Gas Laws

Name(s):
Date:
Lab Section:

DATA

Please attach copies of your spreadsheets and graphs to this worksheet when you turn it in to your instructor.

QUESTIONS

1. What type of relationship does your data show exists between the pressure and volume of a gas?

2. How does the average product of *PV* compare to the slope of your best-fit line for each trial? What happens to the magnitude of the slope with each successive trial? Why does it change?

3. For each trial, calculate the pressure in the syringe if the reading on the syringe, V_s, was 15 mL. Show your calculations.

4. Why should the y-intercept be set to zero on the plots of P vs. $1/V$ and P vs. $1/V^2$?

5. Suppose you accidently started a trial with the syringe set at 6 mL. How would your final straight-line graph be affected?

6. What are some sources of error or uncertainty in this experiment? Are there ways you could reduce the amount of error or uncertainty? If so, how?