

Name _____ Period _____

CP Chemistry of the Earth

Assignment 40 – Ionic Compound / Reaction Type Review

20 Points

For the following compounds and molecules determine the type, and the two atoms/ions that make up the structure.

Atom/Ion
element
symbol or
Poly Ion
* Nodiatomic
X₂ here!

Compound or Molecule	SrBr ₂		Li ₃ P		H ₂ S	
Parts of Compound Molecule	First Atom/Ion	Second Atom/Ion	First Atom/Ion	Second Atom/Ion	First Atom/Ion	Second Atom/Ion
Charge of Atom or Ion	(group 2)	(group 17)			(group 1)	(group 16)

Binary
* X_a Y_b
X | Y

Poly Ion
has ()
X_a(Y_bZ_c)
X | (Y_bZ_c)
Use ion in () only!

Compound or Molecule	Al ₂ (CO ₃) ₃ ()		KNO ₃		HCN	
Parts of Compound Molecule	First Atom/Ion	Second Atom/Ion	First Atom/Ion	Second Atom/Ion	First Atom/Ion	Second Atom/Ion
Charge of Atom or Ion	(group 13)	(poly)	(group 1)	(poly)		

Poly Ion
no ()
X_aY_bZ_c
X | (Y_bZ_c)
Use entire ion!

For the following reactions, write the basic form for the reaction, the reaction type, and the reactants/products

Reaction Types: A + B → AB (Combination)

AB → A + B (Decomposition)

A + BC → AC + B (Single Replace)

AB + CD → AD + CB (Double Replace)

HX + YOH → HOH + YX (Acid/Base)

Reaction	Na + O ₂ → Na ₂ O				Reaction Type
General Form		+		→	
Reaction		+		→	

Write as seen above! (Whole thing)

A or B
Single element or ion
AB, BC, CD, AD, CB
Compound / molecule

Reaction	$\text{H}_3\text{N} \rightarrow \text{H}_2 + \text{N}_2$			Reaction Type	
General Form		$\rightarrow$	+		
Reaction		$\rightarrow$	+		

Reaction	$\text{Cr} + \text{Li}_2\text{SO}_4 \rightarrow \text{CrSO}_4 + \text{Li}$ <i>single elements</i> (pointing to Cr and Li) <i>compounds</i> (pointing to Li₂SO₄ and CrSO₄)			Reaction Type	
General Form		+	$\rightarrow$		+
Reaction		+	$\rightarrow$		+

Reaction	$\text{V}(\text{BrO}_3)_3 + \text{CuCrO}_4 \rightarrow \text{V}_2(\text{CrO}_4)_3 + \text{Cu}(\text{BrO}_3)_2$ <i>All four are compounds</i>			Reaction Type	Double Replace.
General Form		+	$\rightarrow$		+
Reaction		+	$\rightarrow$		+

Reaction	$\text{H}_2\text{CrO}_4 + \text{Pb}(\text{OH})_4 \rightarrow \text{HOH} + \text{Pb}(\text{CrO}_4)_2$ <i>acid</i> (pointing to H₂CrO₄) <i>base</i> (pointing to Pb(OH)₄) <i>water</i> (pointing to HOH)			Reaction Type	Acid/Base Reaction.
General Form		+	$\rightarrow$		+
Reaction		+	$\rightarrow$		+

Acid
 Binary
HX
 "Oxy"
H(xOy)

Base
 Ionic w/ OH¹⁻
YOH
Water
 H⁺ + OH⁻
 → HOH
 or
 H₂O