

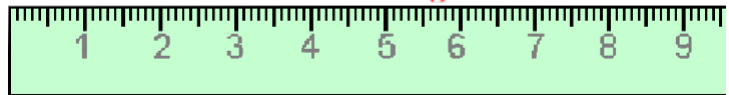
Centimeters and Millimeters

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!

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

The distance between these two is 1 mm.

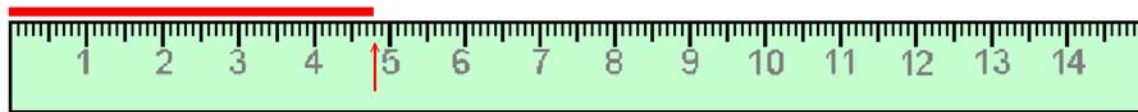


Measuring lines

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.

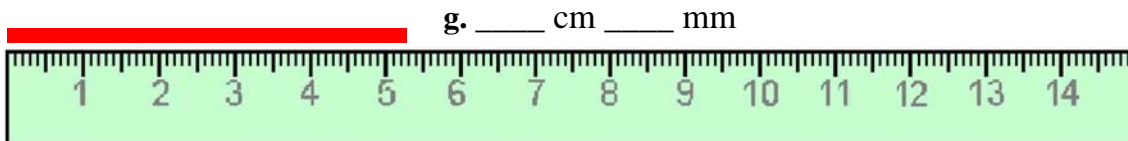
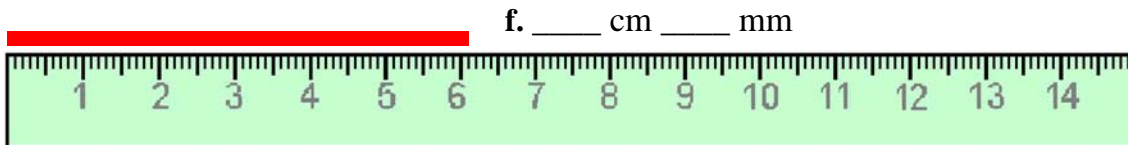
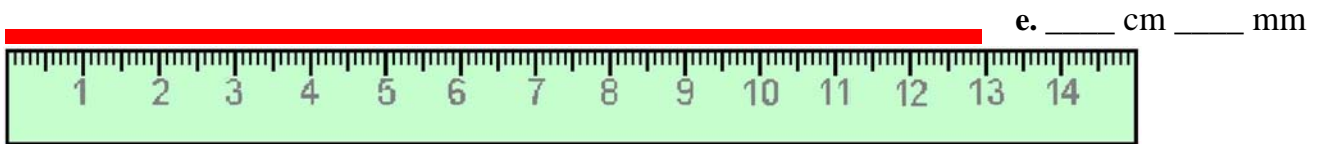
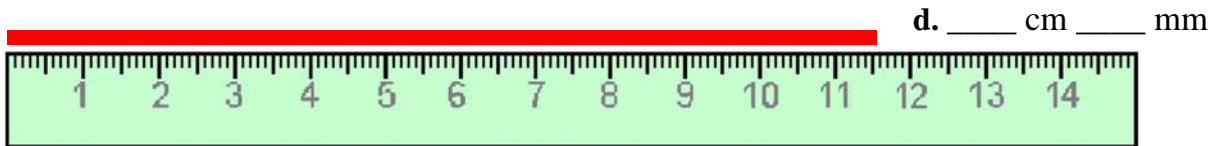
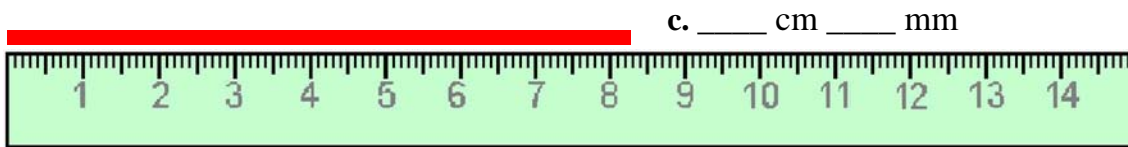
1. Measure the lines using the ruler.

