

HW2

January 30, 2023

1 Homework 2

Alfaifi, Ammar - 201855360

```
[2]: import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np
from matplotlib_inline.backend_inline import set_matplotlib_formats

set_matplotlib_formats('svg', 'pdf')
sns.set_theme()
```

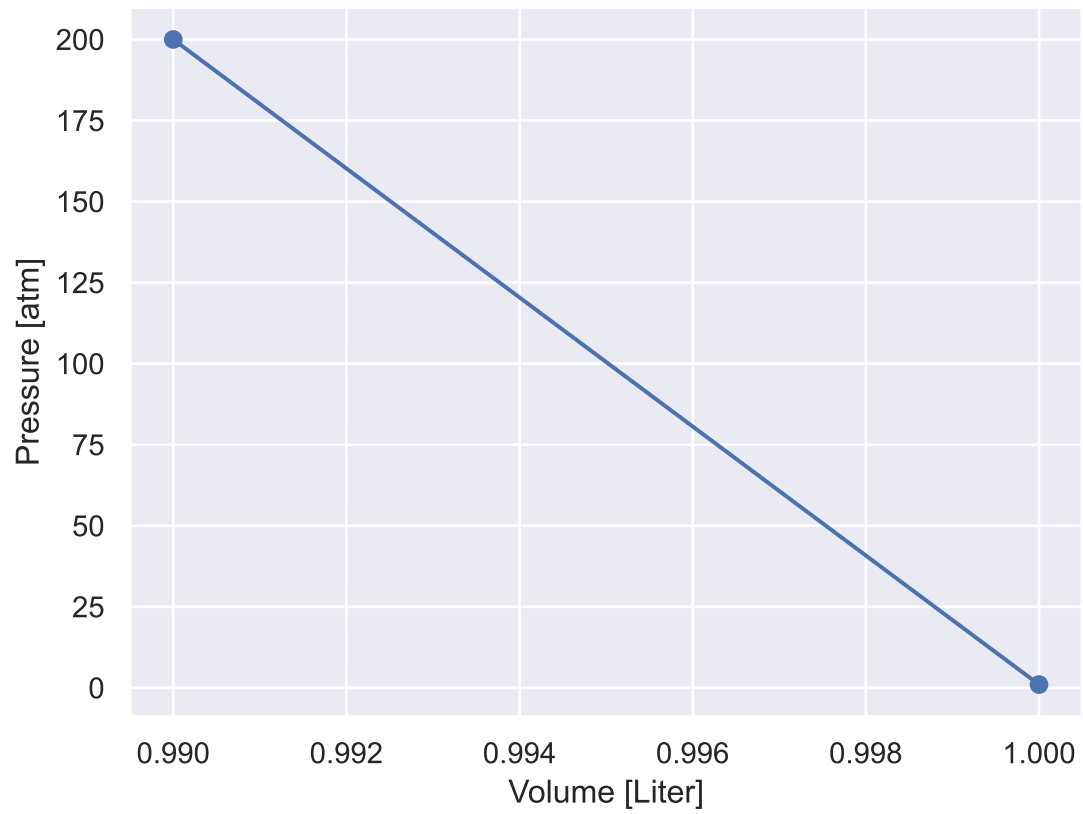
1.1 Problem 1.32

To approximate the the work needed, we take the average pressure as 100 atm.

$$W \approx -\bar{P}\Delta V = -(100)(-0.001) = 100 \text{ J}$$

```
[5]: plt.plot([0.99, 1.00], [200, 1.00], '-o')

plt.xlabel('Volume [Liter]')
plt.ylabel('Pressure [atm]')
plt.show()
```



1.2 Problem 1.33