C11 - 1.1 - # of Particles HMW

Fill in the following table.

Element	Atomic #	# of Protons	Atomic Mass	# of Neutrons	# of electrons in **Atom**	Ion Charge	# of electrons in **Ion**	Ion Valence electrons
oxygen								
calcium								
silicon								
Iron (II)								
Manganese (IV)								
Nickel (III)								
lithium								
Cobalt (II)								
iodine								
Iridium (IV)								
Lead (II)								
Carbon								
chlorine								
Uranium (VI)								
magnesium								
Chromium (II)								
aluminum								
Platinum (IV)								
helium								
hydrogen								
Plutonium (V)								
Gold (I)								
radium								
neon								
potassium								
tin								
radon								
sodium								
Sulfer								
Mercury								

C11 - 1.1 - # of Atoms WS

How many of each atom are there in the following molecules?

K_2O	ZnO	$BeCl_2$	HCl
$2K_2O$	$3ZnO$	$4BeCl_2$	$5HCl$
MgF_2	$2Li_3P$	Si_3P_4	NO_2
$Mg(OH)_2$	$(NH_4)_2O$	$Be(ClO)_2$	$Na_2(CO_3)$
$Mn(CrO_4)_2$	$Ti(C_2O_4)_2$	$Cs(C_2H_3COO)$	
$2Mg(OH)_2$	$3(NH_4)_2O$	$3Ni(MnO_4)_3$	$4Fe(C_2O_4)_3$

C11 - 1.1 - Bohr Diagram HMW

Draw a Bohr diagram for the following atoms.

O H Li Al

N He Ne Fe

K Na Be

Draw a Bohr diagram for the following ions

O^{-2} H^{+} Li^{+} Al^{+3}

N^{-3} He Ne Fe^{+2}

K^{+} Na^{+1} Be^{+2} Fe^{+3}

C11 - 1.1 - Lewis Diagram HMW

Draw a Lewis diagram for the following atoms.

O H Li Al

N He Ne Fe

K Na Be

Draw a Lewis diagram for the following ions

O^{-2} H^{+} Li^{+} Al^{+3}

N^{-3} He Ne Fe^{+2}

K^{+} Na^{+1} Be^{+2} Fe^{+3}

C11 - 1.5 - Naming Ionic WS

Name the ionic compounds:

ZnO

HCl

$BeCl_2$

K_2O

K_3N

AlP

ScP

$LiBr$

$BaTe$

Li_3P

$AgCl$

MgF_2

$NaCl$

Ga_2S_3

SrF_2

Cs_3As

$InAs$

$CaBr_2$

Cd_3P_2

MgS

Y_3As_2

Y_2S_3

FrI

Zn_3P

$CaCl_2$

RbF

MgF_2

C11 - 1.5 - Naming Ionic WS

Name the ionic compounds:

Y_2S_3	La_2S_3	$GeBr_4$
ScP	Rb_3P	Sr_3P_2
Cd_3P_2	MgS	Rb_3P
Y_3As_2	Sr_3P_2	Y_2S_3
$AcAs$	$CaCl_2$	Cs_2S
KCl	Be_3As_2	BaI_2
AcP	RaO	$LaAs$
Sr_3B_2	$RbBr$	Ga_2Se_3
Cs_2S	Fr_2S	In_2Te_3
Ag_2O	AlP	$AcAt_3$

C11 - 1.5 - Naming Multivalent WS

Name the multivalent ionic compounds:

FeO	Fe_2O_3	MnO
CrO	VO_2	VBr_4
Mn_3N_4	$TiCl_3$	TiF_4
CoP	$NiAs$	$CoCl_2$
VP	Nb_2O_5	BkP
RuB	NiS	CrP
Cu_2O	CuO	NbP
HgO	Mo_2O_3	SnO
Au_2O_3	PtO_2	RuS_2
EuO	Bi_2O_5	PdS_2
SbI_5	Sn_3P_4	PoO_2
SbP	PdO	

C11 - 1.5 - Naming Polyatomic WS

Name the Polyatomic compounds:

