

## Mixed Naming Worksheet – Ionic, Covalent and Acids

Directions: Be sure to determine what type of compound your substance is – ionic, binary covalent or an acid.

## Naming Compounds

1.  $\text{NO}_2$  nitrogen dioxide
2.  $\text{NaBr}$  sodium bromide
3.  $\text{SiO}_2$  silicon dioxide
4.  $\text{P}_2\text{Br}_4$  diphosphorus tetrabromide
5.  $\text{FeSO}_4$  iron (II) sulfate
6.  $\text{SF}_6$  sulfur hexafluoride
- \*7.  $\text{HNO}_3$  nitric acid
8.  $\text{Li}_2\text{S}$  lithium sulfide
- \*9.  $\text{HCl}$  hydrochloric acid
10.  $\text{MgBr}_2$  magnesium bromide
11.  $\text{N}_2\text{S}$  dinitrogen monosulfide
12.  $\text{SeF}_2$  selenium difluoride
13.  $\text{AsCl}_3$  arsenic trichloride
27.  $\text{BaCl}_2$  barium chloride
28.  $\text{K}_2\text{SO}_4$  potassium sulfate
29.  $\text{Pb}(\text{ClO}_3)_2$  lead (II) chlorate
- \*30.  $\text{H}_3\text{PO}_4$  phosphoric acid
31.  $\text{NF}_3$  nitrogen trifluoride
32.  $\text{TiCl}_2$  titanium (II) chloride
33.  $\text{Al}_2(\text{HPO}_4)_3$  aluminum monohydrogen phosphate
- \*34.  $\text{HBrO}_3$  boric acid
- \*35.  $\text{HIO}_3$  iodic acid
- \*36.  $\text{H}_2\text{S}$  hydrosulfuric acid
37.  $\text{Si}_3\text{Cl}_9$  trisilicon nonachloride
38.  $\text{Ca}_3\text{P}_2$  calcium phosphide
- \*14.  $\text{HClO}$  hypochlorous acid
15.  $\text{Be}(\text{OH})_2$  beryllium hydroxide
16.  $\text{SO}_3$  sulfur trioxide
17.  $\text{KMnO}_4$  potassium permanganate
- \*18.  $\text{HClO}_4$  perchloric acid
19.  $\text{Cu}_2\text{S}$  copper (I) sulfide
20.  $\text{BF}_3$  boron trifluoride
- \*21.  $\text{H}_2\text{SO}_4$  sulfuric acid
22.  $\text{CaI}_2$  calcium iodide
23.  $\text{Pb}_3(\text{PO}_4)_2$  lead (II) phosphate
- \*24.  $\text{HCH}_3\text{COO}$  acetic acid
25.  $\text{Ca}(\text{CH}_3\text{COO})_2$  calcium acetate
26.  $\text{P}_2\text{O}_5$  diphosphorus pentoxide
39.  $\text{Sr}(\text{OH})_2$  strontium hydroxide
- \*40.  $\text{HClO}_2$  chlorous acid
- \*41.  $\text{HClO}_4$  perchloric acid
- \*42.  $\text{H}_2\text{SO}_3$  sulfurous acid
- \*43.  $\text{H}_3\text{P}$  hydrophosphoric acid
44.  $\text{NO}$  nitrogen monoxide
- \*45.  $\text{HBr}$  hydrobromic acid
- \*46.  $\text{HClO}_2$  chlorous acid
47.  $\text{Mg}(\text{MnO}_4)_2$  magnesium permanganate
48.  $\text{P}_4\text{Cl}_8$  tetraphosphorus octachloride
49.  $\text{Ca}_3\text{N}_2$  calcium nitride
50.  $\text{SnS}_2$  Tin (IV) sulfide

