Name: _____

Section: _____

Report Form – Gas Stoichiometry

Part I – Sample Data for Mass of Zinc

Chemical Reaction		
DATA COLLECTED		
Volume of hydrogen collected*	81.5 mL	L
Temperature of hydrogen*	22.0 °C	K
Barometric pressure*	29.98 in Hg	mm Hg
Height of solution in eudiometer from benchtop		19.2 cm
Height of solution in beaker from benchtop		10.0 cm
CALCULATIONS AND RESULTS		
Difference in liquid levels of solution in eudiometer and beaker*		
Aqueous vapor pressure at temperature of hydrogen		mm Hg
Pressure caused by acid column:* (Difference in cm)*(0.772 mm Hg/cm)		mm Hg
Pressure of hydrogen alone*	mm Hg	atm
Moles of hydrogen*		moles
Moles of zinc*		moles
Mass of zinc (calculated)*		g

Show the calculations for each of the entries in the Data Table marked with * on the calculations page.

Question: If the mass of zinc used was 0.21 g, what is the percent error for your calculated mass of zinc? Show your work below.

Name: _____

Section: _____

Part II – Mass of Magnesium

Chemical Reaction		
DATA COLLECTED		
Unknown number		
Volume of hydrogen collected*	mL	L
Temperature of hydrogen*	°C	K
Barometric pressure*	inches Hg	mm Hg
Height of solution in eudiometer from benchtop		cm
Height of solution in beaker from benchtop		cm
CALCULATIONS AND RESULTS		
Difference in liquid levels of solution in eudiometer and beaker*		cm Acid Solution
Aqueous vapor pressure at temperature of hydrogen		mm Hg
Pressure caused by acid column:* (Difference in cm) * (0.772 mmHg/cm)		mm Hg
Pressure of hydrogen alone*	mm Hg	atm
Moles of hydrogen*		moles
Moles of magnesium*		moles
Mass of magnesium*		g

Show the calculations for each of the entries in the Data Table marked with * on the calculations page.

Calculations

Show the calculations for each of the entries in the Data Table marked with * below.

VAPOR PRESSURE OF WATER AT DIFFERENT TEMPERATURES

Temp (°C)	Vapor Pres (mm Hg)	Temp (°C)	Vapor Pres (mm Hg)
0	4.6	25	23.5
5	6.5	26	25.2
10	9.2	27	26.7
15	12.8	28	28.3
16	13.6	29	30.0
17	14.5	30	31.8
18	15.5	35	42.2
19	16.5	40	55.3
20	17.5	45	71.9
21	18.6	50	92.5
22	19.8	60	149.4
23	21.1	70	233.7
24	22.4	100	760.0