

Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 6I – Introduction to Stoichiometry (*Part I*)

20 Points

Define the following mol terms

Define Stoichiometry	Define Molar Conversions

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

Chemical Equation	$3\text{Mg} + 2\text{AlBr}_3 \rightarrow 2\text{Al} + 3\text{MgBr}_2$							
Molar Ratio								

Aluminum Bromide [AlBr_3]		
Element	#	Molar Mass
Aluminum (Al)		
Bromine (Br)		
Aluminum Bromide (AlBr_3)		

Convert 114.0g AlBr_3 to mol AlBr_3	
mol AlBr_3	

Convert 425.3g MgBr_2 to mol MgBr_2	
mol MgBr_2	

Magnesium Bromide [MgBr_2]		
Element	#	Molar Mass
Magnesium (Mg)		
Bromine (Br)		
Magnesium Bromide [MgBr_2]		

Convert ____ mol AlBr_3 to mol MgBr_2	
mol MgBr_2	

Convert ____ mol MgBr_2 to mol AlBr_3	
mol AlBr_3	

Chemical Equation	$3\text{HNO}_3 + \text{Al}(\text{OH})_3 \rightarrow 3\text{HOH} + \text{Al}(\text{NO}_3)_3$							
Molar Ratio								

Hydrogen Nitrate [HNO_3]		
Element	#	Molar Mass
Hydrogen [H]		
Nitrate [NO_3]		
Hydrogen Nitrate [HNO_3]		

Convert 114.0g HNO_3 to mol HNO_3	
mol HNO_3	

Convert 425.3g $\text{Al}(\text{NO}_3)_3$ to mol $\text{Al}(\text{NO}_3)_3$	
mol $\text{Al}(\text{NO}_3)_3$	

Aluminum Nitrate [$\text{Al}(\text{NO}_3)_3$]		
Element	#	Molar Mass
Aluminum [Al]		
Nitrate [NO_3]		
Aluminum Nitrate [$\text{Al}(\text{NO}_3)_3$]		

Convert ____ mol HNO_3 to mol $\text{Al}(\text{NO}_3)_3$	
mol $\text{Al}(\text{NO}_3)_3$	

Convert ____ mol $\text{Al}(\text{NO}_3)_3$ to mol HNO_3	
mol HNO_3	