Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 4G – Writing Combination Reactions w/Polyatomic Ions 20 Points

For the following reactions, write the products of each reaction following the template provided. Show work for ionic compound

Reaction	$Cr^{3+} + CO_3^{2-} \rightarrow$ _____			
A	+	B	→	AB
	+		→	

Formula	A	B
Ion Charge		
Cross Method		
AB		

Reaction	$Sr + BrO_3^{1-} \rightarrow$ _____			
A	+	B	→	AB
	+		→	

Formula	A	B
Ion Charge		
Cross Method		
AB		

Reaction	$Co^{3+} + OH^{1-} \rightarrow$ _____			
A	+	B	→	AB
Co	+	OH^{1-}	→	

Formula	A	B
Ion Charge	+3	−1
Cross Method	$Co_1(OH)_3$	
AB	$Co(OH)_3$	

~~$CoOH_3$~~

Reaction	$Zr^{1+} + SO_4^{2-} \rightarrow$ _____			
A	+	B	→	AB
Zr	+	SO_4^{2-}	→	

Formula	A	B
Ion Charge	+1	−2
Cross Method	$Zr_2(SO_4)_1$	
AB	Zr_2SO_4	

Reaction	$Pt^{1+} + CrO_4^{2-} \rightarrow$ _____			
A	+	B	→	AB
Pt	+	CrO_4^{2-}	→	

Reaction	$Mo^{3+} + NO_3^{1-} \rightarrow$ _____			
A	+	B	→	AB
	+		→	

Formula	A	B
Ion Charge	+1	−2
Cross Method	$Pt_2(CrO_4)_2$	
AB	Pt_2CrO_4	

Can I Reduce?

Pt_2CrO_4 (÷2 ÷2)

~~$PtCrO_2$~~

Cannot change CrO_4

Formula	A	B
Ion Charge		
Cross Method		
AB		

Reaction	$Sn^{4+} + PO_4^{3-} \rightarrow$ _____			
A	+	B	→	AB
	+		→	

Formula	A	B
Ion Charge		
Cross Method		
AB		

Reaction	$Y^{3+} + P \rightarrow$ _____			
A	+	B	→	AB
	+		→	

Formula	A	B
Ion Charge		
Cross Method		
AB		