Abstract
In this paper I will demonstrate my mastery of Latex. It is not too hard, but yet not too easy.

1 My Background
In this section of my homework paper, I will make a table with some information about me.

<table>
<thead>
<tr>
<th>Name</th>
<th>Hometown</th>
<th>Major</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your name</td>
<td>Your Hometown</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

2 Some Math
In this section will show an inline equation like this one $A = \pi r^2$, the area of a circle.

Then I show a displaystyle equation.

$$\int_{0}^{\infty} \frac{1}{1 + x^2} dx = \frac{\pi}{2}$$

I will now display a matrix:

$$M = \begin{bmatrix}
  a & b & 3y \\
  -b & a & -c \\
  -3y & c & a \\
\end{bmatrix}$$
And finally an multiline equation

\[
\int_0^{\pi/2} \cos(x) = \sin(x)|_0^\pi \\
= \sin(\pi/2) - \sin(0) \\
= 1 - 0 = 1
\]

3 A Figure

Adding figures to documents is essential for presenting scientific results.

I will include a figure in my document (you will need to make a figure with gnuplot of anything you like, to include here.) It’s ok if your figure end up somewhere else in your document, as long as it gets included.

Figure 1: This is my figure: a plot of \( \sin(xy) \).
4 Conclusions

As you can see, I know Latex pretty darn well!