Blurt it

Step 1

Name _____ **Date** _____

1. Cover your notes and put your phone face down.
2. Set a timer for 5 minutes.
3. Write down everything you remember about quantitative chemistry: facts, key words, equations, practicals, and mistakes to avoid. Diagrams count too.

Stuck? Start with one of these: conservation of mass · relative formula mass · concentration

When the timer ends, turn over and check what you remembered.

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Check it, fix it, space it

Steps 2, 3 and 4

Check it

Tick each idea you wrote down, even in your own words.

- [ ] Conservation of mass: no atoms are made or lost, so the mass of the products equals the mass of the reactants
- [ ] To balance an equation, put big numbers in front of formulae; never change the small numbers inside a formula
- [ ] Relative formula mass (Mr) is the sum of the relative atomic masses in the formula
- [ ] Percentage by mass of an element = total relative atomic mass of that element ÷ Mr × 100
- [ ] In a balanced equation, the total Mr of the reactants equals the total Mr of the products
- [ ] If a gas joins or escapes, the mass can seem to go up or down in an open container
- [ ] The range of results around the mean shows how uncertain they are
- [ ] Work out the mass of solute in a volume of solution when you know its concentration in g/dm³

Higher only

- [ ] A mole is the amount of substance; the mass of one mole in grams equals its Mr
- [ ] One mole of anything contains 6.02×10^{23} particles (the Avogadro constant)
- [ ] Moles = mass ÷ Mr
- [ ] Use moles to read a balanced equation and work out reacting masses
- [ ] Balance an equation from reacting masses by turning them into a whole number mole ratio
- [ ] The limiting reactant runs out first and sets the most product you can make
- [ ] Explain how concentration depends on the mass of solute and the volume of solution

Key words to use: conservation of mass · balanced equation · relative formula mass · mole · Avogadro constant · limiting reactant · concentration · solute · solution

I remembered _____ out of 8. **Higher only: _____ out of 7.**

Fix it

Pick 3 ideas you missed. Look them up, then write each one correctly.

1

2

3

Space it

Blurt again on a fresh sheet. Gaps help you remember for longer.

Tomorrow
Date _____
Score _____ / 8
Higher only _____ / 7

In 3 days
Date _____
Score _____ / 8
Higher only _____ / 7

In a week
Date _____
Score _____ / 8
Higher only _____ / 7

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