What is a Neutralization Reaction?

Worksheet

Acid + Base Salt + Water + Heat. Example: HCl + NaOH NaCl + HO. The H and OH cancel, forming water and a neutral ionic compound.

Questions

1. HCl + NaOH products?

A) NaOH + H
B) NaCl + HO
C) Na + HCl
D) Cl + Na

2. Ionic equation of neutralization?

A) HCl + OH Cl + HO
B) H + OH HO
C) Na + Cl NaCl
D) HCl + NaOH NaCl

3. Is neutralization exothermic?

A) no, endothermic
B) yes, releases heat
C) depends on acid
D) depends on base

4. Antacid works by

A) adding acid
B) removing H via neutralization
C) sealing stomach
D) absorbing water

5. Write the neutralization: HSO + 2 NaOH ?

6. HNO + Ca(OH) ?

7. Burning stomach from excess acid - how does antacid work?

8. Define: What is neutralization?

9. Define: General equation?

10. Define: Ionic equation for any neutralization?

Answer Key

1. B) NaCl + HO - Acid + base salt + water.
2. B) H + OH HO - The core: H + OH HO (spectator ions omitted).
3. B) yes, releases heat - Water formation releases energy - exothermic.
4. B) removing H via neutralization - Antacid is a base; neutralizes stomach HCl relief.
5. HSO + 2 NaOH NaSO + 2 HO 2 H + 2 OH 2 HO
6. 2 HNO + Ca(OH) Ca(NO) + 2 HO Ionic: 2 H + 2 OH 2 HO
7. Stomach acid (HCl) + antacid base (e.g. CaCO) salt + water Neutralization removes the H burning sensation
8. An acid-base reaction forming salt and water, releasing heat.
9. Acid + Base Salt + Water + Heat.
10. H(aq) + OH(aq) HO(l).