**Naming Chemical Compounds Worksheet**

Name the following *ionic* compounds:

1) NaBr \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) CaO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) Li2S \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) MgBr2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) Be(OH)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the formulas for the following *ionic* compounds:

6) potassium iodide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) magnesium oxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8) aluminum chloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9) sodium nitrate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10) calcium carbonate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11) lithium sulfate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) beryllium phosphide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13) magnesium hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14) sodium phosphate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15) aluminum carbonate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16) calcium chloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17) sodium cyanide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18) aluminum oxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19) magnesium acetate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20) ammonium chloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the names of the following *covalent* compounds:

21) SO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

22) N2S \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

23) PH3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

24) BF3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

25) P2Br4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

26) CO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

27) SiO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

28) SF6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

29) NH3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

30) NO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the formulas of the following *covalent* compounds:

31) nitrogen trichloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

32) boron carbide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

33) dinitrogen trioxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

34) phosphorus pentafluoride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

35) methane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

36) sulfur dibromide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

37) diboron tetrahydride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

38) oxygen difluoride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

39) carbon disulfide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

40) nitrogen monoxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Naming Chemical Compounds - Answers**

Name the following *ionic* compounds:

1) NaBr **sodium bromide**

2) CaO **calcium oxide**

3) Li2S **lithium sulfide**

4) MgBr2 **magnesium bromide**

5) Be(OH)2 **beryllium hydroxide**

Write the formulas for the following *ionic* compounds:

6) potassium iodide **KI**

7) magnesium oxide **MgO**

8) aluminum chloride **AlCl3**

9) sodium nitrate **NaNO3**

10) calcium carbonate **CaCO3**

11) lithium sulfate **Li2SO4­**

12) beryllium phosphide **Be3P2**

13) magnesium hydroxide **Mg(OH)2**

14) sodium phosphate **Na3PO4**

15) aluminum carbonate **Al2(CO3)3**

16) calcium chloride **CaCl2**

17) sodium cyanide **NaCN**

18) aluminum oxide **Al2O3**

19) magnesium acetate **Mg(C2H3O2)2**

20) ammonium chloride **NH4Cl**

Write the names of the following *covalent* compounds:

21) SO3 **sulfur trioxide**

22) N2S **dinitrogen sulfide**

23) PH3 **phosphorus trihydride**

24) BF3 **boron trifluoride**

25) P2Br4  **diphosphorus tetrabromide**

26) CO **carbon monoxide**

27) SiO2 **silicon dioxide**

28) SF6 **sulfur hexafluoride**

29) NH3 **ammonia**

30) NO2 **nitrogen dioxide**

Write the formulas of the following *covalent* compounds:

31) nitrogen trichloride **NCl3**

32) boron carbide **BC**

33) dinitrogen trioxide **N2O3**

34) phosphorus pentafluoride **PF5**

35) methane **CH4**

36) sulfur dibromide **SBr2**

37) diboron tetrahydride **B2H4**

38) oxygen difluoride **OF2**

39) carbon disulfide **CS2**

40) nitrogen monoxide **NO**

**EMPIRICAL FORMULA WORKSHEET**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_

1. What is the empirical formula for a compound which contains 0.0134 g of iron, 0.00769 g of sulfur and 0.0115 g of oxygen?

2. Find the empirical formula for a compound which contains 32.8% chromium and 67.2% chlorine.

3. NAME the compound which contains 0.463 g Tl (#81), 0.0544 g of carbon, 0.00685 g of hydrogen and 0.0725 g oxygen by finding its empirical formula.

4. What is the empirical formula for a compound which contains 67.1% zinc and the rest is oxygen?

5. Barry Um has a sample of a compound which weighs 200.0 grams and contains only carbon, hydrogen, oxygen and nitrogen. By analysis, he finds that it contains 97.56 grams of carbon, 4.878 g of hydrogen, 52.03 g of oxygen and 45.53 g of nitrogen. Find its empirical formula.







Balancing Equations Worksheets with answers:

Equations with symbols: <http://myweb.astate.edu/mdraganj/BalanceEqn.html>

Equations with naming:

http://www.pascack.org/cms/lib5/NJ01000238/Centricity/Domain/485/13%20cp%20additional%20word%20and%20balancing%20with%20key.pdf