<u>Flashback Exercise 1</u>

Radiaoctivity

1. Compared to combustion, a chemical exothermic process, what is the great advantage of fusion, which allows it to release so much more energy?

Stoichiometry and Molarity

2. a)   If 250.0 ml of a 3.00 M $H_2SO_{4(aq)}$ solution are completely neutralized by potassium hydroxide, what volume of water will be produced? The density of liquid water is 1.00 g/ml at 25 °C.

   $$2\ KOH_{(aq)} + H_2SO_{4(aq)} \rightarrow Na_2SO_{4(aq)} + 2H_2O_{(l)}$$
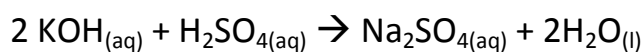
   b) Report the answer with the correct number sig figs.

Bonding

3. a)   Use Lewis structures to reveal the reaction between calcium and chlorine.
   b) Then show the product and ...
   c) ....finally give the empirical formula of the compound created.

Coulomb's Law

4. If the distance between two opposite charges suddenly becomes only ¼ of the original , how will the force of attraction compare to the original one?

Circuits

5. Find the missing resistance if 2.0 A flows through it and then eventually returns to a 12 V power source.