

Binary Ionic Compounds – Worksheet #1

A. Write the formulas for the compounds formed from these elements. Remember, the cation is always written first.

1. rubidium and iodine RbI
2. barium and chlorine BaCl_2
3. lithium and selenium Li_2Se
4. nitrogen and magnesium Mg_3N_2
5. sulfur and sodium Na_2S
6. aluminum and oxygen Al_2O_3
7. silver and phosphorus Ag_3P
8. fluorine and zinc ZnF_2

B. Write the names for these binary ionic compounds.

9. Cs_2S cesium sulfide
10. BaO barium oxide
11. AlI_3 aluminum iodide
12. MnO_2 manganese(IV) oxide
13. Tc_3P_4 technetium(IV) phosphide
14. CdBr_2 cadmium bromide
15. NaCl sodium chloride
16. FeF_3 iron(III) fluoride
17. Mg_3N_2 magnesium nitride
18. Ni_3P_2 nickel(II) phosphide
19. UO_2 uranium(IV) oxide
20. HF hydrogen fluoride
21. CoN cobalt(III) nitride
22. K_2S potassium sulfide

C. Write the formulas for these binary ionic compounds.

23. rubidium sulfide Rb_2S
24. mercury(II) oxide HgO
25. calcium nitride Ca_3N_2
26. zinc bromide ZnBr_2
27. uranium(VI) fluoride UF_6
28. silver phosphide Ag_3P
29. platinum(II) selenide PtSe
30. europium(II) nitride Eu_3N_2
31. cesium phosphide Cs_3P
32. lead(II) chloride PbCl_2
33. cadmium oxide CdO
34. tin(IV) fluoride SnF_4
35. iron(II) oxide FeO
36. iron(III) oxide Fe_2O_3

Binary Ionic Compounds – Worksheet #2

If the name of the compound is given, write the formula. If the formula of the compound is given, write the name.

1. KBr ____potassium bromide_____
2. V_2O_5 ____vanadium(V) oxide_____
3. cobalt(III) oxide ____ Co_2O_3 _____
4. barium phosphide ____ Ba_3P_2 _____
5. cadmium nitride ____ Cd_3N_2 _____
6. Cu_3P ____copper(I) phosphide_____
7. Ag_2S ____silver sulfide_____
8. Sn_3N_4 ____tin(IV) nitride_____
9. radium iodide ____ RaI_2 _____
10. beryllium selenide ____ BeSe _____
11. Fe_2S_3 ____iron(III) sulfide_____
12. SrO ____strontium oxide_____
13. CrCl_2 ____chromium(II) chloride_____
14. mercury(II) fluoride ____ HgF_2 _____
15. lead(IV) bromide ____ PbBr_4 _____
16. CuSe ____copper(II) selenide_____
17. FeP ____iron(III) phosphide_____
18. lithium oxide ____ Li_2O _____
19. cobalt(III) fluoride ____ CoF_3 _____
20. CdI_2 ____cadmium iodide_____

Ternary Ionic Compounds - Worksheet

If the name of the compound is given, write the formula. If the formula of the compound is given, write the name.

1. calcium nitrite $\text{Ca}(\text{NO}_2)_2$
2. BaSO_4 barium sulfate
3. silver acetate $\text{AgC}_2\text{H}_3\text{O}_2$
4. SrSO_3 strontium sulfite
5. nickel(II) phosphate $\text{Ni}_3(\text{PO}_4)_2$
6. Na_2CO_3 sodium carbonate
7. LiHCO_3 lithium hydrogen carbonate (lithium bicarbonate)
8. ammonium phosphate $(\text{NH}_4)_3\text{PO}_4$
9. $\text{Be}(\text{ClO})_2$ beryllium hypochlorite
10. aluminum oxalate $\text{Al}_2(\text{C}_2\text{O}_4)_3$
11. rubidium dichromate $\text{Rb}_2\text{Cr}_2\text{O}_7$
12. KHSO_3 potassium hydrogen sulfite
13. calcium hydroxide $\text{Ca}(\text{OH})_2$
14. manganese(II) silicate MnSiO_3
15. HCN hydrogen cyanide
16. cesium hydrogen sulfate CsHSO_4
17. $\text{Ti}(\text{OH})_4$ titanium(IV) hydroxide
18. ammonium chloride NH_4Cl
19. $\text{Ca}(\text{ClO}_3)_2$ calcium chlorate
20. rubidium cyanate RbOCN
21. copper(II) sulfate CuSO_4
22. CuCl copper(I) chloride
23. iron(II) arsenate $\text{Fe}_3(\text{AsO}_4)_2$
24. NH_4OH ammonium hydroxide

All Ionic Compounds - Worksheet

If the name of the compound is given, write the formula. If the formula of the compound is given, write the name.

- lead(II) nitrate $\text{Pb(NO}_3)_2$
- sodium carbonate Na_2CO_3
- potassium iodide KI
- AgNO_3 silver nitrate
- barium nitrate $\text{Ba(NO}_3)_2$
- Na_2SO_3 sodium sulfite
- potassium carbonate K_2CO_3
- sodium nitrate NaNO_3
- barium acetate $\text{Ba(C}_2\text{H}_3\text{O}_2)_2$
- hydrogen peroxide H_2O_2
- potassium biphosphate K_2HPO_4
- Ba(OH)_2 barium hydroxide
- FeCl_3 (use the Latin nomenclature) ferric chloride
- $\text{Fe}_3(\text{PO}_4)_2$ iron(II) phosphate
- aluminum sulfate $\text{Al}_2(\text{SO}_4)_3$
- calcium hydroxide Ca(OH)_2
- tin(II) oxide SnO
- aluminum hydrogen carbonate $\text{Al(HCO}_3)_3$
- sodium perchlorate NaClO_4
- copper(I) dichromate $\text{Cu}_2\text{Cr}_2\text{O}_7$
- potassium selenide K_2Se
- ZnS zinc sulfide
- stannic dichromate $\text{Sn(Cr}_2\text{O}_7)_2$
- sodium hydrogen phosphate Na_2HPO_4
- Fe(ClO)_2 iron(II) hypochlorite
- $\text{NH}_4\text{CH}_3\text{COO}$ ammonium acetate
- copper(II) nitrate $\text{Cu(NO}_3)_2$
- potassium hypochlorite KClO
- iron(III) chromate $\text{Fe}_2(\text{CrO}_4)_3$
- Ag_2SO_4 silver sulfate

****THIS MAY BE GRADED FOR CORRECTNESS****