

## Acid-Base Reactions

**Neutralization Reaction** – a double displacement reaction in which an acid and a base combine to form water and a salt

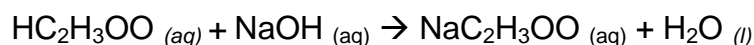
e.g.

### Calculations Involving Neutralization Reactions

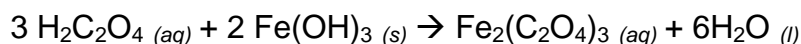
Ex. 1 What volume of 0.250 mol/L sulfuric acid is needed to react completely with 37.2 mL of 0.650 mol/L potassium hydroxide?

### Neutralization Worksheet

- 100.0 mL of 1.50 M sulfuric acid reacts to neutralize solid sodium hydroxide. What mass of sodium hydroxide neutralized?
- 100.0 mL of 1.5 M sulfuric acid reacts to neutralize 50.0 mL of aluminum hydroxide. Calculate the molarity of the aluminum hydroxide.
- What is the molarity of 5.67 L of sulfuric acid that neutralizes 1560 g of potassium hydroxide?
- What mass of acetic acid ( $\text{HC}_2\text{H}_3\text{OO}$ ) would be neutralized by 300.0 mL of 2.90 M sodium hydroxide?



- What mass of iron (III) hydroxide would be neutralized by 2.20 L of 4.70 M oxalic acid ( $\text{H}_2\text{C}_2\text{O}_4$ )?



- What mass of hydrofluoric acid is required to neutralize 1700 mL of 2.0 M barium hydroxide?

Answers : 1. 12.0 g 2. 2.0 M 3. 2.45 M 4. 52.3 g 5. 737 g 6. 140 g
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