Gases Lab: Filling in the Data Table

Initial Syringe Reading (mL)	**Barometric Pressure (mm Hg)**	**Trapped Gas Volume (mL)**
Reading before experiment starts Should be 10-15 mL	Atmospheric Pressure (~ 760 mm Hg) **Read on lab barometer**	Gas Volume in Erlenmeyer Flask Determined at end of experiment

Part II: Temperature – Volume Experiment

Temperature (°C)	Temperature of the water bath
Syringe Reading (mL)	Syringe reading (level with trapped gas) at each temperature

Part III: Pressure – Volume Experiment

Vacuum Gauge (mm Hg)	Number on the vacuum gauge
Syringe Reading (mL)	Syringe reading (level with trapped gas) at each pressre

Gas Lab Calculations: For Each Data Point

Part II: Temperature – Volume Experiment

Temperature (°C)	Temperature of the water bath (degrees Celsius)
Temperature **T** (K)	Temperature of the water bath (degrees Kelvin … K = ^{o}C + 273)
Syringe Reading (mL)	Syringe reading (level with trapped gas) … from data above
Initial Reading (mL)	Initial Syringe reading … same for all data points
Change in Volume (mL)	Syringe Reading – Initial Syringe Reading
Trapped Gas Volume (mL)	Gas Volume in the Erlenmeyer flask … same for all data points
Gas Volume **V** (mL)	Trapped Gas Volume + Change in Volume
V/T *(mL/K)*	Gas volume, **V,** Divided by the absolute temperature, **T**

Part III: Pressure – Volume Experiment

Barometric Pressure (mm Hg)	Pressure in the room … same for all data points
Vacuum Gauge (mm Hg)	Vacuum Gauge Reading … from data above
Gas pressure **P** (mm Hg)	Barometric Pressure – Gauge Pressure (is pressure in apparatus)
Syringe Reading (mL)	Syringe reading (level with trapped gas) … from data above
Initial Reading (mL)	Initial Syringe Reading … same for all data points
Change in Volume (mL)	Syringe Reading – Initial Syringe Reading
Trapped Gas Volume (mL)	Gas Volume in the Erlenmeyer flask … same for all data points
Gas Volume **V** (mL)	Trapped Gas Volume + Change in Volume
P x V (mm x mL)	Gas Pressure, **P,** Multiplied by the Volume, **V**