MFM 2PI Name: _____

SYSTEMS OF MEASURE

Canada adopted the _____ _____ of measurement in _____ under the leadership of _____ _____. Currently, most countries (excluding the _____ _____) officially use a metric-based system. In everyday life and work, however, the _____ _____ is still often used.

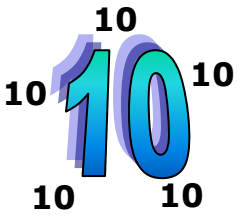
COMMONLY USED UNITS OF MEASURE

	Metric	Imperial
Length 		
Mass 		
Volume 		

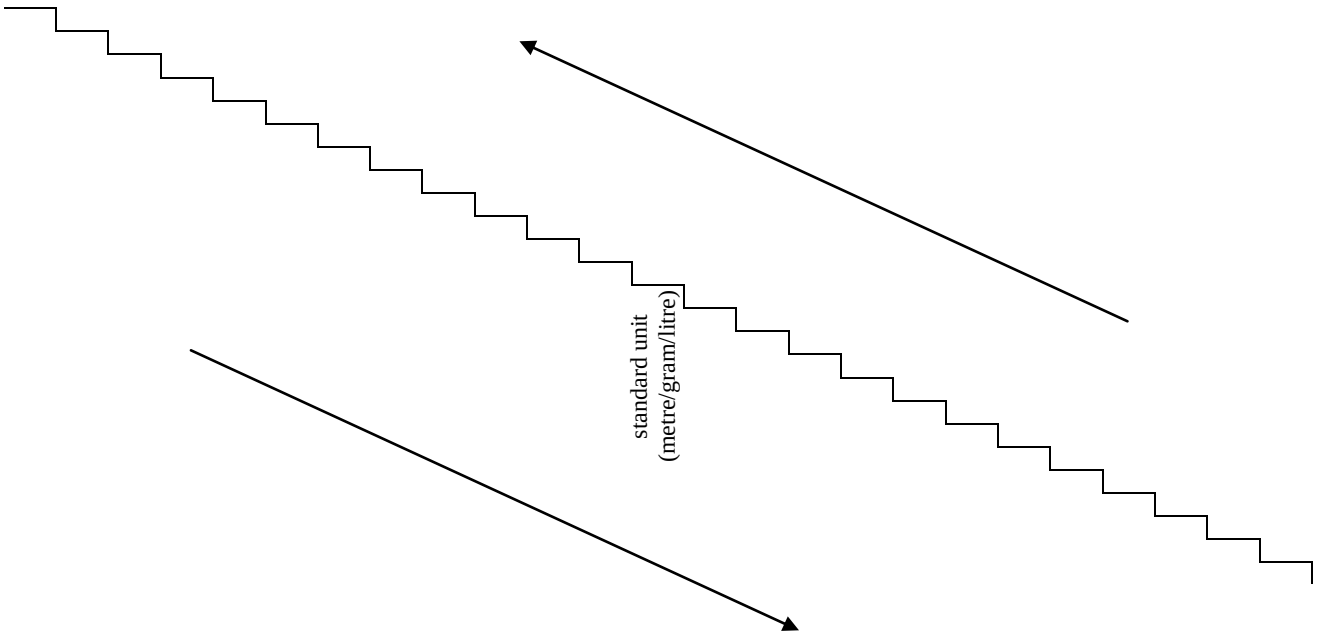
THE METRIC SYSTEM

The metric system is based on the _____ _____(powers of _____).

The _____ is the standard unit for length.
The _____ is the standard unit for mass.
The _____ is the standard unit for volume.



Prefixes are added to them for larger and smaller units.



EXAMPLES

Convert each measure.

1. 50 m to decimetres

2. 400 mL to litres

3. 3 kL to millilitres

4. 20 dag to kilograms

PRACTICE

1. Convert 1 m to millimeters.

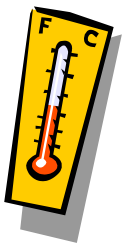
2. Convert the following lengths.
   a) 3.5 hm to metres
   b) 0.1597 m to micrometres
   c) 1280000 mm to kilometres
   d) 595 dm to centimetres

3. Convert 1 Mg to grams.

4. Convert the following weights.
   a) 76 g to milligrams
   b) 0.3925 kg to grams
   c) 0.50 kg to milligrams
   d) 120000000 ng to dekagrams

5. Convert 1 daL to litres.

6. Convert the following volumes.
   a) 8 L to millilitres
   b) 1380 kL to litres
   c) 0.0000001 GL to litres
   d) 825550 mL to kL



7. Three temperature scales are commonly used in science and industry: the degree Fahrenheit (°F), the degree Celsius (°C) and Kelvin (K). Both the degree Celsius and Kelvin scales are metric. To convert from °C to K, add 273.15. To convert from K to °C, subtract 273.15.

   Convert the following temperatures.
   a) 100 °C = _____ K
   b) 273.15 °C = _____ K
   b) 273.15 K = _____ °C
   d) 0 K = _____ °C

ANSWERS

1. 1000 mm	2. a) 350 m	2. b) 159700 μm	2. c) 1.28 km	2. d) 5950 cm
3. 1000000 g	4. a) 76000 mg	4. b) 392.5 g	4. c) 500000 mg	4. d) 0.012 dag
5. 10 L	6. a) 8000 mL	6. b) 1380000 L	6. c) 100 L	6. d) 0.82555 kL
	7. a) 373.15 K	7. b) 546.30 K	7. c) 0 °C	7. d) -273.15 °C