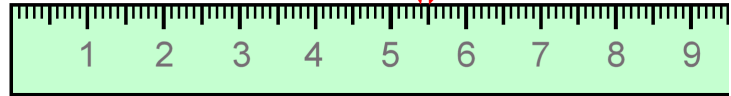


Centimeters and Millimeters

This ruler measures in centimeters.
The numbers signify whole centimeters.
All of the shorter lines between those
are for millimeters.

The distance from one short line to the
next line is 1 millimeter. We write
1 mm. Millimeters are very tiny!

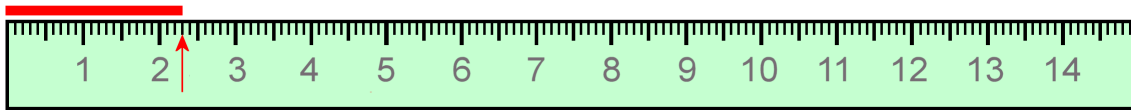
The distance between
these two is 1 mm.



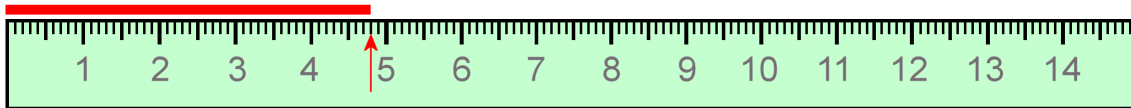
Look at the ruler: there are 10 millimeters in each centimeter.

Measuring lines

First see how many whole centimeters long the line is. Then count how many
millimeter-lines beyond that it reaches.



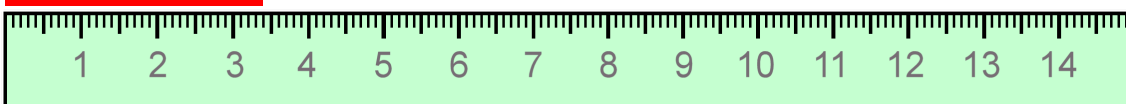
This line is 2 cm 3 mm long.



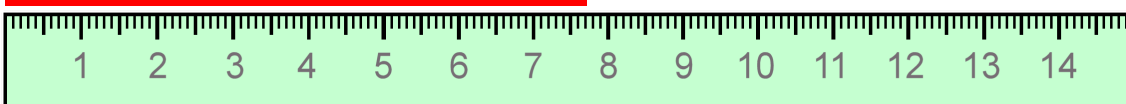
This line is 4 cm 8 mm long.

1. Measure the lines.

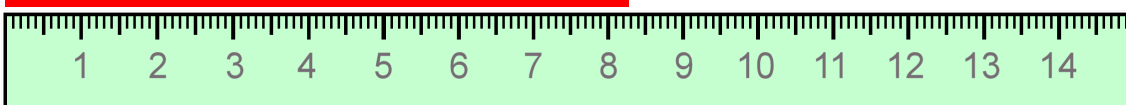
a. _____ cm _____ mm

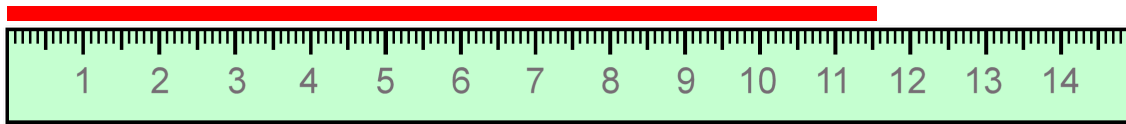


b. _____ cm _____ mm

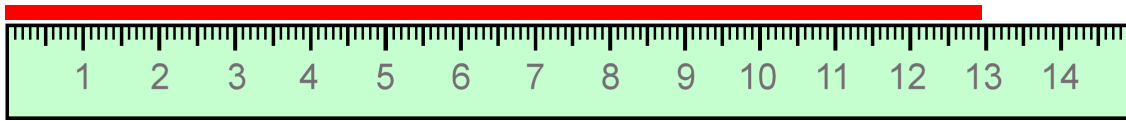


c. _____ cm _____ mm

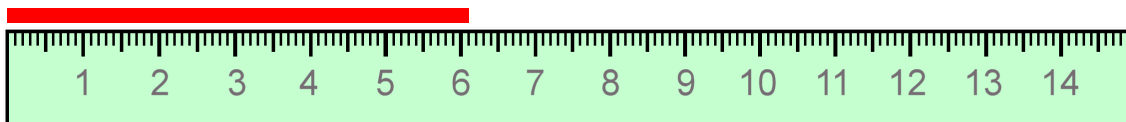




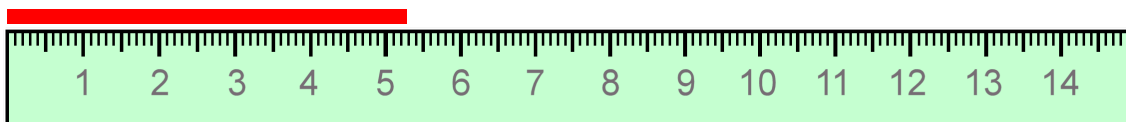
d. _____ cm _____ mm



e. _____ cm _____ mm



f. _____ cm _____ mm



g. _____ cm _____ mm

2. Draw lines using a ruler.

a. 7 cm 8 mm

b. 10 cm 5 mm

c. 1 cm 4 mm

d. 12 cm 6 mm

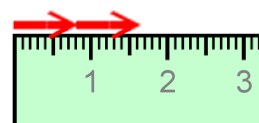
3. Measure items you can find at home, using a centimeter-millimeter ruler.

