

Solutions

Each answer shows the steps, then the **result**.

2.1

- $\text{rate} = k[\text{A}][\text{B}]$

2.2

- No

2.3

- $\text{rate} = k[\text{NO}]^2$

3.1 B

- the slow first step's molecularity

3.2

(a)

- $\text{rate} = k[\text{NO}_2]^2$

(b)

- Yes — it matches the experimental rate law

3.3

- CO reacts only in the fast **second** step, after the rate-determining step; the slow step (which sets the rate) does not involve CO, so it is absent from the rate law