a. ____ cm ____ mm



b. ____ cm ____ mm





2. Draw lines using a ruler.

a. 7 cm 8 mm

b. 10 cm 5 mm

c. 1 cm 4 mm

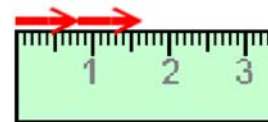
d. 12 cm 6 mm

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

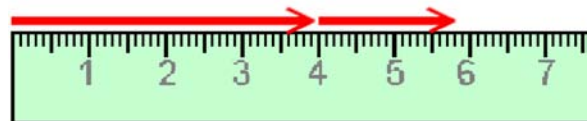
The first arrow is 8 mm. The second arrow is 8 mm too.
End-to-end, they measure together 16 mm *OR* 1 cm 6 mm.

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



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.	b.
1 cm 5 mm + 5 mm = ___ cm ___ mm	5 cm 2 mm + 7 cm 4 mm = ___ cm ___ mm
8 mm + 9 mm = ___ cm ___ mm	10 cm 8 mm + 7 cm 7 mm = ___ cm ___ mm
c.	d.
5 mm + 25 cm 8 mm = ___ cm ___ mm	13 cm 9 mm + 50 cm 2 mm = ___ cm ___ mm
15 mm + 14 mm = ___ cm ___ mm	9 mm + 17 mm + 2 cm 2 mm = ___ cm ___ mm

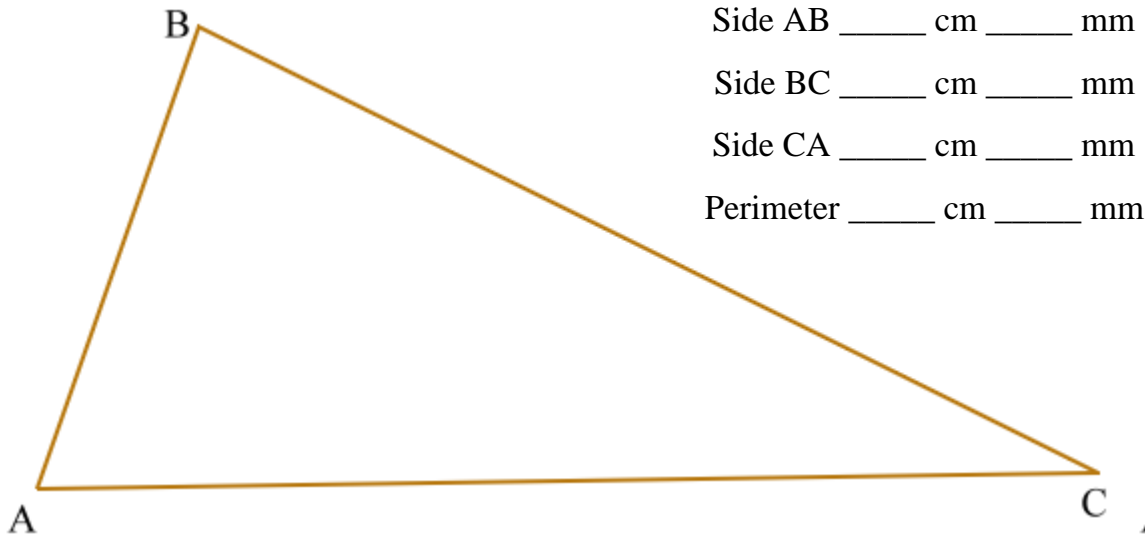
5. Change between centimeters and millimeters.

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.
10 mm = ____ cm	17 mm = <u>1</u> cm <u>7</u> mm	102 mm = ____ cm ____ mm
90 mm = ____ cm	22 mm = ____ cm ____ mm	267 mm = ____ cm ____ mm
100 mm = ____ cm	48 mm = ____ cm ____ mm	859 mm = ____ cm ____ mm
270 mm = ____ cm	67 mm = ____ cm ____ mm	450 mm = ____ cm ____ mm

7. Measure the sides of this triangle, and find the perimeter (“all the way around”).



8. The sides of a triangle are: 5 cm 2 mm, 7 cm 9 mm, and 6 cm 6 mm.
 What is the perimeter?