MEASUREMENT

YOU ARE TO COPY THE NOTES, TABLES, DIAGRAMS AND COMPLETE ALL ACTIVITIES IN YOUR EXERCISE BOOKS.

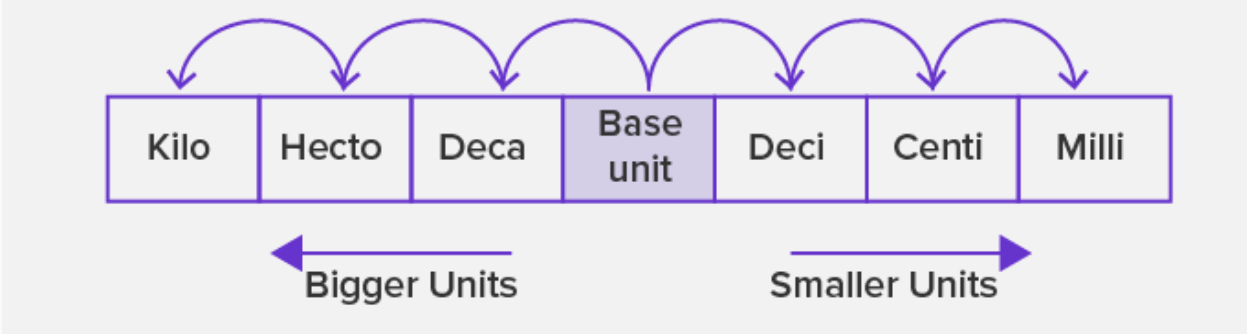
The S.I Systems of Units

S.I stands for Systems International which is a particular form of **the metric system** of measurement.

The basic unit of length in S.I is the meter (m). This is a little more than a yard.

The metric system is a system of measurement that uses the meter, liter, and gram as **base units** of length (distance), capacity (volume), and weight (mass) respectively.

To measure smaller or larger quantities, we use units derived from the metric units



The units for length, weight (mass) and capacity (volume) in the metric system are:

Length: Millimeter (mm), Decimeter (dm), Centimeter (cm), Meter (m), and Kilometer (km) are used to measure how long or wide or tall an object is.
Examples include measuring the thickness or length of a credit card, length of cloth, or distance between two cities.

Kilometer (km)	Hectometer (hm)	Decameter (dam)	Meter (m)	Decimeter (dm)	Centimeter (cm)	Millimeter (mm)
1000	100	10	1	1/10	1/100	1/1000

Example:

1 m = 0.001 km
∴ 2 m = 0.001 × 2
= 0.002 km
∴ 2m = 0.002 km

Note that this symbol ∴ means **therefore**

Activity 1: Find how many kilometers are present in:

A. 5 m
B. 10 m
C. 3.3 m
D. 15 m
E. 80 m
F. 120 m

NB: To get how many kilometers are present in a meter, you multiply by 0.001 or divide by 1000

To get how many meters are present in kilometers, you multiply by 1000

Example: How many meters are present in 5000 kilometers

5000 km = ____ m

To get the answer you multiply by 1000

5000 × 1000 = 5000 000

∴ 5000 km = 5000 000 m

Activity 2: Find how many meters are present in:

a) 55 km
b) 1000 km
c) 4500 km
d) 150 000 km
e) 80000 km
G. 120 km

Activity 3: Use the table to complete the following:

A. 1 km = 1000 m
B. 1 hm = _____ m
C. 1 dam = ____ m
D. 1 dm = _____ m
E. 1 cm = _____ m
F. 1 mm = _____ m

Weight: Gram (g) and Kilogram (kg) are used to measure how heavy an object is. Examples include measuring the weight of fruits or our body weight.

Kilogram (kg)	Hectogram (hg)	Decagram (dag)	Gram (g)	Decigram (dg)	Centigram (cg)	Milligram (mg)
1000	100	10	1	1/10	1/100	1/1000

Example:

1 g = 0.001 kg

∴ 2 g = 0.001 × 2

= 0.002 kg

∴ 2g = 0.002 kg

Activity 4: Find how many kilograms are present in:

H. 53 g
I. 100 g
J. 3.77 g
K. 150 g
L. 800 g
M. 1200 g

NB: To get how many kilograms are present in a gram, you multiply by 0.001 or divide by 1000

