

**C. USING CONCEPTS**

Use the chart below to write formulas or names for the following.

**Common Oxidation Numbers****1 +**

Hydrogen, H<sup>+</sup>  
Lithium, Li<sup>+</sup>  
Potassium, K<sup>+</sup>  
Silver, Ag<sup>+</sup>  
Sodium, Na<sup>+</sup>  
Ammonium, NH<sub>4</sub><sup>+</sup>

**2 +**

Barium, Ba<sup>2+</sup>  
Calcium, Ca<sup>2+</sup>  
Cobalt(II), Co<sup>2+</sup>  
Copper(II), Cu<sup>2+</sup>  
Iron(II), Fe<sup>2+</sup>  
Magnesium, Mg<sup>2+</sup>  
Zinc, Zn<sup>2+</sup>

**3 +**

Aluminum, Al<sup>3+</sup>  
Chromium (III), Cr<sup>3+</sup>  
Iron(III), Fe<sup>3+</sup>

**1 -**

Bromide, Br<sup>-</sup>  
Chloride, Cl<sup>-</sup>  
Iodide, I<sup>-</sup>  
Acetate, C<sub>2</sub>H<sub>3</sub>O<sub>2</sub><sup>-</sup>  
Hydroxide, OH<sup>-</sup>  
Nitrate, NO<sub>3</sub><sup>-</sup>

**2 -**

Oxide, O<sup>2-</sup>  
Sulfide, S<sup>2-</sup>  
Carbonate, CO<sub>3</sub><sup>2-</sup>  
Sulfate, SO<sub>4</sub><sup>2-</sup>

**3 -**

Nitride, N<sup>3-</sup>  
Phosphate, PO<sub>4</sub><sup>3-</sup>

- |                             |   |
|-----------------------------|---|
| 1. sodium sulfide _____     | 6. KCl _____                              |
| 2. sodium carbonate _____   | 7. NH <sub>4</sub> OH _____               |
| 3. zinc chloride _____      | 8. CaI <sub>2</sub> _____                 |
| 4. copper(II) bromide _____ | 9. AgCl _____                             |
| 5. aluminum oxide _____     | 10. Na <sub>3</sub> PO <sub>4</sub> _____ |

Insert coefficients before the formulas to correctly balance the equations

- |  |  |
|--|--|
| 11. KClO <sub>3</sub> → KCl + O <sub>2</sub>                     | 14. HCl + Ca(OH) <sub>2</sub> → CaCl <sub>2</sub> + H <sub>2</sub> O |
| 12. H <sub>2</sub> + O <sub>2</sub> → H <sub>2</sub> O           | 15. HCl + AgNO <sub>3</sub> → AgCl + HNO <sub>3</sub>                |
| 13. HNO <sub>3</sub> + KOH → KNO <sub>3</sub> + H <sub>2</sub> O |  |