S3 N5 Chemistry Summaries: Rates of Reaction

6. REACTION RATES

The following can affect the **speed** of a reaction:

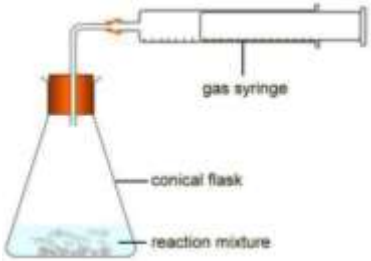
- **PARTICLE SIZE** (SMALLER PARTICLES → FASTER)
- **TEMPERATURE** (HIGHER TEMP → FASTER)
- **CONCENTRATION** (MORE CONCENTRATED → FASTER)

A **CATALYST** is a substance which **speeds up a reaction but remains unchanged at the end** (not used up!).

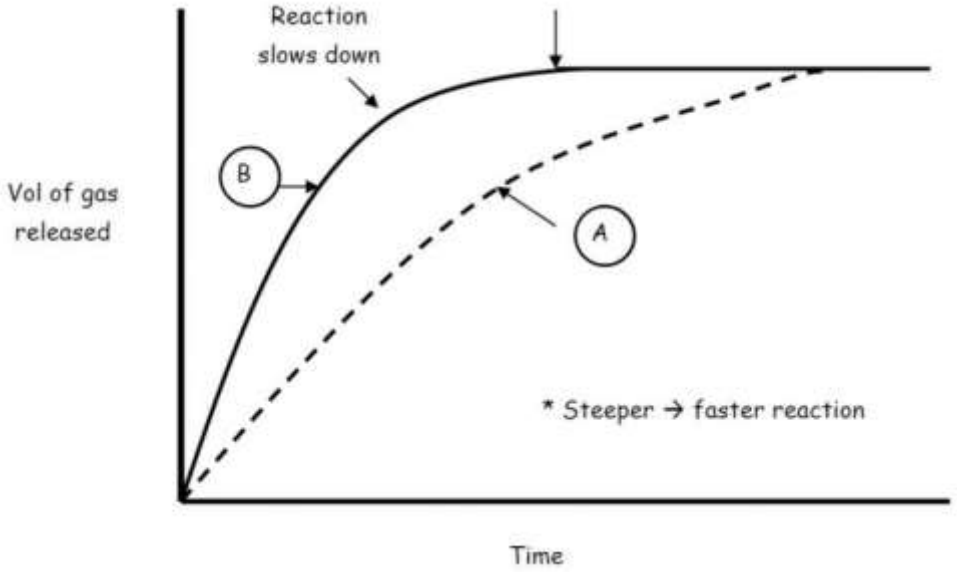
Presenting results on RATES of reactions:

e.g. Lump of chalk + acid A

Powdered chalk + acid B



Reaction Over

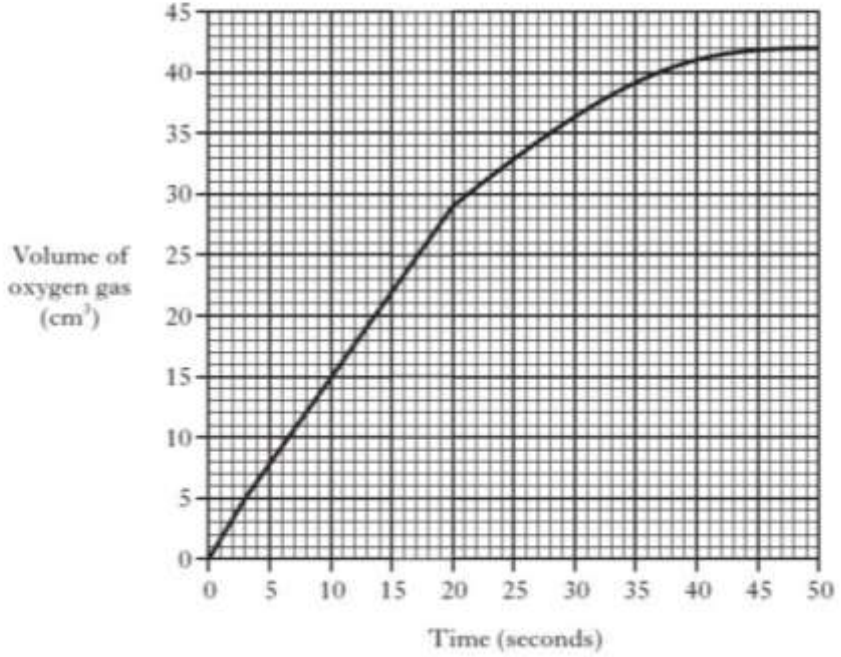


Average Rate of Reaction

$$\text{Average rate} = \frac{\text{CHANGE IN MASS/VOLUME/CONCENTRATION}}{\text{TIME INTERVAL}}$$

Eg.

(a) The graph shows the results of an experiment carried out to measure the volume of oxygen gas released.



Calculate the average rate of reaction between 0 and 20 seconds.