

Solutions

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

2.1

- acid + carbonate → **salt + water + carbon dioxide**

2.2

- litmus in alkali is **blue**

3.1 D

- pH 2 is **strongly acidic**
- A is pH 12–14; B is pH 7; C is about pH 4–6

3.2

(a)

- a **strong** acid is **fully dissociated** in water
- a **weak** acid is only **partly dissociated**

(b)

- $\text{HCl}(aq) \rightarrow \text{H}^+(aq) + \text{Cl}^-(aq)$

3.3

- magnesium + sulfuric acid → **magnesium sulfate** and **hydrogen**