$Li(OH)$

$Mg(OH)_2$

$K_2(SO_3)$

$Ca(SO_4)$

$Be(ClO)_2$

$Sc(HSO_3)_3$

$Na_2(CO_3)$

$Ga(PO_4)$

$Ni(MnO_4)_3$

$Fe(CrO_4)$

$Fe_2(CrO_4)_3$

$(NH_4)_2O$

$Ti_2(CrO_4)_3$

$Ni(ClO_2)_3$

$Cs(C_2H_3COO)$

$Zr(SO_3)_2$

$Mn(HPO_4)_2$

$Zn(NO_2)_2$

$Ag(OH)$

$Ag(NO_2)$

$Pd(HPO_4)$

$Be(SO_3)_2$

$Mn(CrO_7)$

$Cr(HSO_4)_3$

$Ti(ClO_3)_4$

$Sc(HCO_3)_3$

$Be(CN)$

$Mn(CrO_4)_2$

$Al(ClO_4)_3$

C11 - 1.5 - Naming Covalent WS

Name the covalent compounds:

CO_2

NO

B_4C_3

Si_3P_4

AsP

TeI_2

H_2O

P_2S_3

NO_2

CH_4

CH_3

BO

As_3O_4

$SeBr_5$

$TeCl$

N_6F

C11 - 1.5 - Writing Ionic Formulas WS

Write the formula for each ionic compounds:

Magnesium fluoride

Barium selenide

Cesium bromide

Potassium iodide

Silver oxide

Potassium bromide

Radium chloride

Rubidium chloride

Hydrogen chloride

Calcium oxide

Strontium Asatide

Sodium oxide

Sodium fluoride

Lithium fluoride

Beryllium oxide

Calcium arsenide

Zirconium sulfide

Magnesium sulfide

Scandium phosphide

Lithium oxide

Aluminum iodide

Calcium phosphide

Magnesium oxide

Potassium phosphide

Cesium sulfide

Gallium Chloride

Tin oxide

Cerium oxide

Sodium chloride

Francium nitride

Rubidium phosphide

Thorium oxide

Yttrium sulfide

Zinc oxide

Cadmium oxide

C11 - 1.5 - Writing Multivalent Formulas WS

Write the formula for each multivalent ionic compounds:

Titanium (III) oxide

Iron (II) oxide

Cobalt (II) bromide

Cobalt (III) bromide

Cobalt (II)selenide

Nickel (*III) fluoride*

Nickel (II) oxide

Manganese (IV) nitride

Nickel (III) chloride

Gold Nitride

Lead (IV) iodide

Iron (II) iodide

Gold (III) oxide

Copper (II) sulfide

Palladium (II) phosphide

Palladium (IV) sulfide

Platinum (II) Oxide

Vandium (V) sulfide

Copper (II) sulfide

Palladium chloride

Chromium (*III) iodide*

Platinum (IV) sulfide

Bismuth (V) Sulfide

Copper fluoride

Polonium (IV) asatide

Lead (IV) oxide

Plutonium (VI) oxide

Uranium (IV) oxide

Manganese (IV) phosphide

Antimony (III) chloride

C11 - 1.5 - Writing Polyatomic Formulas WS

Write the formula for each polyatomic compounds:

Copper (II) sulfate	Copper sulfate	Calcium oxalate	Iron (III) nitrite
Hydrogen sulfate	Lithium chromate	Sodium phosphate	Iron (II) nitrate
Titanium (IV) bisulfite	Zinc acetate	Zinc silicate	Calcium phosphate
Cobalt (II) permanganate	Titanium (IV) sulfate	Hydrogen cyanide	Nickel (*II) carbonate*
Sodium dichromate	Calcium hydroxide	Barium chlorate	lithium bisulfate
Iron perchlorate	Titanium iodate	Chromium carbonate	Ammonium oxide
Ammonium fluoride	Chromium bicarbonate	Ammonium phosphide	Beryllium bicarbonate
Silver oxalate	Scandium silicate	Manganese chlorite	

C11 - 1.5 - Writing Covalent Formulas WS

Write the formula for each covalent compound:

Nitrogen dioxide

Carbon monoxide

Chlorine triflouride

Carbon dioxide

Dihydrogen oxide

Tetrasulfur dinitride

Dinitrogen Trioxide

Diphosphorus dexoxide

Dinitrogen Tetroxide

Carbon disulfide

Sulfur Tetraflouride

Bromine Fluoride

Dinitrogen Trioxide

Carbon Tetraoxide

Fluorine Pentoxide

Sulfur Tetroxide

Pentaboron Dioxide

Arsenic hexoxide

Silicon nonochloride

Bromine Decafluoride

Phosphorus triselenide