

Math 9
2.1 SI Measurement (part 2)

Name: _____
Date: Feb 23

Learning Goals: *I will learn to*

- solve problems using a personal referent to estimate measurements
- convert between SI measurements

Example 1: Estimate and Measure Using SI Units

Use a referent to estimate each distance. Then measure each distance.

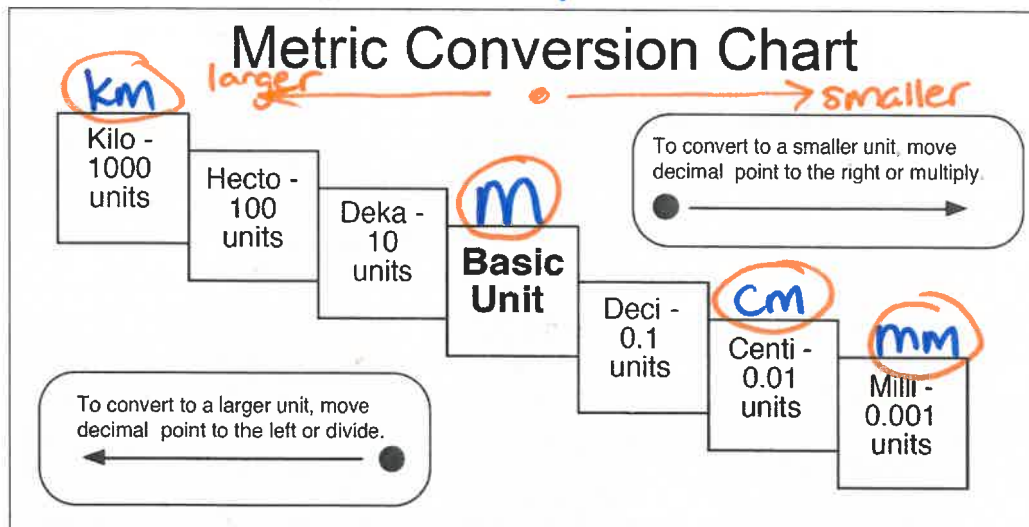
	ESTIMATE:	MEASURE:
a) the thickness of a cellphone	about 1 finger width $\approx 1 \text{ cm}$	1.1 cm OR 11 mm
b) the height of the seat of a chair	about half my hip height $\approx 0.5 \text{ m}$ or 50 cm	46.2 cm
c) the width of the cover of the textbook	about one outstretched hand $\approx 20 \text{ cm}$	20.8 cm

SI (Metric) Units

SI stands for *Système International d'Unités*.

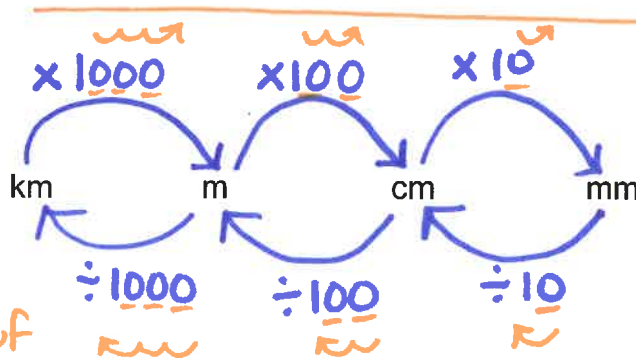
In the SI system, the base unit of length is the metre.

Other length units are obtained by attaching prefix to the base unit.



The most used SI length units are related as follows:

converting to smaller units * (need more of them)
 move decimal to right.



converting to larger units ÷ (need less of them)
 move decimal to left.

Example 2: Convert between SI Units for Length

Convert each measurement to a more appropriate SI unit. Justify your choice.

a) A tube of toothpaste is 205 mm long ⇒ **cm** mm too small
 m too big

mm → cm
 ÷ 10

205 mm ÷ 10 = **20.5 cm**

b) The circumference of a highlighter measures 0.06 m. ⇒ **mm** m too big
 cm would be o.k.

m → cm → mm
 x100 x10

0.06 m x 100 x 10 = **60 mm**

c) You travel 418 000 m from Penticton to Vancouver ⇒ **km** large distance
 we typically use km to measure distances between cities

m → km
 ÷ 1000

418,000 ÷ 1000 = **418 km**

d) The top of a door is 2032 mm high. ⇒ **m** m is closest to
 height of door

mm → cm → m
 ÷ 10 ÷ 100

2032 mm ÷ 10 ÷ 100 = **2.032 m**