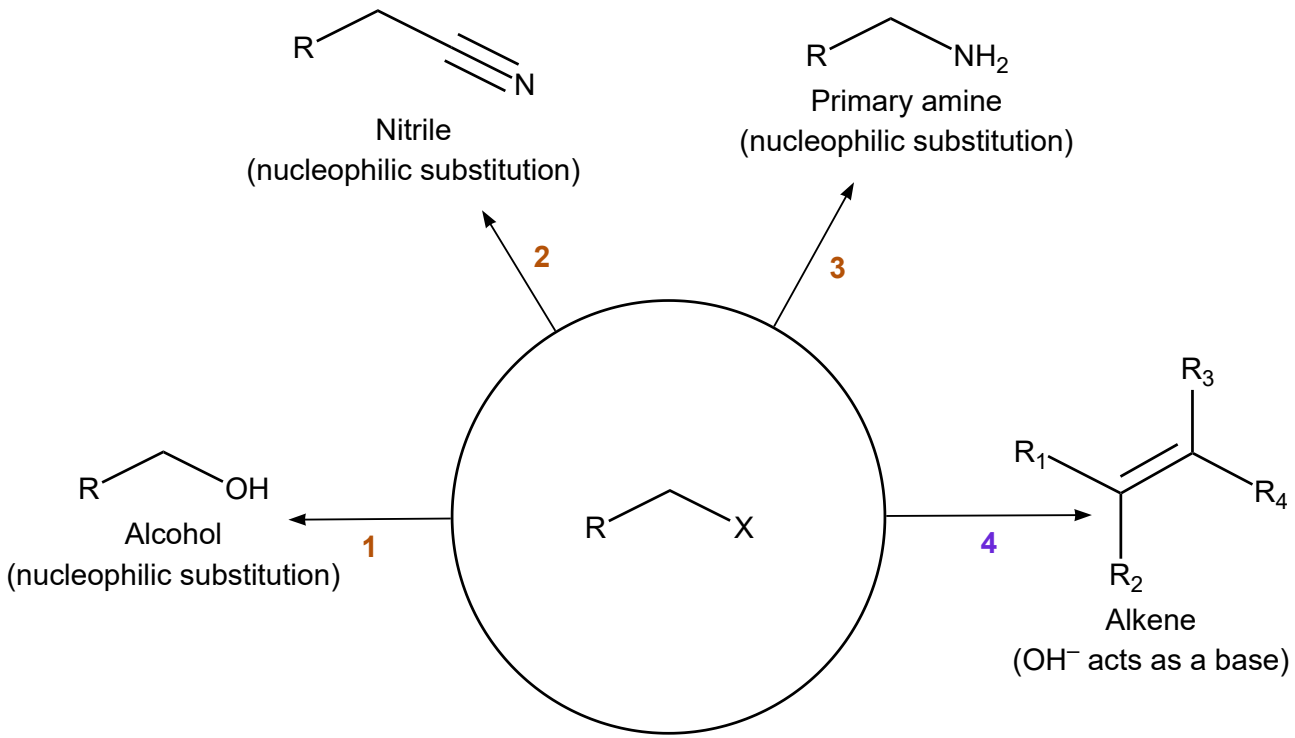
Halogenoalkanes Map

AQA A Level Chemistry · 3.3.3 Halogenoalkanes



1 substitution: NaOH(aq) or KOH(aq), warm, heat under reflux

2 substitution: KCN in aqueous ethanol, heat under reflux

3 substitution: excess NH_3 in ethanol, heat in a sealed tube

4 elimination: KOH in ethanol, heat under reflux

Rate: C–I > C–Br > C–Cl, because the C–X bond enthalpy decreases.

OH^- can act as nucleophile and base: aqueous favours substitution, ethanolic favours elimination (e.g. 2-bromopropane).

CFCs: UV breaks C–Cl; Cl• catalyses ozone decomposition.

substitution elimination

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