

CHE 111 - Extra Practice - Ch 4b
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.

- (a) HF 1(a) _____
- (b) NaOH 1(b) _____
- (c) BaCl₂ 1(c) _____
- (d) H₂SO₄ 1(d) _____
- (e) BaCO₃ 1(e) _____
- (f) CaSO₄ 1(f) _____
- (g) Zn(C₂H₃O₂)₂ 1(g) _____
- (h) PbCl₂ 1(h) _____
- (i) CH₃CH₂OH 1(i) _____
- (j) Al₂O₃ 1(j) _____
- (k) KOH 1(k) _____
- (l) KNO₃ 1(l) _____
- (m) AgCl 1(m) _____
- (n) C₆H₁₂O₆ 1(n) _____

Solution: (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

CHE 111 - Extra Practice - Ch 4b
Ionic and Net Ionic Reactions

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.

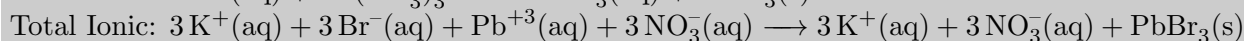
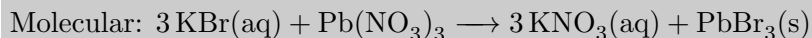
Net Ionic Equation:

- 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.

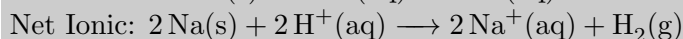
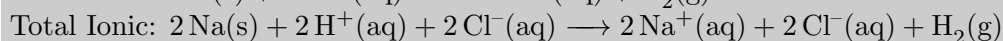
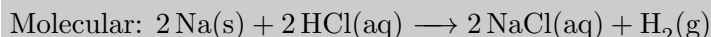
2. potassium bromide + lead (III) nitrate \longrightarrow potassium nitrate + lead (III) bromide

Solution:



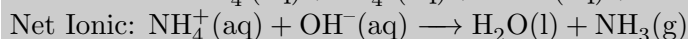
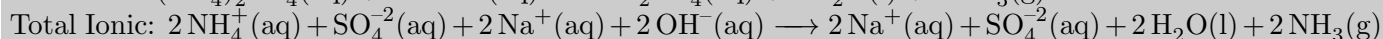
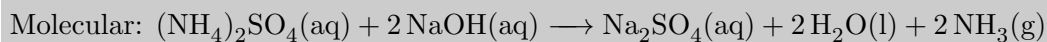
3. sodium metal + hydrochloric acid \longrightarrow sodium chloride + hydrogen

Solution:



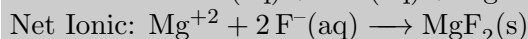
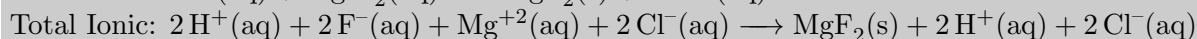
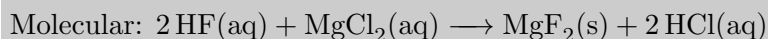
4. ammonium sulfate + sodium hydroxide \longrightarrow sodium sulfate + water + nitrogen trihydride

Solution:



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

Solution:



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

Solution:

