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| Group Name: |  |

**Determination of Absolute Zero**

**using Gay-Lussac's Law**

Worksheet

## **LibreTexts page:** [**8: Gases**](https://chem.libretexts.org/Courses/University_of_Arkansas_Little_Rock/Chem_1402%3A_General_Chemistry_1_%28Belford%29/Laboratory/08%3A_Experiment_8_-_Gases)

## **(**<https://chem.libretexts.org/link?214685>)

**Please don’t edit, rearrange or delete anything that is already in this document. Just add your answers inside the boxes.**

**You can use shortcuts for superscripts and subscripts when needed:**

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**Part I: Data**

Use this Google Sheet [Insert link] to obtain the data. Pay attention to the units.

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| **Type of bath used** | **Temperature, °C** | **Pressure, kPa** | **Pressure, atm** |
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**Part II: Graphing**

1. Create a new Google Sheet and plot the data points above. Pressure is the dependent variable.
2. Go to Edit Graph → Customize → Vertical axis → Set minimum value to -0.1
3. Set the minimum value of the x-axis so that you can observe the trendline cross through the x-axis, this is called the x-intercept, which is the value of the temperature when the pressure equals zero.
4. Insert a snapshot of your graph below. Don’t forget to add titles, units, equation, trendline and minor gridlines.

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1. What is the value of absolute zero from the graph?

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**Part III: Calculations**

1. Using the slope calculate the value of x when y=0, this is the x-intercept.

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1. Calculate present error using the formula below.



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