

5 Rate laws and energy profiles — Part 2 — Answers

Answers

Work through these after you have tried the questions yourself.

2.1 k is the rate constant (a fixed number at a given temperature); the order tells you how strongly the rate depends on that reactant's concentration.

2.2 first order (the rate changes in direct proportion to $[A]$).

2.3 the activation energy (the energy the reaction must gain to proceed).

2.4 exothermic (energy is released).

2.5 it provides a new pathway with a lower activation energy, so more collisions succeed; it does not change the enthalpy change ΔH or the final amount of product.