Standard International Units

Quantity measured	Name of unit	Symbol
length	metre	m
mass	kilogram	kg
time	second	s
force	newton	N
area	square metres	m^2
volume	cubic metres	m^3
temperature	degrees Celsius	°C
speed	metres per second	m/s
current	ampere or amp	A
energy	joule	J
voltage	volt	V
pressure	pascal	Pa
power	watt	W
frequency	hertz	Hz

Converting units

Conversions to remember:

Length

Cm → m ÷ 100
m → km ÷ 1000
mm → cm ÷ 10
µm → mm ÷ 1000

m → cm x 100
km → m x 1000
cm → mm x 10
mm → µm x 1000

Mass

g → kg ÷ 1000
mg → g ÷ 1000

kg → g x 1000
g → mg x 1000

Example:
50 km to m.

Km → m x 1000

50 x 1000 =

50 000 m

Prefix	Symbol	Meaning	Example
mega-	M	1 000 000	1 megawatt (1 MW) = 1000 000 W
kilo-	k	1000	1 kilojoule (kJ) = 1000 J
deci-	d	1/10	1 cubic decimetre (dm^3) = 1/1000 m^3 (1/10 m × 1/10 m × 1/10 m)
centi-	c	1/100 (a hundredth)	100 centimetres (cm) = 1 m
milli-	m	1/1000 (a thousandth)	1000 millimetres (mm) = 1 m
micro-	µ	1/1 000 000 (a millionth)	1000 micrometres (µm) = 1 mm
nano-	n	1/1 000 000 000	1 000 000 nanometres (nm) = 1 mm

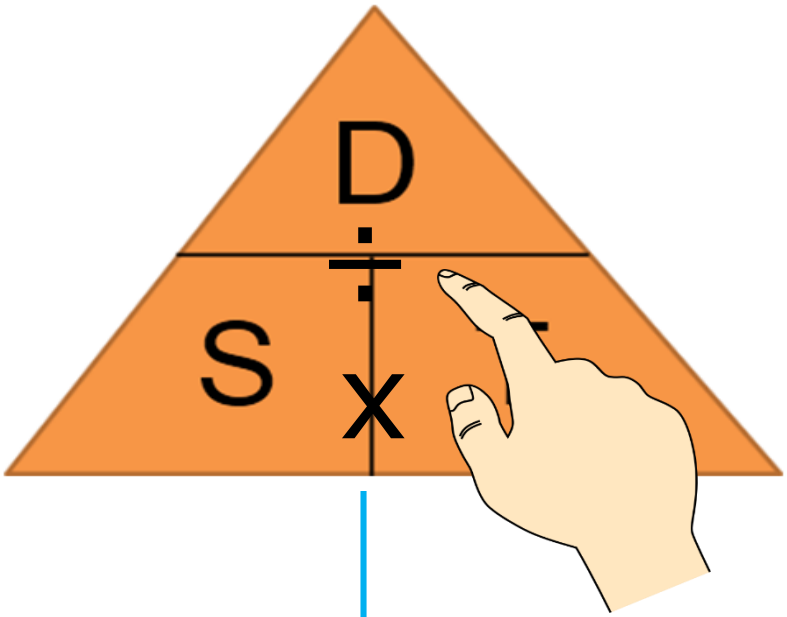
Pay close attention to units, often to catch you out a value may be in the wrong unit for its equation.

Equations

1. Underline the numbers in the question and what they represent. Circle what you need to find out.
2. Put your equation into a **triangle**
3. **Cover** what you want to find out
4. Write the **equation** to work this out
5. **Input the numbers** from the question
6. Check the **units**, do you need to convert?
7. Remember to show your working out and the units.

Putting equations into triangles:

- Multiply goes on the base of your triangle
- What is being divided goes on the tip of the triangle.
- E.g. speed = distance / time
  d is being divided so it is on top.



Example:
A car travels 0.5 km at a speed of 2.5 m/s.
Calculate the time it takes for a car to do this journey.

Time = distance/speed
T = 0.5 km / 2.5

Input your numbers into the equation

0.5 km → m x 1000
0.5 x 1000 = 500m

Check the units, distance is always measured in m. So we need to convert from km to m.

T = 500/2.5
= 200 s.

Now we have the correct numbers to work out our answer. Do not forget units.