

Name
Chemistry
Covalent Compounds
ChemCovalent1

Prefix + Name		Prefix + root + ide	
} First Atom		} Second Atom	
Mono = 1	Di = 2	Tri = 3	Tetra = 4
Penta = 5	Hexa = 6	Hepta = 7	Octa = 8
		Nona = 9	Deca = 10

Note:
Mono is dropped on the first atom only

Indicate the name of the covalent compound.

1. CO mono Carbon monoxide → carbon monoxide
2. CO₂ carbon dioxide
3. SO₂ sulfur dioxide
4. SO₃ sulfur trioxide
5. N₂O dinitrogen monoxide
6. NO nitrogen monoxide
7. N₂O₃ dinitrogen trioxide
8. NO₂ nitrogen dioxide
9. N₂O₄ dinitrogen tetroxide
10. N₂O₅ dinitrogen pentoxide
11. PCl₃ phosphorus trichloride
12. Phosphorus pentachloride PCl₅
13. Diphosphorous Pentoxide P₂O₅
14. Sulfur Hexachloride SCl₆
15. Diphosphorous pentoxide P₂O₅
16. Carbon Tetrachloride CCl₄
17. Silicon Dioxide SiO₂
18. Carbon Disulfide CS₂
19. Oxygen Diflouride OF₂
20. Phosphorous Tribromide PBr₃

Name
Chemistry
Ionic Covalent Mix Nomenclature
chemIonicCovalentnaming.docx

Ionic Compounds
Gives the name not the quantity

Covalent
Always gives the Quantity

	Formula	Type of compound
1. Sulfur dioxide =	SO_2	C
2. Aluminum chloride =	$AlCl_3$	I
3. Copper (II) fluoride =	CuF_2	I
4. Hydrogen oxide =	HO	C
5. Hydrogen dioxide =	H_2O	C
6. Pentaphosphorous decoxide =	P_5O_{10}	C
7. Copper (I) nitride =	Cu_2N	I
8. Sodium bicarbonate =	$NaHCO_3$	I
9. Carbon tetrachloride =	CCl_4	C
10. Iron (III) hypochlorite =	$Fe(OCl)_2$	I
11. Ammonium sulfate =	$(NH_4)_2SO_4$	I
12. Gold (IV) oxide =	AuO_2	I
11. Ammonium Phosphate =	$(NH_4)_3PO_4$	I

	Name	Bond type
1. $CuCl$ =	copper(I) chloride	I
2. CO =	carbon monoxide	C
3. $AlCl_3$ =	aluminum chloride	I
*4. $HClO$ =	hypochlorous acid	acid
5. $Sn(C_2O_4)_2$ =	tin(IV) oxalate	I
6. $Zn(OH)_2$ =	zinc hydroxide	I
7. $Ca_3(PO_4)_2$ =	calcium phosphate	I
8. PCl_5 =	phosphorus pentachloride	C
9. NH_4SCN =	ammonium thiocyanate	I
10. P_2O_5 =	diphosphorus pentoxide	C
11. $Al_2(SO_3)_3$ =	aluminum sulfite	I
12. N_2O_5 =	dinitrogen pentoxide	C
13. $(NH_4)_3P$ =	ammonium phosphide	I

NAME
IONIC NOMENCLATURE II

Convert the following formulas to names.

1. LiNO_3 lithium nitrate
2. NaNO_3 sodium nitrate
3. CuSO_4 copper(II) sulfate
4. $\text{Na}_2\text{C}_2\text{O}_4$ sodium oxalate
5. $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$ calcium acetate
6. AlPO_3 aluminum phosphate
7. $\text{Ba}(\text{OH})_2$ barium hydroxide
8. $\text{Fe}(\text{OH})_3$ iron(III) hydroxide
9. PbO_2 ^{+4 -2} Lead(IV) oxide
10. $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$ ammonium acetate

Convert the following names to formulas (Make sure you write the formulas correctly)

