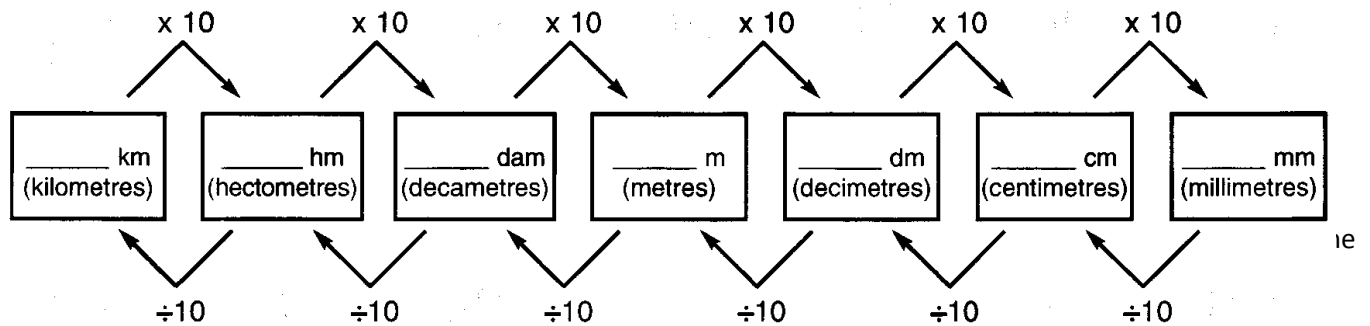# Unit 2 – Measurement
2.2 – Metric System Conversions

- the metric system is based on **multiples of 10**
- therefore, it is a *decimal* system similar to our money system
- the following diagram shows the relationships between length units of the metric system

Example: Convert the following length measurements.

1. 246 m = _____ cm

6. 4803 cm = _____ m

2. 3.96 dm = _____ hm

7. 37 000 mm = _____ dam

3. 3.63 km = _____ m

8. 12.1 m = _____ dm

4. 2.5 m = _____ mm

9. 195 dam = _____ mm

5. 1 120 mm = _____ cm

10. 36.2 hm = _____ km

- you can use a similar method when converting between any two units of volume and mass
- use the following chart to convert between different units

k	h	da	M g ℓ	d	c	m

Example: Convert the following measures as indicated.

1. 2.57 m = _____ cm

6. 6027 cℓ = _____ ℓ

2. 450 dg = _____ hg

7. 2500 mg = _____ dag

3. 0.517 kℓ = _____ ℓ

8. 6.3 m = _____ dm

4. 0.5 g = _____ mg

9. 2460 daℓ = _____ mℓ

5. 315 mm = _____ cm

10. 1.6 hg = _____ kg

Assignment

1. Make the following conversion of metric units.

a) 1 m = _____ cm

b) 1 g = _____ hg

c) 1 ℓ = _____ dℓ

d) 1 g = _____ kg

e) 1 m = _____ dam

f) 1 ℓ = _____ mℓ

g) 1 g = _____ dg

h) 1 ℓ = _____ daℓ

i) 1 m = _____ km

j) 1 ℓ = _____ cℓ

k) 1 m = _____ mm

l) 1 ℓ = _____ hℓ

m) 1 g = _____ dag

n) 1 m = _____ dm

o) 1 g = _____ cg

p) 1 ℓ = _____ kℓ

q) 1 g = _____ mg

r) 1 m = _____ hm

2. Use the following chart to help convert the following measurement into the indicated units.
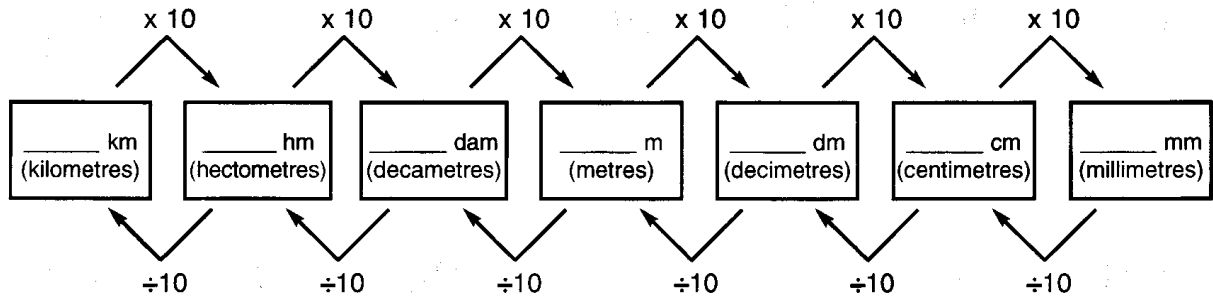
k	h	da	m g ℓ	d	c	m

a) 0.1 hg = _____ kg

b) 14 cm = _____ mm

c) 281 ℓ = _____ hℓ

d) 1463 kℓ = _____ ℓ

e) 2.1 g = _____ dag

f) 10 m = _____ mm

g) 98.6 hg = _____ dg

h) 2991 dm = _____ dam

i) 367.13 ℓ = _____ kℓ

j) 9768 mm = _____ dam

k) 16 cg = _____ hg

l) 4.16 kg = _____ dg

m) 99 dam = _____ cm

p) 0.4 dag = _____ hg

q) 60 mm = _____ km

r) 53 km = _____ cm

s) 39 cℓ = _____ dℓ

t) 132 dg = _____ g

u) 430 mg = _____ cg

v) 0.05 daℓ = _____ dℓ

w) 4.8 cm = _____ m

x) 0.03 hg = _____ mg

y) 1.1 mℓ = _____ ℓ

z) 152 dg = _____ kg

aa) 48.73 daℓ = _____ ℓ

bb) 0.071 kg = _____ mg

n) 0.031 hg = _____ g   cc) 102 m = _____ cm

o) 11.2 dℓ = _____ mℓ   dd) 55 hg = _____ dag

3. Use the following chart to help with your conversions of distance units.

a) 12 hm = _____ m = _____ dm = _____ mm

b) 0.042 km = _____ dam = _____ cm = _____ m

c) 43.3 mm = _____ dm = _____ dam = _____ hm

d) 1300 cm = _____ m = _____ hm = _____ mm

e) 12.53 dam = _____ km = _____ dm = _____ cm

f) 1.53 m = _____ km = _____ cm = _____ hm

g) 312 dm = _____ dam = _____ m = _____ mm

h) 0.0096 dam = _____ hm = _____ m = _____dm

i) 3210 dm = _____ km = _____ cm = _____ hm

j) 16 000 mm = _____ m = _____ km = _____ cm

j) 3.37 km = _____ dm = _____ hm = _____ mm

k) 12.55 m = _____ dm = _____ dam = _____ mm

l) 0.058 hm = _____ dam = _____ cm = _____ km

m) 823 cm = _____ km = _____ dm = _____ dam

n) 11 230 cm = _____ hm = _____ dm = _____ m