If the item is not exactly as long as the markers on the ruler, choose the nearest mark.

Item	Length
	_____ cm _____ mm

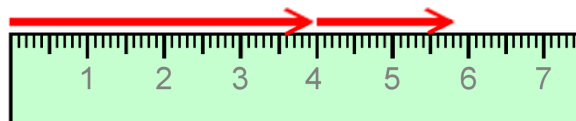
The first arrow is 8 mm. The second arrow is 8 mm too.
End-to-end, they measure together 16 mm *OR* 1 cm 6 mm.

$$8 \text{ mm} + 8 \text{ mm} = 16 \text{ mm} = 1 \text{ cm } 6 \text{ mm}$$



The first arrow is 4 cm. The second arrow is
1 cm 8 mm. Together they measure 5 cm 8 mm.

$$4 \text{ cm} + 1 \text{ cm } 8 \text{ mm} = 5 \text{ cm } 8 \text{ mm}$$



You can add centimeters with centimeters, and millimeters with millimeters. But whenever you have 10 or more millimeters, remember that 10 millimeters makes 1 centimeter.

$$9 \text{ mm} + 6 \text{ mm} = 15 \text{ mm} = 1 \text{ cm } 5 \text{ mm}$$

$$8 \text{ cm } 4 \text{ mm} + 3 \text{ cm } 7 \text{ mm} = 11 \text{ cm } 11 \text{ mm} = 12 \text{ cm } 1 \text{ mm}$$

4. Figure out these “line additions”.

a. $1 \text{ cm } 5 \text{ mm} + 5 \text{ mm} = \text{_____ cm _____ mm}$

b. $8 \text{ mm} + 9 \text{ mm} = \text{_____ cm _____ mm}$

c. $5 \text{ mm} + 5 \text{ cm } 8 \text{ mm} = \text{_____ cm _____ mm}$

d. $15 \text{ mm} + 14 \text{ mm} = \text{_____ cm _____ mm}$

e. $5 \text{ cm } 2 \text{ mm} + 7 \text{ cm } 4 \text{ mm} = \text{_____ cm _____ mm}$

f. $10 \text{ cm } 8 \text{ mm} + 7 \text{ cm } 7 \text{ mm} = \text{_____ cm _____ mm}$

g. $13 \text{ cm } 9 \text{ mm} + 50 \text{ cm } 2 \text{ mm} = \text{_____ cm _____ mm}$

h. $9 \text{ mm} + 17 \text{ mm} + 2 \text{ cm } 2 \text{ mm} = \text{_____ cm _____ mm}$

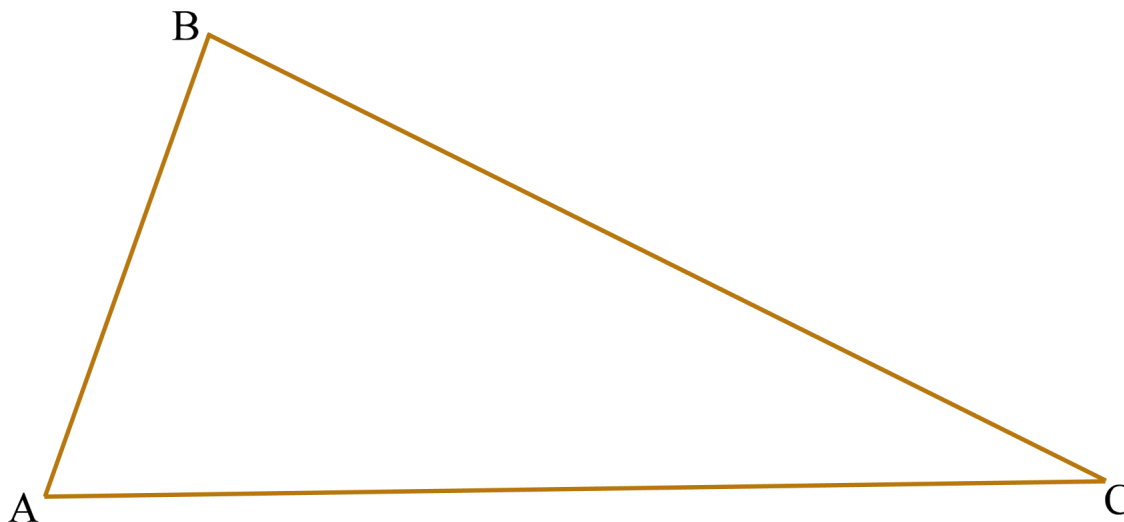
5. Change between centimeters and millimeters.

a.	b.	c.
1 cm = _____ mm	1 cm 1 mm = <u>11</u> mm	4 cm 5 mm = _____ mm
2 cm = _____ mm	1 cm 2 mm = _____ mm	2 cm 5 mm = _____ mm
5 cm = _____ mm	1 cm 8 mm = _____ mm	7 cm 8 mm = _____ mm
8 cm = _____ mm	2 cm 3 mm = _____ mm	10 cm 4 mm = _____ mm

6. Change between millimeters and centimeters.

a.	b.	c.
70 mm = _____ cm	12 mm = ____ cm ____ mm	89 mm = ____ cm ____ mm
100 mm = _____ cm	45 mm = ____ cm ____ mm	102 mm = ____ cm ____ mm

7. Measure the sides of this triangle, and find the perimeter.



Side AB: _____ cm _____ mm

Side BC: _____ cm _____ mm

Side CA: _____ cm _____ mm

Perimeter _____ cm _____ mm

8. Draw the third side of this triangle.
Then find its perimeter.

