



CC9 Calculations involving masses

Personal learning checklist | 1 of 2

GCSE Edexcel Combined Science | Chemistry Papers 1 and 2

Name _____ Class _____ Date _____

Tick one box for each statement. Red: need help. Amber: partly confident.
Green: can do independently.

I can	Red	Amber	Green
Formula calculations			
Calculate relative formula masses and element mass percentages, including bracketed formulae and appropriate rounding.	☐	☐	☐
Distinguish empirical and molecular formulae and simplify atom ratios.	☐	☐	☐
Calculate empirical formulae from masses or percentages using relative atomic masses.	☐	☐	☐
Calculate molecular formulae using empirical formula and relative molecular mass.	☐	☐	☐
Experimental evidence			
Describe the magnesium oxide experiment and calculate magnesium and oxygen masses and the empirical formula.	☐	☐	☐
Explain constant-mass heating and how incomplete reaction or product loss affects experimental results.	☐	☐	☐
Explain mass conservation in closed and open systems, including gas escape and oxygen uptake.	☐	☐	☐
Calculate reacting and product masses from balanced equations and distinguish mass ratios from particle ratios.	☐	☐	☐

My next revision priority _____



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Personal learning checklist | 2 of 2

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Name _____ Class _____ Date _____

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I can	Red	Amber	Green
Concentration			
Calculate and rearrange mass concentration using solution volume and convert between cubic centimetres and cubic decimetres.	☐	☐	☐
Explain dilution using unchanged solute amount and increased solution volume.	☐	☐	☐
Moles (Higher)			
Use molar mass to convert between mass and amount in moles (Higher).	☐	☐	☐
Use the Avogadro constant to convert between amount and numbers of specified particles (Higher).	☐	☐	☐
Use balanced mole ratios to calculate reacting quantities and identify limiting reactants (Higher).	☐	☐	☐
Deduce balanced reaction ratios from measured reactant and product masses (Higher).	☐	☐	☐

My next revision priority _____