

Compound Naming Worksheet

Part A: Name the following binary compounds. If there is a transition element, write both names (IUPAC and the Latin).

NaCl Sodium chloride

K₂S Potassium sulfide

CaO Calcium oxide

AlBr₃ Aluminum Bromide

FeI₂ Iron (II) Iodide

Fe₂O₃ Iron (III) oxide

PCl₃ Phosphorus Trichloride

PCl₅ Phosphorus Pentachloride

NO₂ Nitrogen Dioxide NOT Nitrite = NO₂⁻ (ion)

CuS Copper (II) sulfide

Cu₂S Copper (I) sulfide

S₂Cl₂ Disulfur Dichloride

TiCl₄ Titanium (IV) chloride

Part B: Write the formulas for the following binary compounds.

calcium oxide CaO

Magnesium nitride Mg₃N₂

sodium selenide Na₂Se

Lithium bromide LiBr

Cesium chloride CsCl

Barium sulfide BaS

Dinitrogen tetraoxide N₂O₄

Tin (II) iodide SnI₂

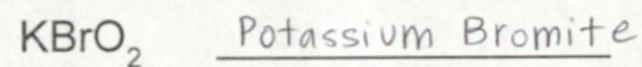
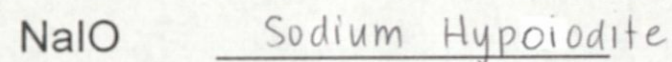
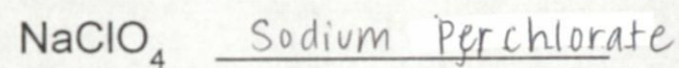
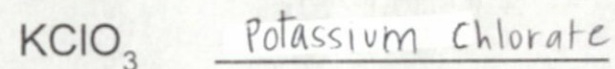
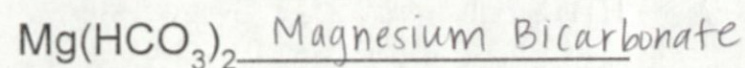
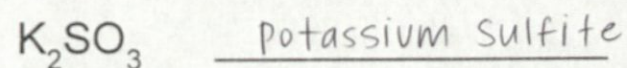
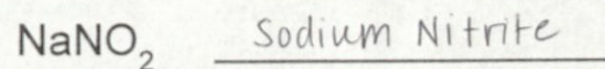
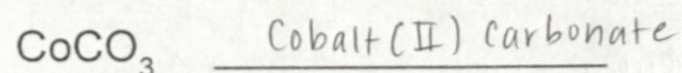
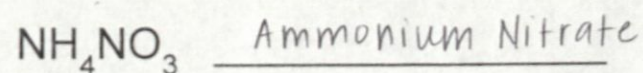
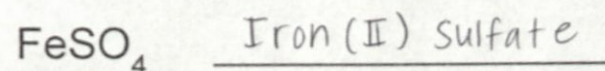
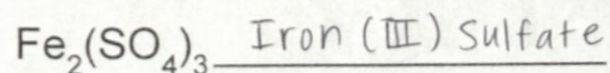
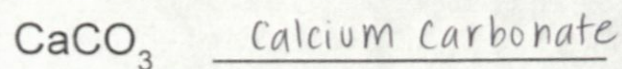
Tin (IV) oxide SnO₂

Sulfur hexafluoride SF₆

Iron (III) oxide Fe₂O₃

Mercury (II) sulfide HgS

Part C: Name the following. If there is a transition element, write both formulas (Stock System and suffix system).



Part D: Write the formulas for the following.

Tin (IV) sulfate $\text{Sn}(\text{SO}_4)_2$

Iron (III) nitrate $\text{Fe}(\text{NO}_3)_3$

Strontium nitrite $\text{Sr}(\text{NO}_2)_2$

Potassium sulfite K_2SO_3

Barium phosphate $\text{Ba}_3(\text{PO}_4)_2$

Sodium permanganate NaMnO_4

Potassium chromate K_2CrO_4

Sodium hydroxide NaOH

Monohydrogen phosphate ion HPO_4^{2-}

Magnesium dihydrogen phosphate $\text{Mg}(\text{H}_2\text{PO}_4)_2$

Cobalt (II) chloride hexahydrate $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$

Naming Acids

Write the formulas for each of the following acids:

HCl(g) hydrogen chloride (Not in H₂O)

HNO₃(aq) Nitric Acid

HClO₄ (aq) perchloric Acid

H₂S (aq) hydrosulfuric Acid

HBrO₂ (aq) bromous Acid

~~H₃PO₃(aq)~~
Error → HPO₃(aq) phosphorous acid

H₃PO₄ Phosphoric acid

HClO₃ (aq) chloric acid

Write the names for each of the following acids:

sulfuric acid H₂SO₄(aq)

carbonic acid H₂CO₃(aq)

Hydrochloric acid HCl(aq)

Nitric acid HNO₃(aq)

Acetic acid HC₂H₃O₂ or CH₃COOH

Hypoiodous acid HIO

Bromic Acid HBrO₃

Practice Worksheet

1. Write the names for each of the following:

- a. NaBr Sodium bromide k. KNO₂ potassium Nitrite
- b. Ca(OH)₂ calcium hydroxide l. Al₂S₃ Aluminium sulfide
- c. ^{AuBr₃} ~~Hg~~₂H₃O₂(aq) gold (III) bromide m. N₂O₃ dinitrogen Trioxide
- d. NaHCO₃ Sodium bicarbonate n. FeCO₃ iron(II) carbonate
- e. BaI₂ barium iodide o. Si₂Cl₆ disilicon hexachloride
- f. N₂S₅ dinitrogen pentasulfide p. Cu(NO₃)₂ Copper(II) Nitrate
- g. TeF₄ Tellurium Tetrafluoride q. Li₂CO₃ Lithium Carbonate
- h. KMnO₄ potassium permanganate r. NaCN Sodium cyanide
- i. (NH₄)₂Cr₂O₇ ammonium dichromate s. Pb(SO₄)₂ lead(II) sulfate

2. Write the formulas for each of the following:

a. triphosphorus nonaoxide P_3O_9 l. potassium iodide KI

b. carbon disulfide CS_2 m. nickel (II) chloride $NiCl_2$

c. potassium dichromate $K_2Cr_2O_7$ n. aluminum hydroxide $Al(OH)_3$

d. sodium acetate $NaC_2H_3O_2$ o. sulfur trioxide SO_3

e. calcium bicarbonate $Ca(HCO_3)_2$ p. iron(III) sulfite $Fe_2(SO_3)_2$

f. ammonium oxide $(NH_4)_2O$ q. barium chromate $BaCrO_4$

g. copper (II) sulfate $CuSO_4$ r. titanium(IV) phosphide $Ti_3(P_3)_4$

h. mercury (I) nitrate $Hg_2(NO_3)_2$ s. oxygen difluoride OF_2

i. dibromine hexaoxide Br_2O_6 t. gold(III) perchlorate $Au(ClO_4)_3$

j. diphosphorus pentaoxide P_2O_5 u.

k. potassium chlorate $KClO_3$ v.