

# Sample TeX File

Your name here

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# 1 This is a section

Here is a list:

- Item 1
- Item 2

## 1.1 Here is a subsection

*Proof.*

- (a) Numbered item 1
- (b) Numbered item 2

□

Use `\mathrm` to make normal text in a math block, such as the `d` in the integral below:

$$\int_{-7}^{\pi} f(x) \, \mathrm{d}x \tag{1}$$

### 1.1.1 Here is a subsubsection

You can align equations as follows:

$$\begin{aligned} x &= y & (1) \\ x^2 &= y^2 & (2) \end{aligned}$$

You can also remove the equation numbers by adding an asterisk:

$$\begin{aligned} x &= \frac{1}{2} \\ x^2 &= \left(\frac{1}{2}\right)^2 \end{aligned}$$

**Lemma 1.** *This is a lemma*

$$\sum_{n=1}^{\infty}$$