

CHE 101 - Extra Practice - Ch 15b
Ionic and Net Ionic Reactions

Name: _____

Date: _____

Strong Electrolyte	Weak Electrolyte	Nonelectrolyte
Dissociate 100% →	Dissociate < 10% ⇌	Do not dissociate
Strong Acids Strong Bases Ionic - Soluble (aq) Written as Ions	Weak Acids Weak Bases Written as Molecules	Molecular Compounds Ionic - Insoluble (s) Written as Molecules

1. Classify each of the following compounds as either a (S)trong electrolyte, (W)eak electrolyte or (N)onelectrolyte.

- | | |
|---|-------------------------------|
| 1(a) HF | 1(a) <u> WE </u> |
| 1(b) NaOH | 1(b) <u> SE </u> |
| 1(c) BaCl ₂ | 1(c) <u> SE </u> |
| 1(d) H ₂ SO ₄ | 1(d) <u> SE </u> |
| 1(e) BaCO ₃ | 1(e) <u> NE </u> |
| 1(f) CaSO ₄ | 1(f) <u> NE </u> |
| 1(g) Zn(C ₂ H ₃ O ₂) ₂ | 1(g) <u> SE </u> |
| 1(h) PbCl ₂ | 1(h) <u> NE </u> |
| 1(i) CH ₃ CH ₂ OH | 1(i) <u> NE </u> |
| 1(j) Al ₂ O ₃ | 1(j) <u> NE </u> |
| 1(k) KOH | 1(k) <u> SE </u> |
| 1(l) KNO ₃ | 1(l) <u> SE </u> |
| 1(m) AgCl | 1(m) <u> NE </u> |
| 1(n) C ₆ H ₁₂ O ₆ | 1(n) <u> NE </u> |

(a) WE (b) SE (c) SE (d) SE (e) NE (f) NE (g) SE (h) NE (i) NE (j) NE (k) SE (l) SE (m) NE (n)NE

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Molecular Equation:

- Write everything as molecules or compounds.
- Include states.
- Balance the reaction.

Total Ionic Equation:

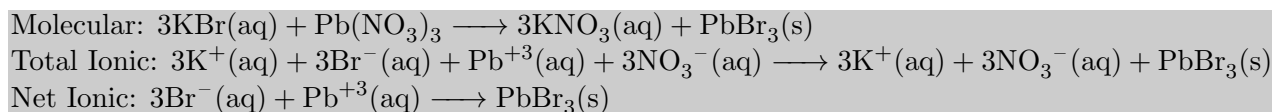
- Write SE as ions. Include charges and states.
- Write WE and Nonelectrolytes as molecules. Include states.

Net Ionic Equation:

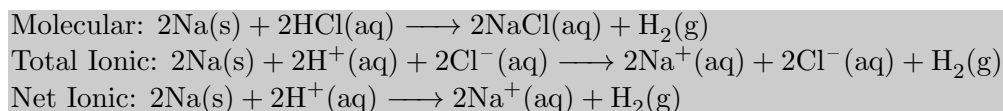
- Only include atoms, ions, and molecules that change states or charges.
- Do **not** include (cross out) spectator ions.
- Include states and balance the reaction.

On a separate sheet of paper write the Molecular, Ionic and Net Ionic equations for each of the following reactions.

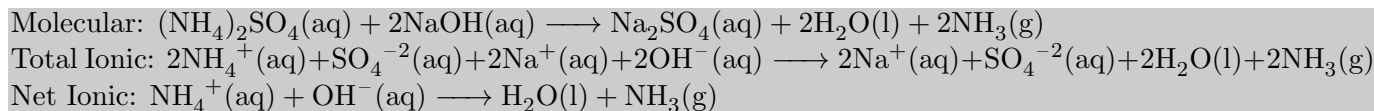
2. potassium bromide + lead (III) nitrate \longrightarrow potassium nitrate + lead (III) bromide



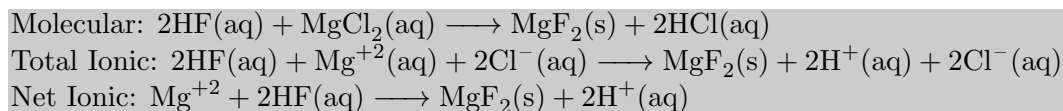
3. sodium metal + hydrochloric acid \longrightarrow sodium chloride + hydrogen



4. ammonium sulfate + sodium hydroxide \longrightarrow sodium sulfate + water + nitrogen trihydride



5. hydrofluoric acid + magnesium chloride \longrightarrow magnesium fluoride + hydrochloric acid



6. aluminium nitrate + sodium hydroxide \longrightarrow aluminium hydroxide + sodium nitrate