1. Calcium Hydroxide $\text{Ca}(\text{OH})_2$
2. Magnesium sulfate MgSO_4
3. ammonium hydroxide NH_4OH
4. Aluminum sulfate $\text{Al}_2(\text{SO}_4)_3$
5. potassium oxalate $\text{K}_2\text{C}_2\text{O}_4$
6. Lead (II) chloride PbCl_2
7. Copper (I) Phosphate Cu_3PO_4
8. Ammonium phosphate $(\text{NH}_4)_3\text{PO}_4$
9. Ammonium Dichromate $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$
10. Hydrogen peroxide H_2O_2

Name
Chemistry
Acid Nomenclature
ChemAcid1

Convert the following to names to chemical formulas (indicate type of acid)

	Name	Type
1. Hydrochloric acid	= HCl (aq)	non oxy
2. Sulfuric acid	= $\text{H}_2\text{SO}_4 \text{ (aq)}$	oxy
3. Carbonic Acid	= $\text{H}_2\text{CO}_3 \text{ (aq)}$	oxy
4. Hydrofluoric Acid	= HF (aq)	non oxy
5. Acetic Acid	= $\text{HC}_2\text{H}_3\text{O}_2 \text{ (aq)}$	oxy
6. Oxalic acid	= $\text{H}_2\text{C}_2\text{O}_4 \text{ (aq)}$	oxy
7. Hypochlorous acid	= HClO (aq)	non oxy
8. Bromic acid	= $\text{HBrO}_3 \text{ (aq)}$	oxy
9. Hydrobromic acid	= HBr (aq)	non oxy
10. Bromous acid	= $\text{HBrO}_2 \text{ (aq)}$	oxy
11. Nitrous acid	= $\text{HNO}_2 \text{ (aq)}$	oxy
12. Phosphoric acid	= $\text{H}_3\text{PO}_4 \text{ (aq)}$	oxy
13. Hydrocyanic acid	= HCN (aq)	non oxy
14. Dichromic acid	= $\text{H}_2\text{Cr}_2\text{O}_7 \text{ (aq)}$	oxy
15. Hydronitric acid	= $\text{H}_3\text{N (aq)}$	non oxy

Convert the following formulas to chemical names

	Name	Type
1. $\text{H}_2\text{S}_{\text{(aq)}}$	= hydrosulfuric acid	non oxy
2. $\text{H}_2\text{SO}_{4\text{(aq)}}$	= sulfuric acid	oxy
3. $\text{H}_3\text{PO}_{4\text{(aq)}}$	= phosphoric acid	oxy
4. $\text{HF}_{\text{(aq)}}$	= hydrofluoric acid	non oxy
5. $\text{H}_2\text{CO}_{3\text{(aq)}}$	= carbonic acid	oxy
6. $\text{HI}_{\text{(aq)}}$	= hydroiodic acid	non oxy
7. $\text{HClO}_{4\text{(aq)}}$	= perchloric acid	oxy
8. $\text{HIO}_{3\text{(aq)}}$	= iodic acid	oxy
9. $\text{HCN}_{\text{(aq)}}$	= hydrocyanic acid	non oxy
10. $\text{HCl}_{\text{(aq)}}$	= hydrochloric acid	non oxy
11. $\text{H}_2\text{SO}_{3\text{(aq)}}$	= sulfurous acid	oxy
12. $\text{H}_2\text{C}_2\text{O}_{4\text{(aq)}}$	= oxalic acid	oxy
13. $\text{HNO}_{2\text{(aq)}}$	= nitrous acid	oxy
14. $\text{HC}_2\text{H}_3\text{O}_{2\text{(aq)}}$	= acetic acid	oxy

Name
Chemistry
Ionic Nomenclature
ChemIonic1

Ionic Compounds
Cation - Anion
Name of cation + Name of anion
monatomic anions ending = "ide"

Indicate the formula of the following ionic compounds.

