

Recall C8

Question	Answer
What is meant by the term rate of reaction?	Mean rate of reaction = $\frac{\text{quantity of reactant used}}{\text{time taken}}$ Mean rate of reaction = $\frac{\text{quantity of product formed}}{\text{time taken}}$
What factors affect the rate of a chemical reaction?	Concentration of reactants The pressure of gases The surface area of solids Temperature Presence of catalysts
What is collision theory?	Reactions can only occur if reacting particles collide with each other with sufficient energy
How does concentration, pressure and surface area affect rate of reactions?	Increasing these increases the rate due to more frequent collisions
How does temperature affect rate of reaction?	Increasing temperature increases the frequency and energy of collisions
How do catalysts affect the rate of reaction?	They provide a different pathway for the reaction that has a lower activation energy (energy required for a successful collision)
What is the sign for reversible reactions?	\rightleftharpoons
How do reversible reactions work with exo/endothemic reactions?	If it is exothermic in one direction then it is endothermic in the opposite direction
What is equilibrium?	When a reversible reaction occurs in a closed system equilibrium is reached when the forwards and reverse reactions occur at the same rate

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What happens when a condition is changed in a closed system in equilibrium?	The system responds to counteract the change
What happens if concentration is changed?	Increase in reactants: More products are formed Decrease in products: More reactants will react
What happens if temperature is increased?	Endothermic reactions: Relative amount of products increases Exothermic reactions: Relative amount of products decreases
What happens if temperature is decreased?	Endothermic: Relative amount of products decreases Exothermic Relative amount of products increases

What happens if pressure is increased?	The equilibrium will shift towards the side with the smallest number of molecules
What happens if the pressure is decreased?	The equilibrium will shift towards the side with the largest number of molecules