

Name _____

● 2 Linear Measurement: Metric

Chapter
2



Uses of metric measurement:

- Some sports use metric units.
For example, Olympic races are 100 m, 200 m, 400 m, 800 m, or 1500 m.
In the javelin throw, the world record for women is 72.28 m.
- Distances between Canadian cities are measured in kilometres.
For example, it is about 90 km from Toronto to Barrie.
- Height is given in centimetres on a driver's licence.
- Most of the time, you measure lengths using a centimetre ruler or measuring tape.

1. Where else is metric measurement used?

2. Before redecorating your room, what are some things you should measure?

Name _____

2.1 Metric Lengths and References

Focus: measuring lengths, approximating measurements

Chapter
2

Warm Up

1. Write each fraction in decimal form.

a) $\frac{1}{2} =$ _____

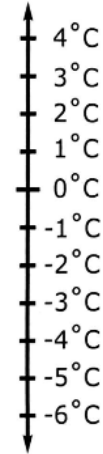
b) $\frac{1}{4} =$ _____

c) $\frac{1}{10} =$ _____

d) $\frac{2}{10} =$ _____

e) $\frac{3}{10} =$ _____

2. Last night the temperature was -5°C . This morning, the temperature is 3°C . What was the change in temperature?



Skills Practice 5: Multiplying and Dividing by Powers of Ten

1. Evaluate.

a) $43 \times 1 =$ _____ b) $43 \times 10 =$ _____ c) $43 \times 100 =$ _____

d) $0.5 \times 10 =$ _____ e) $0.5 \times 100 =$ _____ f) $0.5 \times 1000 =$ _____

g) $0.75 \times 10 =$ _____ h) $0.75 \times 100 =$ _____ i) $0.75 \times 1000 =$ _____

2. Describe the pattern when multiplying by powers of 10.

3. Evaluate.

a) $800 \div 1 =$ _____ b) $800 \div 10 =$ _____ c) $800 \div 100 =$ _____

d) $912 \div 10 =$ _____ e) $912 \div 100 =$ _____ f) $912 \div 1000 =$ _____

g) $75 \div 10 =$ _____ h) $75 \div 100 =$ _____ i) $75 \div 1000 =$ _____

4. Describe the pattern when dividing by powers of 10.

Name _____

Measuring Metric Lengths



- Metric lengths and distances are usually measured in metres (m), centimetres (cm), millimetres (mm), or kilometres (km).

1. Arrange these 4 units from smallest to largest.

- Converting from one metric unit to another will be easier for you if you memorize these facts:

- 1 cm = 10 mm
- 1 m = 100 cm
- 1 km = 1000 m

2. Convert each measurement to the unit specified. The first one is done for you.

- a) 2 cm = 20 mm b) 2 m = _____ cm
- c) 2 km = _____ m d) 4 km = _____ m
- e) 8 m = _____ cm f) 0.5 cm = _____ mm
- g) 0.5 m = _____ cm h) 500 m = _____ km
- i) 300 cm = _____ m j) 1500 m = _____ km

3. Circle the better measurement.

- a) The length of this book is about 30 cm 30 mm
- b) The diameter of a CD is about 12 mm 12 cm
- c) The length of a car is about 4 m 40 m
- d) The width of a fingernail is about 1 mm 1 cm

4. Write the metric unit that you might use to measure each of the following items. The first one is done for you.

- a) a floor tile cm b) length of a pencil _____
- c) a soccer field _____ d) distance to Calgary _____
- e) length of an ant _____ f) width of a pen tip _____

Chapter
2

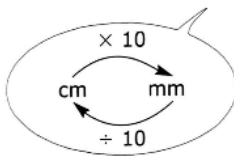
Name _____

5. Measure each line segment shown below using a metric ruler. Write the measurements in the table. The first one is done for you.

- a) _____
- b) _____
- c) _____
- d) _____
- e) _____
- f) _____
- g) _____
- h) _____
- i) _____

Centimetres	Millimetres
a) 5.8 cm	58 mm
b)	
c)	
d)	
e)	
f)	
g)	
h)	
i)	

6. A pencil measures 13.4 cm in length.
What is the length of the pencil in millimetres?



7. A compact disc has a thickness of 2 mm.
What is the thickness of the CD in centimetres?

8. Without using a ruler, draw a line that is about each given length.

- a) 1 cm
- b) 2 cm
- c) 5 cm
- d) 10 cm
- e) 5 mm

9. Measure each line you drew in #8. How close were you?




Name _____

- Estimating distances is easier if you can approximate common measurements using your body or surroundings.
- For the following activity, you will need a ruler and a measuring tape.

10. Complete the following table to collect some personal references for estimating metric distances.

Measurement	Personal Reference
1 cm	
10 cm	
1 m	
2 m	

11. Complete this table to collect more personal references for estimating metric distances.

Measurement	Personal Reference
	Your outstretched hand 
	The length of your foot 
	The length of your arm 
	Your height

Check Your Understanding

How could you use your collection of personal references to estimate the height of the classroom?
