

Formulas of binary ionic compounds: Determining correct formula from name

- Which is the correct formula for potassium hydride?
1) KH_2 2) KH 3) KOH 4) K(OH)_2
- Which formula correctly represents the compound aluminum iodide?
1) AlI 2) AlI_3 3) Al_3I 4) Al_3I_3
- What is the correct chemical formula for cesium oxide?
1) CsO_2 2) C_2O_3 3) CsO 4) Cs_2O
- Which formula is correct for magnesium sulfide?
1) MgS 2) Mg_2S_2 3) MnS 4) Mn_2S_2
- Which is the formula for calcium nitride?
1) CaN 2) Ca_2N_3 3) Ca_3N_3 4) Ca_3N_2

Formulas of compounds with polyatomic ion: Determining correct formula from name

- Which formula is correct for sodium nitrate?
1) NaNO_2 2) NaNO_3 3) Na(NO)_2 4) Na(NO)_3
- Which formula is correct for magnesium phosphate?
1) Mg_2PO_7 2) MgPO_4 3) $\text{Mg}_2(\text{PO}_4)_3$ 4) $\text{Mg}_3(\text{PO}_4)_2$
- Which is the correct formula for ammonium oxide?
1) NH_4O 2) NH_2O 3) $(\text{NH}_4)_2\text{O}$ 4) $(\text{NH}_4)_2\text{O}_2$
- Which is the correct formula for ammonium sulfate?
1) NH_4SO_4 2) $\text{NH}_4(\text{SO}_4)_2$ 3) $(\text{NH}_4)_2(\text{SO}_4)_2$ 4) $(\text{NH}_4)_2\text{SO}_4$
- Which is the correct formula for zinc carbonate?
1) ZnCO_3 2) $\text{Zn}_2(\text{CO}_3)_2$ 3) ZnCO_6 4) ZnCO

Formulas of compounds with multiple oxidation numbers: Determining correct formula

- What is the correct formula for lead (II) chloride?
1) PbCl 2) Pb_2Cl 3) Pb_2Cl_2 4) PbCl_2
- The formula for lead (II) oxide is
1) PbO 2) PbO_2 3) Pb_2O 4) Pb_2O_3
- The correct formula for the compound platinum (IV) nitride is ?
1) PtN 2) Pt_3N_4 3) Pt_4N_3 4) Pt_4N
- The correct formula for manganese (IV) sulfide is
1) Mn_4S 2) MnS_2 3) Mn_4S_2 4) Mn_4S_4
- Which formula is correct for copper (II) chlorate?
1) Cu_2Cl 2) CuCl_2 3) Cu_2ClO_3 4) $\text{Cu(ClO}_3)_2$
- Which formula correctly represents lead(II) thiosulfate?
1) $\text{Pb}_2(\text{S}_2\text{O}_3)_2$ 2) $\text{Pb}_2\text{S}_4\text{O}_6$ 3) PbS_2O_3 4) PbSO_3
- Which formula is correct for nitrogen (IV) oxide?
1) NO_2 2) N_2O 3) N_2O_2 4) N_4O_2

10. Mixed formula writing

- Which formula represents nickel (II) dichromate?
1) $\text{Ni}_2\text{Cr}_2\text{O}_7$ 2) NiCrO_7 3) NiCr_2O_7 4) $\text{Ni}(\text{Cr}_2\text{O}_7)_2$
- The formula for calcium cyanide is
1) CaCN_2 2) CaSCN_2 3) $\text{Ca}(\text{CN})_2$ 4) $\text{Ca}(\text{SCN})_2$
- The correct formula for potassium oxide is
1) PO_2 2) P_2O 3) KO_2 4) K_2O
- Which is the correct formula for iron (II) sulfide?
1) FeS 2) Fe_5O_3 3) Fe_2S_3 4) $\text{Fe}_2(\text{SO}_4)_2$
- Which is a correct formula for a compound with IUPAC name of Nickel (III) hypochlorite?
1) NiCl_3 2) Ni_3ClO 3) NiClO_3 4) $\text{Ni}(\text{ClO})_3$
- The correct formula for manganese (VII) oxide will be
1) Mn_7O_2 2) Mg_2O_7 3) Mn_2O_7 4) Mn_7O_2
- Which formula is correct for ammonium carbonate?
1) NH_4CO_3 2) $(\text{NH}_4)_2\text{CO}_3$ 3) $(\text{NH}_4)_3\text{CO}_3$ 4) $(\text{NH}_4)_3(\text{CO})_3$
- Which formula is correct for antimony (V) oxide?
1) SbO_3 2) Sb_2O 3) Sb_2O_5 4) Sb_5O_2
- Which formula is correct for sodium hydrogen carbonate?
1) NaHCO_3 2) NaHC 3) Na_3HCO_3 4) NaCO_3
- Which formula correctly represents chromium (VI) sulfide?
1) Cr_6S_2 2) Cr_2S_6 3) CrS_3 4) Cr_3S

