Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 5O – Types of Reactions – Single Replacement Reactions 20 Points

Answer the following questions

Define Single Replacement Reaction	How is a Single Replace and Combo Alike
Single Replacement Reaction General Form	How are Single Replace and Decomp Alike

For the following reactions, determine the reaction type, write the general form for the reaction, then identify A, B, C and AC and CB from each reaction.

$3Ca + 2FeBr_3 \rightarrow 3CaBr_2 + 2Fe$		$6Li + Al_2O_3 \rightarrow 3Li_2O + 2Al$	
Reaction Type		Reaction Type	
General Form		General Form	

A		B		A		B	
C		Ratio		C		Ratio	
AC		CB		AC		CB	

$Mg + 2ZnBrO_3 \rightarrow Mg(BrO_3)_2 + 2Zn$		$4V + 3Pb(SO_4)_2 \rightarrow 2V_2(SO_4)_3 + 3Pb$	
Reaction Type		Reaction Type	
General Form		General Form	

A		B		A		B	
C		Ratio		C		Ratio	
AC		CB		AC		CB	

$4Cu + Sn_3(PO_4)_4 \rightarrow 4CuPO_4 + 3Sn$		$Fe + Ag_2CO_3 \rightarrow FeCO_3 + 2Ag$	
Reaction Type		Reaction Type	
General Form		General Form	

A		B		A		B	
C		Ratio		C		Ratio	
AC		CB		AC		CB	

Activity Series for Rep and Transition Metals

Most Active	
Symbol	Name
Li	Lithium
K	Potassium
Ba	Barium
Sr	Strontium
Ca	Calcium
Na	Sodium
Mg	Magnesium
Al	Aluminum
Mn	Manganese
Zn	Zinc
Cr	Chromium
Fe	Iron
Cd	Cadmium
Co	Cobalt
Ni	Nickel
Sn	Tin
Pb	Lead
H	Hydrogen
Sb	Antimony
Bi	Bismuth
Cu	Copper
Hg	Mercury
Ag	Silver
Pt	Platinum
Au	Gold
Least Active	

Answer the following questions

What is the activity series?	What two things determine an element's activity?

For the following reactions, determine if the reaction will occur based on the activity series.

Single Replacement Reaction	Will Reaction Occur?
$3Na + CuCl_3 \rightarrow 3NaCl + Cu$	
$2Fe + 3MnO \rightarrow Fe_2O_3 + 3Mn$	
$Cu + 2HOH \rightarrow H_2 + Cu(OH)_2$	
$2Ni + Pb(SO_4)_2 \rightarrow Pb + 2NiSO_4$	

Note: HOH is the same as H_2O (Water)