

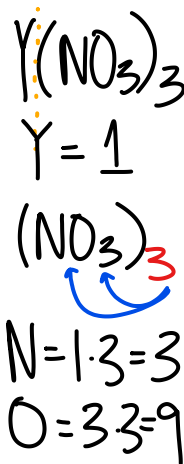
Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 5H – Molar Mass Conversions (Part 3)

20 Points

For the following calculate the molar mass and convert the following measurements

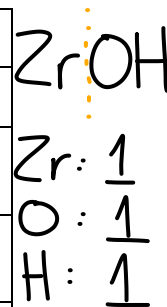


Yttrium(III)Nitrate [$\text{Y}(\text{NO}_3)_3$]		
Element	#	Molar Mass
Yttrium (Y)	1	88.91 g/mol
Nitrogen (N)	3	14.01 g/mol
Oxygen (O)	9	16.00 g/mol
Yttrium(III)Nitrate [$\text{Y}(\text{NO}_3)_3$]	= 274.94 g/mol	

Convert 154.6g $\text{Y}(\text{NO}_3)_3$ to mol $\text{Y}(\text{NO}_3)_3$		
154.6g $\text{Y}(\text{NO}_3)_3$	1 mol $\text{Y}(\text{NO}_3)_3$	
	274.94g $\text{Y}(\text{NO}_3)_3$	
Mol $\text{Y}(\text{NO}_3)_3$	= 0.56 mol $\text{Y}(\text{NO}_3)_3$	

Zirconium(I)Hydroxide [ZrOH]		
Element	#	Molar Mass
Zirconium (Zr)	1	91.22 g/mol
Oxygen (O)	1	16.00 g/mol
Hydrogen (H)	1	1.01 g/mol
Zirconium(I)Hydroxide [ZrOH]	= 108.23 g/mol	

Convert 1.70mol ZrOH to mass ZrOH		
1.70 mol ZrOH	108.23g ZrOH	
	1 mol ZrOH	
Mass ZrOH	= 183.99g ZrOH	



Lithium Manganate [Li_2MnO_4]		
Element	#	Molar Mass
Lithium (Li)		
Magnesium (Mn)		
Oxygen (O)		
Lithium Manganate [Li_2MnO_4]		

Convert 214.5g Li_2MnO_4 to mol Li_2MnO_4		
Mol Li_2MnO_4		

Rhodium(III)Oxalate [$\text{Rh}_2(\text{C}_2\text{O}_4)_3$]		
Element	#	Molar Mass
Rhodium (Rh)		
Carbon (C)		
Oxygen (O)		
Rhodium(III)Oxalate [$\text{Rh}_2(\text{C}_2\text{O}_4)_3$]		

Convert 5.80mol $\text{Rh}_2(\text{C}_2\text{O}_4)_3$ to mass $\text{Rh}_2(\text{C}_2\text{O}_4)_3$		
Mass $\text{Rh}_2(\text{C}_2\text{O}_4)_3$		

Cadmium(I)Phosphate [Cd ₃ PO ₄]		
Element	#	Molar Mass
Cadmium (Cd)		
Phosphorous (P)		
Oxygen (O)		
Cadmium(I)Phosphate [Cd ₃ PO ₄]		

Convert 92.5g Cd ₃ PO ₄ to mol Cd ₃ PO ₄	
Mol Cd ₃ PO ₄	

Lead(IV)Thiosulfate [Pb(S ₂ O ₃) ₂]		
Element	#	Molar Mass
Lead (Pb)		
Sulfur (S)		
Oxygen (O)		
Lead(IV)Thiosulfate [Pb(S ₂ O ₃) ₂]		

Convert 3.49mol Pb(S ₂ O ₃) ₂ to mass Pb(S ₂ O ₃) ₂	
Mass Pb(S ₂ O ₃) ₂	