To get how many grams are present in kilograms, you multiply by 1000

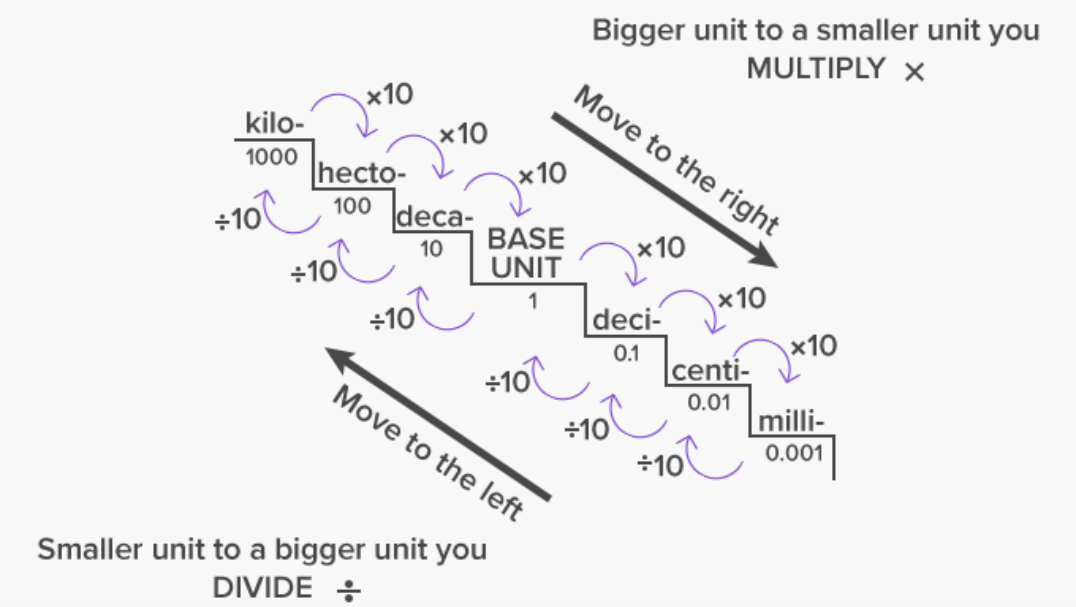
Example: How many grams are present in 4000 kilograms

4000 kg = ____ g
To get the answer you multiply by 1000
4000 × 1000 = 4 000 000
∴ 4000 kg = 4 000 000 g

Activity 5: Use the table to complete the following:

A. 1 kg = 1000 g
B. 1 hg = _____ g
C. 1 dag = _____ g
D. 1 dg = _____ g
E. 1 cg = _____ g
F. 1 mg = _____ g

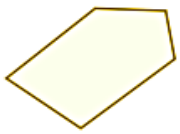
Study carefully, copy and do activity 6



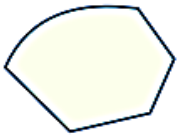
Activity 6: pg 49 Ex 4a # 1 to 10

Polygons

A polygon is any figure bounded by line segments. Special polygons derive their names from the number and nature of their sides.



Polygon
(straight sides)



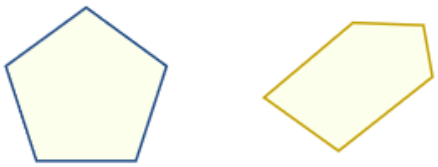
Not a Polygon
(has a curve)

Not a Polygon
(open, not closed)

Types of Polygons

Regular or Irregular

A **regular** polygon has all angles equal and all sides equal otherwise, it is **irregular**

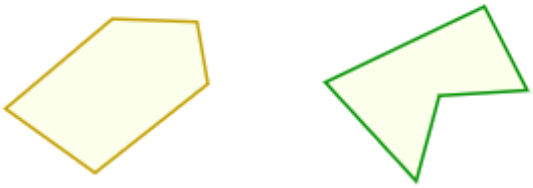


Regular Irregular

Concave or Convex

A **convex** polygon has no angles pointing inwards. More precisely, no internal angle can be more than 180°.

If any internal angle is greater than 180° then the polygon is **concave**. (*Think: concave has a "cave" in it*)



Convex Concave

Simple or Complex

A **simple** polygon has only one boundary, and it doesn't cross over itself. A **complex** polygon intersects itself! Many rules about polygons don't work when it is complex.

Simple Polygon
(this one's a Pentagon)

Complex Polygon
(also a Pentagon)

Table showing the names of polygons. Complete the table by drawing the shapes and stating the number of vertices for each polygon.

Name	Sides	Number of vertices	Shape	Sum of Interior Angle
Triangle *(or Trigon)*	**3**			180°
Quadrilateral	**4**			360°
Pentagon	**5**			540°
Hexagon	**6**			720°
Heptagon	**7**			900°
Octagon	**8**			1080°
Nonagon	**9**			1260°
Decagon	**10**			1440°

ALL WORK MUST BE COMPLETED SINCE THE WORK WILL BE DISCUSSED WHEN SCHOOL REOPENS