1. Iron (III) Chlorate = $\text{Fe}(\text{ClO}_3)_3$
2. Calcium Phosphite = $\text{Ca}_3(\text{PO}_3)_2$
3. Gold (III) Oxide = Au_2O_3
4. Tin (IV) Fluoride = SnF_4
5. Barium sulfate = BaSO_4
6. Potassium peroxide = K_2O_2
7. Copper (I) nitride = Cu_2N
8. Sodium bicarbonate = NaHCO_3
9. Sodium chloride = NaCl
10. Sodium phosphide = Na_3P
11. Ammonium Oxalate = $(\text{NH}_4)_2\text{C}_2\text{O}_4$
12. Manganese (II) permanganate = $\text{Mn}(\text{MnO}_4)_2$
13. Ammonium Phosphate = $(\text{NH}_4)_3\text{PO}_4$

Indicate the name of the following chemicals

1. $\text{Cu}(\text{CN})_2$ = copper(II) cyanide
2. AlCl_3 = aluminium chloride
3. HI = hydroiodic acid
4. HClO = hypochlorous acid
5. $\text{Sn}(\text{C}_2\text{O}_4)_2$ = tin(IV) oxalate
6. ZnO_2 = zinc peroxide
7. $\text{Ca}_3(\text{PO}_4)_2$ = calcium phosphate
8. $\text{Fe}_3(\text{PO}_4)_2$ = iron(II) phosphate
9. NaSCN = sodium thiocyanate
10. NH_4Cl = ammonium chloride
11. $\text{Al}_2(\text{SiO}_3)_3$ = aluminium silicate
12. $(\text{NH}_4)_2\text{SO}_4$ = ammonium sulfate
13. KNO_3 = potassium nitrate

Name
Chemistry
Nomenclature Mix 2
ChemNomMix2.doc

Convert the following chemical formulas to written names.

	NAME	Named as a(n)
1. $\text{HF}_{(\text{aq})}$	= <u>hydrofluoric acid</u>	<u>A</u>
2. $(\text{NH}_4)_2\text{S}_{(\text{aq})}$	= <u>ammonium sulfide</u>	<u>I</u>
3. CCl_4	= <u>carbon tetrachloride</u>	<u>C</u>
4. $\text{HC}_2\text{H}_3\text{O}_2_{(\text{aq})}$	= <u>acetic acid</u>	<u>A</u>
5. HCl	= <u>hydrochloric acid</u>	<u>A</u>
6. $\text{HClO}_{(\text{aq})}$	= <u>hypochlorous acid</u>	<u>A</u>
7. $\text{HClO}_2_{(\text{aq})}$	= <u>chlorous acid</u>	<u>A</u>
8. $\text{HClO}_4_{(\text{aq})}$	= <u>perchloric acid</u>	<u>A</u>
9. CuCl_2	= <u>copper (II) chloride</u>	<u>I</u>
10. SnS	= <u>tin (II) sulfide</u>	<u>I</u>
11. CuCl	= <u>copper (I) chloride</u>	<u>I</u>
12. $\text{HCN}_{(\text{aq})}$	= <u>hydrocyanic acid</u>	<u>A</u>
13. AlPO_4	= <u>aluminum phosphate</u>	<u>I</u>
14. N_2O_5	= <u>dinitrogen pentoxide</u>	<u>C</u>
15. H_2O	= <u>water</u> <u>dihydrogen monoxide</u>	<u>common</u> <u>C</u>

Convert the following chemical names to formulas

1. Sulfur dioxide	= <u>SO_2</u>	<u>C</u>
2. Copper (I) Sulfate	= <u>Cu_2SO_4</u>	<u>I</u>
3. Hydroiodic acid	= <u>HI</u>	<u>A</u>
4. Nitric acid	= <u>HNO_3</u>	<u>A</u>
5. Bromic acid	= <u>HBrO_3</u>	<u>A</u>
6. Sulfur Trioxide	= <u>SO_3</u>	<u>C</u>
7. Aluminum hydroxide	= <u>$\text{Al}(\text{OH})_3$</u>	<u>I</u>
8. Iodous acid	= <u>HIO_2</u>	<u>A</u>
9. Iodic acid	= <u>HIO_3</u>	<u>A</u>
10. Iron (III) sulfide	= <u>Fe_2S_3</u>	<u>I</u>
11. Hypochlorous acid	= <u>HClO</u>	<u>A</u>
12. Permanganic acid	= <u>HMnO_4</u>	<u>A</u>
13. Calcium phosphide	= <u>Ca_3P_2</u>	<u>I</u>
14. Aluminum sulfite	= <u>Al_2S_3</u>	<u>I</u>
15. tetraphosphorous octaoxide	= <u>P_4O_8</u>	<u>C</u>