

**Laboratory report 2261-2:**

**Heat engine**

Full name : \_\_\_\_\_

UID : \_\_\_\_\_

Group No. : \_\_\_\_\_

Date : \_\_\_\_\_

**1 Part A. Charles' law**

[Present a plot of  $T$  versus  $V$ . Perform linear fit on it and analyze the result.]

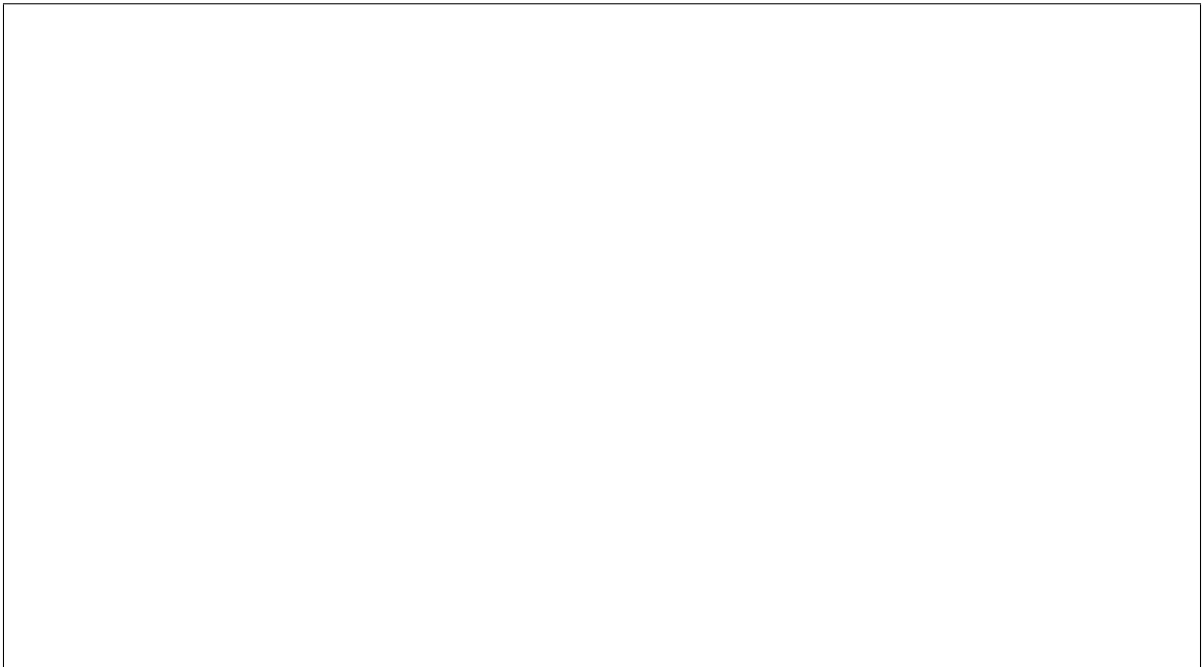


Figure 1: Plot of temperature versus volume.

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## 2 Part B. Gay-Lussac's law

[Present a plot of  $T$  versus  $P$ . Perform linear fit on it and analyze the result.]

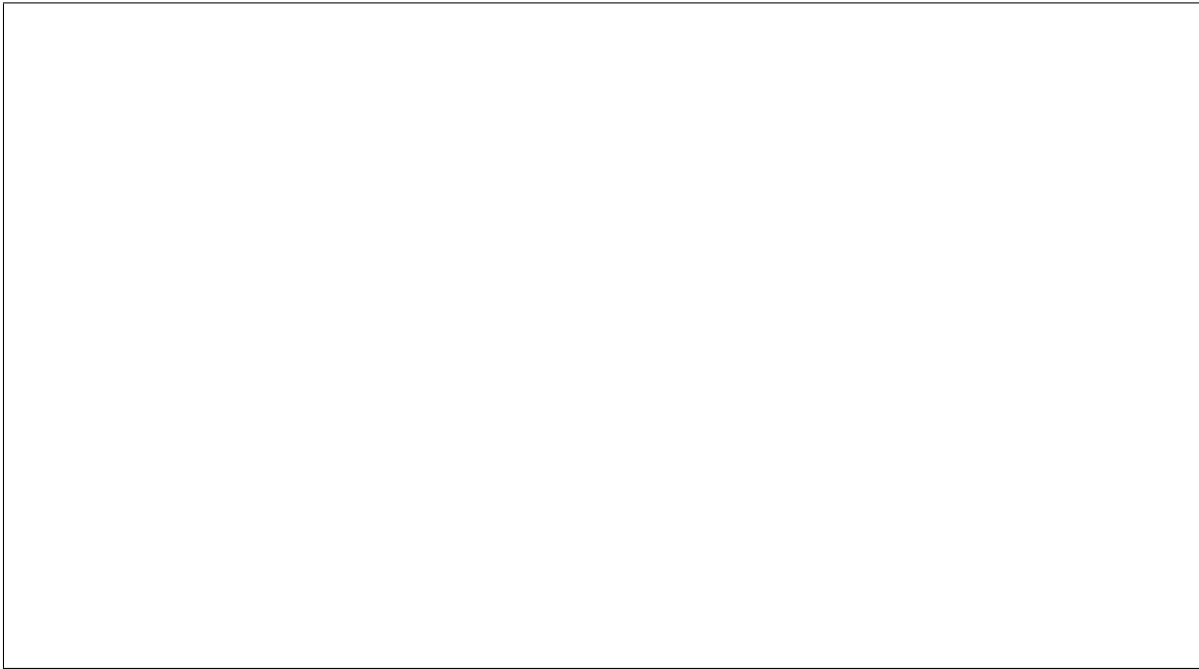


Figure 2: Plot of temperature versus pressure.

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## 3 Part C. Operation of a heat engine

[Present a plot of  $T$  versus  $V$ . Perform linear fit on it and analyze the result.]

The mass  $m$  is measured to be \_\_\_\_\_. The temperatures of cold water and hot water are \_\_\_\_\_, respectively. It takes \_\_\_\_\_ times of putting the air chamber into hot water bath until the mass is lifted. When a mass is lifted up to a higher position, it gains gravitational potential energy. But energy can neither be created nor destroyed. Indeed, this is energy comes from \_\_\_\_\_

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## **4 Discussion**

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## **5 References**

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