Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 6D – Double Molar Conversions (*Part 2*) 20 Points

For the following chemical reactions, complete the chart and perform the following conversions

Chemical Equation	$Cu_2(CO_3)_3 + Ag_3PO_4 \rightarrow CuPO_4 + Ag_2CO_3$							
Molar Ratio	mol $Cu_2(CO_3)_3$	=	mol Ag_3PO_4	=	mol $CuPO_4$	=	mol Ag_2CO_3	

Copper(III)Carbonate [$Cu_2(CO_3)_3$]		
Element	#	Molar Mass
Copper (Cu)		
Carbon (C)		
Oxygen (O)		
Copper(III)Carbonate [$Cu_2(CO_3)_3$]		

Copper(III)Phosphate [$CuPO_4$]		
Element	#	Molar Mass
Copper (Cu)		
Phosphorous (P)		
Oxygen (O)		
Copper(III)Phosphate [$CuPO_4$]		

Convert 374.28g $Cu_2(CO_3)_3$ to mol $Cu_2(CO_3)_3$	
mol $Cu_2(CO_3)_3$	

Convert _____mol $Cu_2(CO_3)_3$ to mol Ag_2CO_3	
mol Ag_2CO_3	

Convert 2.17mol Ag_3PO_4 to mol $CuPO_4$	
mol $CuPO_4$	

Convert _____mol $CuPO_4$ to mass $CuPO_4$	
mass $CuPO_4$	

Chemical Equation	$3Ti(SO_4)_2 + 4Ni(FO_3)_3 \rightarrow 3Ti(FO_3)_4 + 2Ni_2(SO_4)_3$
Molar Ratio	mol $Ti(SO_4)_2$ = mol $Ni(FO_3)_3$ = mol $Ti(FO_3)_4$ = mol $Ni_2(SO_4)_3$

Nickel(III)Fluorate $[Ni(FO_3)_3]$		
Element	#	Molar Mass
Nickel (Ni)		
Fluorine (F)		
Oxygen (O)		
Nickel(III)Fluorate $[Ni(FO_3)_3]$		

Titanium(IV)Fluorate $[Ti(FO_3)_4]$		
Element	#	Molar Mass
Titanium (Ti)		
Fluorine (F)		
Oxygen (O)		
Titanium(IV)Fluorate $[Ti(FO_3)_4]$		

Convert 5.82mol $Ti(SO_4)_2$ to mol $Ni(FO_3)_3$	
mol $Ni(FO_3)_3$	

Convert _____ mol $Ni(FO_3)_3$ to mass $Ni(FO_3)_3$	
mass $Ni(FO_3)_3$	

Convert 724.29g $Ti(FO_3)_4$ to mol $Ti(FO_3)_4$	
mol $Ti(FO_3)_4$	

Convert _____mol $Ti(FO_3)_4$ to mol $Ti(SO_4)_2$	
mol $Ti(SO_4)_2$	