**Chemistry 2.6 AS 91166** Demonstrate understanding of chemical reactivity



Writing Excellence answers to **Equilibrium – Concentration** questions

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| **Equilibrium – Concentration QUESTION** |
| **Question:**   When acid is added to a yellow solution of chromate ions, CrO42–(*aq*), the following equilibrium is established. 2CrO42–(*aq*) + 2H+(*aq*) ↔ Cr2O72–(*aq*) + H2O(l) **yellow**  **orange** Analyse this equilibrium using equilibrium principles to explain the effect on the colour of the solution when: (i) more dilute acid is added **AND** when (ii) dilute base is added:  |
| **ANSWER** |
| 1. State the **equilibrium principle** |  |
| 2. Describe the **factor** in your question AND Link the principle to how the **system responds to increasing or decreasing concentration** of reactants |  |
| 3. **Generally,** explain which side of the equation is favoured (relate to reactants or products) by increasing or decreasing concentration  |  |
| 4. **Specifically,** for your reaction explain how you are increasing the concentration of reactants, AND link the direction of reaction that would be favoured  |  |
| 5. Describe how the **system shift** by increasing the concentration of reactants would affect which substances are made AND final observation. |  |
| 6. **Specifically,** for your reaction explain how you are decreasing the concentration of reactants, AND link the direction of reaction that would be favoured  |  |
| 7. Describe how the **system shift** by decreasing the concentration of reactants would affect which substances are made AND final observation. |  |

NOTE: The white column is how your answer would appear on your test paper so make sure you **write out complete sentences**. The grey area is just to help you structure your answer and would not appear in the question.