# Nomenclature – Find the Mistake!

Directions: Look at the formula/name pairs below and decide if there is a mistake or not. If there is not a mistake, write "correct". If there is a mistake, fix it. Mistakes could be in either the name or the formula.

a) $Au(Br)_2$ – gold (II) bromide

**$AuBr_2$ – no ( ), Br is not a polyatomic**

b) $CdCl_2$ – cadmium (II) chloride

**cadmium chloride – Cd is NOT a VOS**

c) $Na_2O_2$ – sodium peroxide

**correct**

d) $SO_4$ – sulfate

**$SO_4^{2-}$ = sulfate OR $SO_4$ = sulfur tetroxide**
**molecular compounds do NOT have charges**

e) $Zn_3P_2$ – trizinc diphosphide

**zinc phosphide – ionic compound**
**so no prefixes**

f) $BeHPO_4$ – beryllium hydrogen phosphate

**correct**

g) HCl – hydrochloric acid

**$HCl_{(aq)}$ = hydrochloric acid OR**
**HCl = hydrogen monochloride**

h) $HgNO_3$ – mercury (I) nitrate

**$Hg_2(NO_3)_2$ – mercury (I) MUST be $Hg_2$**

i) $Ni_2SO_3$ – nickel sulfite

**nickel (I) sulfite – nickel is a VOS**

j) $TiOH_3$ – titanium (III) hydroxide

**$Ti(OH)_3$ – hydroxide is a polyatomic and there are more than one so need ( )**

k) sulfuric acid – $H_2SO_{3(aq)}$

**sulfuric acid = $H_2SO_{4(aq)}$ OR**
**sulfurous acid = $H_2SO_{3(aq)}$**

l) $CoCO_3$ – copper (II) carbonate

**$CuCO_3$ = copper (II) carbonate OR**
**$CoCO_3$ = cobalt (II) carbonate**