

# Definitions

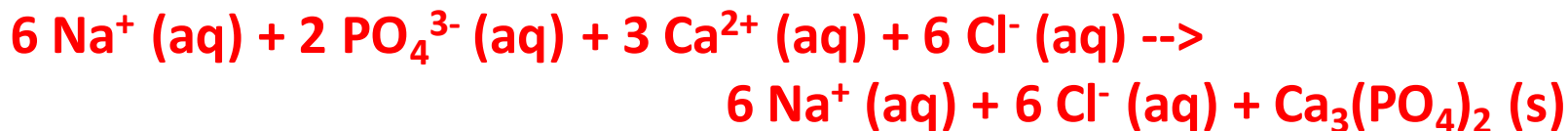
## 1. Molecular Equations:

- Complete, balanced equations that show reactants and products, undissolved.
- Example:



## 2. Ionic Equations:

- Balanced equations showing all dissolved compounds (aqueous).
- Example:



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## 3. Net Ionic Equations

- Equation showing only the reactants and products that form a precipitate, liquid, or gas.
- Example:  $2 \text{PO}_4^{3-} (\text{aq}) + 3 \text{Ca}^{2+} (\text{aq}) \rightarrow \text{Ca}_3(\text{PO}_4)_2 (\text{s})$

## 4. Spectator Ions:

- Those ions that are the same on both sides of the equation. They don't do anything.
- Example:  $\cancel{6 \text{Na}^+ (\text{aq})} + 2 \text{PO}_4^{3-} (\text{aq}) + 3 \text{Ca}^{2+} (\text{aq}) + \cancel{6 \text{Cl}^- (\text{aq})} \rightarrow \cancel{6 \text{Na}^+ (\text{aq})} + \cancel{6 \text{Cl}^- (\text{aq})} + \text{Ca}_3(\text{PO}_4)_2 (\text{s})$

# Definitions:

**5. Aqueous Solutions**: Those that dissolve into its basic ions in water. Check Solubility Rules (aq).

Example:  $\text{NaCl (aq)} \rightarrow \text{Na}^+ + \text{Cl}^-$

**6. No Reaction**: A reaction where no precipitate, liquid, or gas forms. ALL dissolve in water.

Example:  $\text{NaCl(aq)} + \text{KBr(aq)} \rightarrow \text{NaBr(aq)} + \text{KCl(aq)}$