11. Naming binary compounds. Determining name from binary compound formula

1. What is the correct IUPAC name for the formula LiN ?
 - 1) Lithium nitride
 - 2) Lithium nitrite
 - 3) Lithium (I) nitride
 - 4) Lithium (I) Nitrite
2. Which name is correct for BaBr_2 ?
 - 1) Barium bromite
 - 2) Barium bromate
 - 3) Barium bromide
 - 4) Barium bromium
3. The name of the compound Na_3P is
 - 1) Sodium (III) phosphide
 - 2) Sodium (III) phosphate
 - 3) Sodium phosphide
 - 4) Sodium phosphate
4. The correct name for FrO is
 - 1) Francium oxide
 - 2) Francium (II) oxide
 - 3) Fluorine oxygen
 - 4) Fluorine (II) oxygen

12. Naming compounds containing polyatomic ions: Determining correct name from formula

1. What is the correct IUPAC name for $\text{Mg}(\text{NO}_3)_2$?
 - 1) Magnesium (II) nitrate
 - 2) Magnesium (II) nitrite
 - 3) Magnesium nitrate
 - 4) Magnesium nitride
2. What is the correct name for the compound with the formula AlPO_4 ?
 - 1) Aluminum (IV) phosphate
 - 2) Aluminum phosphate
 - 3) Aluminum (III) phosphite
 - 4) Aluminum phosphite
3. The correct name for the compound with the IUPAC formula of NH_4Cl is
 - 1) Nitrogen chlorate
 - 2) Ammonium chloride
 - 3) Nitrate chloride
 - 4) Ammonium chlorite

13. Naming compounds containing an atom with multiple oxidation numbers atom

1. What is the correct name for the compound CrPO_4 ?
 - 1) Chromium (III) phosphate
 - 2) Chromium (III) phosphite
 - 3) Chromium (II) phosphide
 - 4) Chromium (III) phosphide
2. The correct IUPAC name of the compound with a formula of PbO_2 is
 - 1) Lead (I) oxide
 - 2) Lead (II) oxide
 - 3) Lead (III) oxide
 - 4) Lead (IV) oxide
3. Which formula is correct for $\text{V}(\text{NO}_3)_2$?
 - 1) Vanadium (I) nitrate
 - 2) Vanadium (II) nitrate
 - 3) Vanadium (III) nitrate
 - 4) Vanadium (IV) nitrate
4. What is the correct IUPAC name for Co_2O_3 ?
 - 1) Cobalt (II) oxide
 - 2) Cobalt (III) oxide
 - 3) Copper (II) oxide
 - 4) Copper (III) oxide

Write the correct chemical formula to the given names. Use criss-cross method to ensure correct subscripts and equalization of charges.

1. Write the correct formulas for the following Binary Ionic Compounds.

a) Potassium fluoride

b) Lithium oxide

c) Barium iodide

d) Magnesium sulfide

2. Write the correct formulas for the following compounds containing a polyatomic ion.

e) Sodium sulfate

f) Barium Phosphate

g) Magnesium hydrogen carbonate

h) Aluminum chromate

3. Write formula for the following compounds containing element with multiple positive charges.

i) Lead (II) iodide

j) Copper (I) nitrate

k) Nitrogen (V) oxide

l) Iron (III) Sulfate

m) Chromium (V) Chloride

n) Phosphorous (IV) oxide

4. Mixed formula writing.

o) Palladium (II) sulfide

p) Strontium nitrite

q) Calcium iodide

r) Lithium permanganate

s) Platinum (IV) oxide

t) Barium chlorate

u) Iron (III) Sulfate

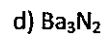
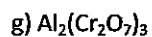
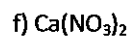
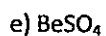
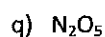
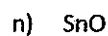
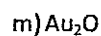
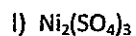
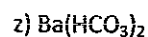
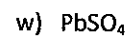
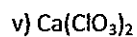
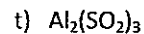
v) Chromium (VI) phosphide

w) Manganese (III) oxide

Set B: Naming chemical formula

Objective: To test your ability to write correct IUPAC name to given chemical formulas

Write the correct IUPAC name for each of the formulas below.

5. Name the following Binary ionic compounds.**6. Name the following compounds containing a polyatomic ion.****7. Name the following compounds containing element with multiple positive charges.****8. Mixed formula naming.**

Set C: Writing and Naming formulas with prefixes*Objective: To test your ability to write and name formulas with prefixes***9. Write formulas to the following compounds containing prefixes.**

a) Dibismuth trichloride

b) Silicon tetrafluoride

c) Dititanium trioxide

d) Tetraphosphorous hexaoxide

e) Carbon disulfide

f) Boron triiodide

10. Name the following compounds using prefixes.a) H_2S b) SiF_4 c) Hg_2Cl_2 d) XeF_6 e) V_2H f) PF_5 **Set D: Naming and writing formulas to hydrates***Objective: To test your ability to write and name formulas of hydrates***11. Write the correct names to each of the following hydrates.**a) $\text{NH}_4\text{NO}_3 \cdot 3\text{H}_2\text{O}$ b) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ c) $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ d) $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ **12. Write the correct formula to each of the following hydrates.**

a) Barium hydroxide octahydrate

b) Cobalt (II) chloride hexahydrate

c) Iron (III) phosphate tetrahydrate

d) Lithium sulfite pentahydrate