**Chemistry Revision: Acids and Alkalis 2**

Mastery Matrix Points TRIPLE ONLY

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| Explain the difference between a strong and weak acid, giving examples (triple only) |
| Link pH changes to hydrogen ion concentration (triple only) |
| Explain how to use a titration to measure the volume of an acid or an alkali |
| **Required practical 2: Determine the reacting volume of a solution of strong acid and strong alkali by titration linking to concentration (triple only)** |

Key Knowledge

Definitions

Strong acid

Weak acid

Dilute acid

Concentrated acid

Examples of weak acids

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Examples of strong acids

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pH and ion concentration

For a given concentration of aqueous solutions, the stronger an acid,

the \_\_\_\_\_\_\_\_\_the pH.

As the pH decreases by one unit, the hydrogen ion concentration of

the solution increases by a factor of \_\_\_.

i.e. pH 1 has the \_\_\_\_\_ hydrogen ions and pH 14 has the \_\_\_\_\_ hydrogen ions.

Understanding and Explaining

1. Explain how a concentrated acid can be weak or strong.
2. Describe the equipment and method of using a titration to find out the concentration of a sulfuric acid by reacting it is a known concentration of sodium hydroxide. Include how you will accurately measure the volumes of reactants and the indicator you will use (HINT – universal indicator is NOT suitable to use in titrations because its colour change is too graduated).
3. Explain the five steps you take to calculate the unknown concentration after a titration is complete.

Use these results as an example: A titration is carried out and 0.04dm3 hydrochloric acid neutralises 0.08dm3 sodium hydroxide of concentration 1.00 mol/dm3. Calculate the concentration of the hydrochloric acid.