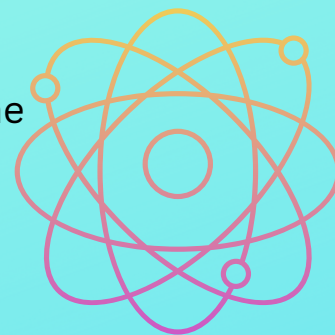# Equation Sheet for GCSE Chemistry

These are the equations you will need to memorise for your Chemistry GCSE

For all:

Relative formula mass = Relative atomic mass of all atoms in the compound added together

Concentration (g/dm^3) = $\dfrac{\text{Mass (g)}}{\text{Volume (dm}^3\text{)}}$

Mean rate of reaction (g/s or cm^3/s) = $\dfrac{\text{Quantity of reactant used OR Quantity of product formed}}{\text{Time taken}}$

Chromatography Rf value = $\dfrac{\text{Distance moved by substance}}{\text{Distance moved by solvent}}$

Plus these for higher tier (combined and triple):

Moles = $\dfrac{\text{Mass (g)}}{\text{Relative formula mass}}$

Number of particles in a substance = Moles x Avogadro's number

Plus these for triple:

% Yield = $\dfrac{\text{Mass of product actually made}}{\text{Maximum theoretical mass of product}}$ x100

Atom economy = $\dfrac{\text{Relative formula mass of desired product from equation}}{\text{Sum of relative formula masses of all reactants from equation}}$ x 100

Plus these for triple higher:

Concentration (mol/dm^3) = $\dfrac{\text{Moles}}{\text{Volume (dm}^3\text{)}}$

Volume of gas at room temperature and pressure (dm^3) = moles x 24

Remember to convert cm^3 into dm^3 you divide by 1000