

Name: _____

Date: _____

Consider some common units that you use **every day**:

- kilometres (distance)
 - metre
 - centimetre
 - millimetre
- litres (volume)
 - millilitres
- grams (weight)
 - kilograms (kilos)
- seconds (time)

Can you move between different 'levels' in systems?

Example Time.

millisecond	second	minute.	hour	day	week	month.
	1000 milliseconds = 1 sec	60 sec = 1 min	60 min = 1 hr	24 hrs = 1 day	7 days = 1 week	on average 4 weeks + 2 days = 1 month.

$$\frac{60 \text{ min}}{1 \text{ hrs}} \times \frac{24 \text{ hrs}}{1 \text{ day}} = \frac{1440 \text{ min}}{1 \text{ day}}$$

$$\frac{\text{hrs}}{\text{hrs}} = 1$$

$$\frac{60 \text{ sec}}{1 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}} \times \frac{24 \text{ hrs}}{1 \text{ day}} \times \frac{7 \text{ days}}{1 \text{ week}} = \frac{604800 \text{ sec}}{1 \text{ week}}$$

$$\frac{\text{min}}{\text{min}} = 1$$

$$\frac{\text{hrs}}{\text{hrs}} = 1$$

$$\frac{\text{day}}{\text{day}} = 1$$

Example Distance.

centimetre			metres		kilometres	
mm	cm	dm	m	dam	hm	km
1mm	10 mm	10 cm	10 dm 100 cm 1000 mm	10 m	10 dam 100 m	10 hm 1000 m

millimetre decimetre decametre hectometre

← \times by 10 (# should get bigger)
 $3.5 \text{ m} = 350 \text{ cm}$
 \div by 10 (# should be getting smaller) →

0.7 m in kilometres and centimetres

0.0007 km
 0.70 cm

Example Volume.

litres						
mL	cL	dL	L	daL	hL	kL
←			\times by 10 per step	→		
			\div by 10 per step			

milli centi deci deca hecto kilo

11 L in millilitres

11000 mL

8 kL in litres

8000 L