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 [$Y(NO_3)_3$]		
Element	#	Molar Mass
Yttrium (Y)		
Nitrogen (N)		
Oxygen (O)		
Yttrium(III)Nitrate [$Y(NO_3)_3$]		

Zirconium(I)Hydroxide [ZrOH]		
Element	#	Molar Mass
Zirconium (Zr)		
Oxygen (O)		
Hydrogen (H)		
Zirconium(I)Hydroxide [ZrOH]		

Convert 154.6g $Y(NO_3)_3$ to mol $Y(NO_3)_3$	
Mol $Y(NO_3)_3$	

Convert 1.70mol ZrOH to mass ZrOH	
Mass ZrOH	

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

Rhodium(III)Oxalate [$Rh_2(C_2O_4)_3$]		
Element	#	Molar Mass
Rhodium (Rh)	2	102.51 g/mol
Carbon (C)	6	12.01 g/mol
Oxygen (O)	12	16.00 g/mol
Rhodium(III)Oxalate [$Rh_2(C_2O_4)_3$]	469.88 g/mol	

$Rh_2(C_2O_4)_3$
C: 2·3
O: 4·3
205.82
72.06
192.00

Convert 214.5g Li_2MnO_4 to mol Li_2MnO_4	
Mol Li_2MnO_4	

Convert 5.80mol $Rh_2(C_2O_4)_3$ to mass $Rh_2(C_2O_4)_3$	
$5.80 \text{ mol } Rh_2(C_2O_4)_3$	$469.88 \text{ g } Rh_2(C_2O_4)_3$
	$1 \text{ mol } Rh_2(C_2O_4)_3$
Mass $Rh_2(C_2O_4)_3$	$2725.30 \text{ g } Rh_2(C_2O_4)_3$

Cadmium(I)Phosphate [Cd_3PO_4]		
Element	#	Molar Mass
Cadmium (Cd)		
Phosphorous (P)		
Oxygen (O)		
Cadmium(I)Phosphate [Cd_3PO_4]		

Lead(IV)Thiosulfate [$Pb(S_2O_3)_2$]		
Element	#	Molar Mass
Lead (Pb)		
Sulfur (S)		
Oxygen (O)		
Lead(IV)Thiosulfate [$Pb(S_2O_3)_2$]		

Convert 92.5g Cd_3PO_4 to mol Cd_3PO_4	
Mol Cd_3PO_4	

Convert 3.49mol $Pb(S_2O_3)_2$ to mass $Pb(S_2O_3)_2$	
Mass $Pb(S_2O_3)_2$	

$Cu(IO_3)_3$
Cu: 1
I: 1·3
O: 3·3
63.55
+380.70
+144.00
588.25

Copper(III)Iodate [$Cu(IO_3)_3$]		
Element	#	Molar Mass
Copper (Cu)	1	63.55 g/mol
Iodine (I)	3	126.90 g/mol
Oxygen (O)	9	16.00 g/mol
Copper(III)Iodate [$Cu(IO_3)_3$]	588.25 g/mol	

Magnesium Carbonate [$MgCO_3$]		
Element	#	Molar Mass
Magnesium (Mg)		
Carbon (C)		
Oxygen (O)		
Magnesium Carbonate [$MgCO_3$]		

Convert 38.23g $Cu(IO_3)_3$ to mol $Cu(IO_3)_3$	
38.23g $Cu(IO_3)_3$	1 mol $Cu(IO_3)_3$
	588.25g $Cu(IO_3)_3$
Mol $Cu(NO_3)_3$	0.065 mol $Cu(IO_3)_3$

Round to 2
0.064989...
0.065

Convert 0.528mol $MgCO_3$ to mass $MgCO_3$	
Mass $Mg_3(PO_4)_2$	