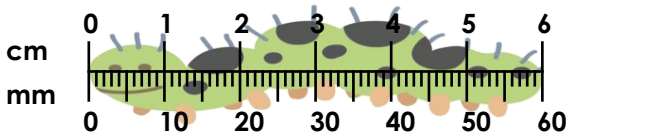
300mm

30mm

4cm

★ VF

4a. Tick the insect that is the same length as the caterpillar below.



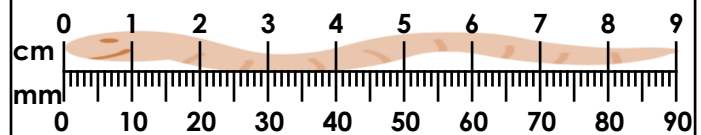
Not to scale

A.  60cm 5mm

B.  6cm 5mm

★ C.  6cm VF

4b. Tick the insect that is the same length as the worm below.



Not to scale

A.  7cm 5mm

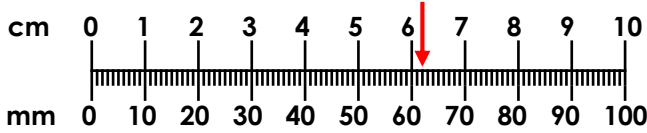
B.  9cm

★ C.  19cm VF

Equivalent Lengths – mm and cm

Equivalent Lengths – mm and cm

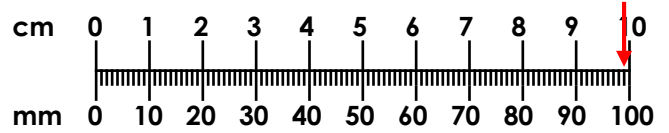
5a. Complete the measurement to match the length shown on the ruler.



_____ cm _____ mm VF



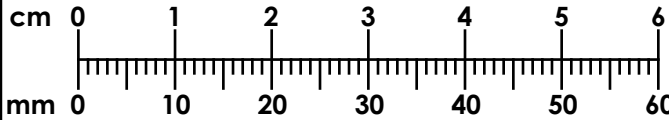
5b. Complete the measurement to match the length shown on the ruler.



_____ cm _____ mm VF



6a. Join the equivalent lengths.



33mm

4cm 5mm

45mm

82mm

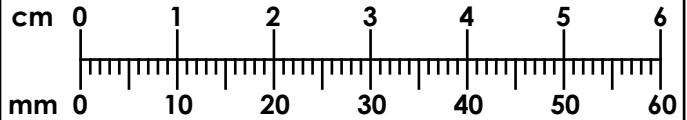
8cm 2mm

3cm 3mm

_____ VF



6b. Join the equivalent lengths.



76mm

9cm 5mm

95cm

69mm

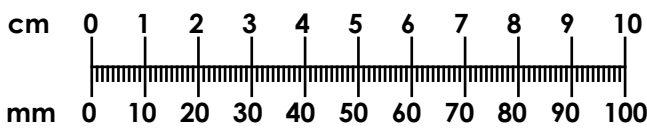
6cm 9mm

7cm 6mm

_____ VF



7a. Circle the longest length.



52cm 6mm

533mm

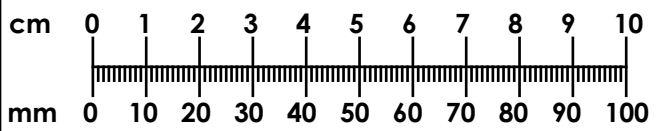
58mm

5cm 9mm

_____ VF



7b. Circle the shortest length.



4cm 9mm

63mm

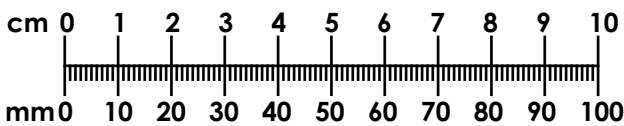
56mm

4cm 4mm

_____ VF



8a. Tick the ribbon that is the same length as the one below.



11cm 1mm *Not to scale*

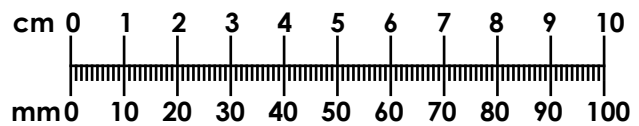
A. 111mm

B. 61cm 5mm

C. 10cm 1mm VF



8b. Tick the ribbon that is the same length as the one below.



