

**Molar Volume of Hydrogen Gas****Problem**

## 1. Molar Volume Dry Lab

**Data Table**

Master ribbon length	100.0	cm
Master ribbon mass	1.1819	g
Room Temp	23.5	°C
Room Pressure	758.2	mm Hg
Vapor Pressure of H <sub>2</sub> O	21.8	mm Hg
“Wet” gas volume	49.36	mL
Lab length of Mg Ribbon	3.68	cm

In the following calculations, DO NOT round of the answers until the very end (you will be told when!)

1	Mass of Mg ribbon segment:		g
2	moles of Mg		mol
3	moles of H <sub>2</sub>		mol
4	pressure of “dry” H <sub>2</sub> gas		mm Hg
5	mL of “dry” H <sub>2</sub> gas at STP		mL
6	experimental molar volume		L/mol
7	% error		%

use 3 sig figs for #6 and #7