## Writing Formulas

- \* 51. hydroiodic acid  
iodate =  $\text{IO}_3^{-1}$   $\text{HIO}_3$
- \* 52. hydrosulfuric acid  $\text{H}_2\text{S}$
53. calcium sulfide  $\text{CaS}$
- (54) dinitrogen pentoxide  $\text{N}_2\text{O}_5$
55. aluminum sulfate  $\text{Al}_2(\text{SO}_4)_3$
- \* 56. sulfurous acid  
sulfite =  $\text{SO}_3^{-2}$   $\text{H}_2\text{SO}_3$
- \* 57. nitric acid  
nitrate =  $\text{NO}_3^{-1}$   $\text{HNO}_3$
- (58) dihydrogen monoxide  $\text{H}_2\text{O}$  (water)
- (59) trisulfur monochloride  $\text{S}_3\text{Cl}$
- (60) selenium monoxide  $\text{SeO}$
- \* 61. hydrotelluric acid  $\text{H}_2\text{Te}$
62. tin(IV) sulfite  $\text{Sn}(\text{SO}_3)_2$
- \* 63. carbonic acid  
carbonate =  $\text{CO}_3^{-2}$   $\text{H}_2\text{CO}_3$
64. barium acetate  
 $+2$   $-1$   $\text{Ba}(\text{C}_2\text{H}_3\text{O}_2)_2$
65. zinc(II) periodate  
 $+2$   $-1$   $\text{Zn}(\text{IO}_4)_2$
- \* 66. chloric acid  
chlorate =  $\text{ClO}_3^{-1}$   $\text{HClO}_3$
- (67) silicon pentanitride  $\text{Si}_3\text{N}_5$
- \* 68. bromic acid  
bromate =  $\text{BrO}_3^{-1}$   $\text{HBrO}_3$
- (69) pentaphosphorous heptoxide  $\text{P}_5\text{O}_7$
70. sodium oxide  $\text{Na}_2\text{O}$
- \* 71. hydrofluoric acid  $\text{HF}$
72. calcium bromate  
 $+2$   $-1$   $\text{Ca}(\text{BrO}_3)_2$
- \* 73. hydrobromic acid  $\text{HBr}$
- (74) silicon dioxide  $\text{SiO}_2$
75. nickel(III) sulfide  $\text{Ni}_2\text{S}_3$
76. manganese(II) phosphate  
 $+2$   $-3$   $\text{Mn}_3(\text{PO}_4)_2$
77. silver(I) iodate  
 $+1$   $-1$   $\text{AgIO}_3$
- \* 78. hydrobromic acid  $\text{HBr}$
- (79) diboron tetrabromide  $\text{B}_2\text{Br}_4$
- \* 80. phosphoric acid  
phosphate =  $\text{PO}_4^{-3}$   $\text{H}_3\text{PO}_4$
81. potassium carbonate  
 $+1$   $-2$   $\text{K}_2\text{CO}_3$
82. ammonium oxide  
 $+1$   $-2$   $(\text{NH}_4)_2\text{O}$
- (83) carbon monoxide  $\text{CO}$
84. aluminum sulfite  
 $+3$   $-2$   $\text{Al}_2(\text{SO}_3)_3$
85. zinc(II) nitrate  
 $+2$   $-1$   $\text{Zn}(\text{NO}_3)_2$
86. sodium carbonate  
 $+1$   $-2$   $\text{Na}_2\text{CO}_3$
87. sodium permanganate  
 $+1$   $-1$   $\text{NaMnO}_4$
- (88) diphosphorus pentoxide  $\text{P}_2\text{O}_5$
89. lead(IV) sulfide  
 $+4$   $-2$   $\text{PbS}_2$
90. copper(I) sulfate  
 $+1$   $-2$   $\text{Cu}_2\text{SO}_4$
91. aluminum sulfate  
 $+3$   $-2$   $\text{Al}_2(\text{SO}_4)_3$
92. ammonium nitride  
 $+1$   $-3$   $(\text{NH}_4)_3\text{N}$
93. magnesium hydroxide  
 $+2$   $-1$   $\text{Mg}(\text{OH})_2$
94. calcium cyanide  
 $+2$   $-1$   $\text{Ca}(\text{CN})_2$
- \* 95. nitric acid  
nitrate =  $\text{NO}_3^{-1}$   $\text{HNO}_3$
- \* 96. sulfuric acid  
sulfate =  $\text{SO}_4^{-2}$   $\text{H}_2\text{SO}_4$
- (97) xenon tetrafluoride  $\text{XeF}_4$
- (98) pentaphosphorus hexafluoride  $\text{P}_5\text{F}_6$
99. cobalt(II) hypochlorite  
 $+2$   $-1$   $\text{Co}(\text{ClO})_2$
100. aluminum bicarbonate  
 $+3$   $-1$   $\text{Al}(\text{HCO}_3)_3$