8cm 5mm *Not to scale*

A. 75cm 1mm

B. 85mm

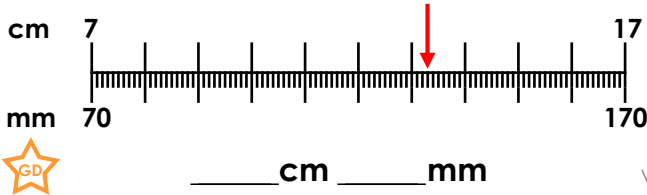
C. 855mm VF



Equivalent Lengths – mm and cm

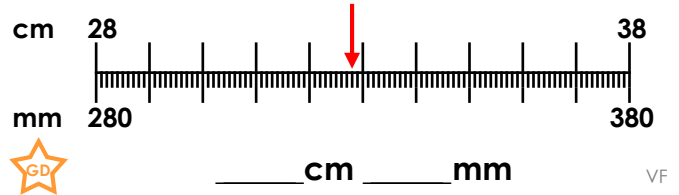
Equivalent Lengths – mm and cm

9a. Complete the measurement to match the length shown on the ruler.



VF

9b. Complete the measurement to match the length shown on the ruler.



VF

10a. Join the equivalent lengths.

360mm

36mm

3cm 6mm

6cm 3mm

60cm 3mm

35cm
10mm

63mm

603mm



VF

10b. Join the equivalent lengths.

78mm

78cm 7mm

70cm 8mm

88mm

787mm

708mm

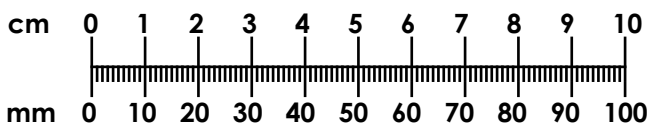
7cm 18mm

7cm 8mm



VF

11a. Circle the longest length.



6cm 3mm

603mm

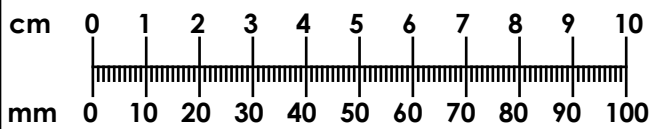
6cm 13mm

$6\frac{1}{2}$ cm



VF

11b. Circle the shortest length.



5cm 8mm

508mm

580mm

5cm 18mm



VF

12a. Tick the snakes that are the same length as the one below.



Not to scale

A. 60cm 6mm

B. 50cm 106mm

C. 6cm 6mm



VF

12b. Tick the snakes that are the same length as the one below.



Not to scale

A. 9cm

B. 90cm 5mm

C. 80cm 105mm



VF

Varied Fluency

Equivalent Lengths – mm and cm

Developing

- 1a. 5cm 5mm
2a. 30mm = 3cm
40mm = 4cm
6cm = 60mm
3a. 8cm 5mm
4a. C

Expected

- 5a. 6cm 2mm
6a. 33mm = 3cm 3mm;
45mm = 4cm 5mm;
8cm 2mm = 82mm
7a. 533mm
8a. A

Greater Depth

- 9a. 13cm 3mm
10a. 360mm = 35cm 10mm
3cm 6cm = 36mm
60cm 3mm = 603mm
63mm = 6cm 3mm
11a. $6\frac{1}{2}$ cm
12a. A and B

Varied Fluency

Equivalent Lengths – mm and cm

Developing

- 1b. 3cm 5mm
2b. 50mm = 5cm
30cm = 300mm
2cm = 20mm
3b. 2cm
4b. B

Expected

- 5b. 9cm 9mm
6b. 76mm = 7cm 6mm
95mm = 9cm 5mm
6cm 9mm = 69mm
7b. 4cm 4mm
8b. B

Greater Depth

- 9b. 32cm 8mm
10b. 78mm = 7cm 8mm
70cm 8mm = 708mm
787mm = 78cm 7mm
7cm 18mm = 88mm
11b. 5cm 8mm
12b. B and C