Name: _____ Section: _____

Data and Calculations for Experiment 11

Pressure of the air in the room: _____

Temperature of the air in the room: _____

Actual Volume (mL)	1 / Volume (mL^{-1})	Pressure * Vol. = *k* (Pa·L)	Plunger Position	Pressure (kPa)
These will be calculated in Excel®. Submit your spreadsheet and your graphs.			5	
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Average *k* = _____

Name: _____ Section: _____

Questions

1) On your linear graph, do any points deviate from the straight line?

2) Write down the equation of the trendline (y = mx + b) from your linear graph. How does the slope (m) compare to the average P*V=*k* value from the table of data?

3) Using the equation of your trendline, solve for the pressure at a volume of 2.0 mL.
Hint: x = 1/V in your equation!

4) Why must the temperature be constant during this experiment? Use observations from your experiment and the graphs to support your answer!

5) If you repeated this experiment at a higher temperature, how would the P vs. V curve obtained differ from the curve on your 1st graph?

6) You have a 1.00 L sample of Argon gas at 700.0 mmHg. You decrease the pressure to 500.0 mmHg. What is the new volume?

7) Describe (quantitatively) what you would do to the volume of a container of gas if you wanted to double the pressure inside.