

1. Classify the following compounds as ionic or covalent and give the full name for each.

a. **MgBr₂**

Is it Ionic ☐ or Covalent ☐?

Full Name:

2. **PF₅**

Is it Ionic ☐ or Covalent ☐?

Full Name:

3. **P₄O₁₀**

Is it Ionic ☐ or Covalent ☐?

Full Name:

4. **PbO**

Is it Ionic ☐ or Covalent ☐? Full Name:

2. Write the chemical formula for the compound formed between the two given ions, and then give the full name. Formulas can be written without subscript format (such as H₂O can be written as H2O).

1. **Gold** (with a +3 charge) and **dichromate**

Formula: _____

Full Name: _____

2. **Aluminum** and **oxalate**

Formula: _____

Full Name: _____

Q3: Name the following compound: $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$

Answer:

4. Write the chemical formula for the following acids. Formulas can be written without subscript format (such as H_2O can be written as H2O).

a. Perbromic acid _____

b. Hypochlorous acid _____

c. Hydroiodic acid _____

5. Answer the following questions:

a. What is the molarity of an aqueous solution made by dissolving 6.00 g of K_2SO_4 to create a 0.500 L solution?

_____ M

b. In question 5a, what is the molar concentration of all ions in solution?

$[\text{K}^+] =$ _____ M

$[\text{SO}_4^{2-}] =$ _____ M

c. In question 5a, write the full **chemical names** (not formulas!) of the solute and the solvent:

Solute: _____

Solvent: _____

6. CHALLENGE QUESTION: You dissolve 410. g of phosphorous acid to make a 2.0 L stock solution. What volume (in mL) of this stock solution do you need to take to prepare 3.0 L of 0.020 M solution?

_____ mL