

② Concentration \propto Rate of Reaction

$$c = \frac{n}{v}$$

→ $\uparrow c \propto n \uparrow$

→ $\uparrow c \propto \frac{1}{v} \downarrow$

Concentration can be increased by

- decreasing volume of solvent

OR - increasing moles of solute

$n \downarrow$ conc. \downarrow

$n \uparrow$ conc. \uparrow

★ When concentration is increased

- there are more particles per unit volume
- More collisions occur per second | frequency of collisions increases.
- Greater number of collisions are now successful.
- Hence rate of reaction increases.
- Time taken to complete reaction decreases

★ When concentration is decreased

- there are fewer particles per unit volume
- Fewer collisions occur per second | frequency of collisions decreases.
- Fewer number of collisions are now successful.
- Hence rate of reaction decreases.
- Time taken to complete reaction increases

