

## Problem Set 6: Writing Chemical Formulas for Molecular Compounds and Acids

1. Name the following molecular compounds.

$\text{PCl}_5$  \_\_\_\_\_  $\text{NI}_3$  \_\_\_\_\_

$\text{ICl}_7$  \_\_\_\_\_  $\text{N}_2\text{O}_4$  \_\_\_\_\_

2. Write formulas for the following molecular compounds.

Nitrogen dioxide \_\_\_\_\_

Silicon tetrachloride \_\_\_\_\_

Phosphorus triiodide \_\_\_\_\_

3. Write formulas for the following acids.

Sulfuric acid \_\_\_\_\_

Nitric acid \_\_\_\_\_

Acetic acid \_\_\_\_\_

4. Write names for the following acids.

$\text{HI (aq)}$  \_\_\_\_\_  $\text{H}_3\text{PO}_4 \text{ (aq)}$  \_\_\_\_\_

$\text{HNO}_2 \text{ (aq)}$  \_\_\_\_\_  $\text{H}_2\text{CO}_3 \text{ (aq)}$  \_\_\_\_\_

5. Write formulas for the following ions, elements or compounds.

Hydrobromic acid \_\_\_\_\_ Cesium ion \_\_\_\_\_

Tetrasulfur tetranitride \_\_\_\_\_ Oxygen \_\_\_\_\_

Lithium carbonate \_\_\_\_\_ Calcium sulfide \_\_\_\_\_

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6. Write names for the following compounds. HINT: It will help to first identify the substance as an ionic compound, molecular compound or acid.

LiCl \_\_\_\_\_

Na<sub>2</sub>SO<sub>3</sub> \_\_\_\_\_

HNO<sub>2</sub> (aq) \_\_\_\_\_

Na<sub>2</sub>S \_\_\_\_\_

KI \_\_\_\_\_

Na<sub>2</sub>SO<sub>4</sub> \_\_\_\_\_

NH<sub>4</sub>Cl \_\_\_\_\_

BaCl<sub>2</sub> \_\_\_\_\_

PCl<sub>3</sub> \_\_\_\_\_

CO \_\_\_\_\_

NI<sub>3</sub> \_\_\_\_\_

CCl<sub>4</sub> \_\_\_\_\_

K<sub>2</sub>CO<sub>3</sub> \_\_\_\_\_

Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> \_\_\_\_\_