

Problem Set 5: Writing Chemical Formulas for Ionic Compounds

1. Write the formula (including charge) for the following ions. HINT: Some are polyatomic ions!

Calcium ion _____ Nitride ion _____

Sodium ion _____ Nitrite ion _____

Carbonate ion _____ Nitrate ion _____

Ammonium ion _____ Sulfite ion _____

Magnesium ion _____ Sulfide ion _____

Hydroxide ion _____ Sulfate ion _____

2. Complete the table below by writing the formula for the ionic compound formed from the cation in the left column and the anion in the top row. See the examples for further clarification.

Ions	F ⁻	S ²⁻	N ³⁻	SO ₃ ²⁻
Li ⁺	LiF			
Ca ²⁺				
Al ³⁺				
NH ₄ ⁺				(NH ₄) ₂ SO ₃

3. Write the names for the following ionic compounds.

MgS _____ KNO₃ _____

LiBr _____ Al₂O₃ _____

4. Write the formulas for the following ionic compounds.

Sodium nitrite _____ Aluminum oxide _____

Potassium sulfide _____ Ammonium hydroxide _____

Barium chloride _____ Calcium hydroxide _____