Review and Tips

LATEX for Math and Science
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Error Checking

- TeXnic Center and other programs auto-correct obvious errors. The problem is that errors become more difficult for it to auto-correct, as your TeX becomes more complicated.

Error Fixing

- LaTeX is often not descriptive about the error or its location.
- My method involves knowing the last time the program compiled, and taking roughly half of the document and either cutting it into another document or commenting out the lines.
- Thus at each step you know whether the error occurs in the upper or lower half, then repeat until the error location is narrowed down.

"Good" Practices in LaTeX

- Just like programming code, creating readable .tex is helpful for yourself and us as graders. Also, if you plan to share documents.
- A comment on sharing documents, you may need to send the packages along with the .tex itself.
- So like code, use tabs, new lines, and comments to your advantage. For example if you enter `\\` or `\newline`, then start a new line on the .tex file itself, and do the same with tabs and such.

Geometry package

- Allows for manipulation of margins, page size, and many other things. Otherwise margins take too much thought/time.
- The following is an example of making a file with 1in margins all around.
  `\usepackage[left=1in,right=1in,top=1in,bottom=1in]...`
  `...{geometry}`
  Or
  `\usepackage{geometry}`
  `\geometry{left=1in,right=1in,top=1in,bottom=1in}`

Enumerate package

- Allows for you to declare your own labels for enumerate where you could use A, a, I, i or 1 as the characters to count.
- If you would like a A, a, I, i or 1 to not act as a counter, then put {} around the letter or entire text not used in the counter.
- Here's an example
    - I1 $T(1,2)$
    - I2 $S(2)$
    - I11 $Z(1)$
- This is the code of the example above.
  ```
  \begin{enumerate}[{I}1]
      \item $T(1,2)$
      \item $S(2)$
      \setcounter{enumi}{10}
      \item $Z(1)$
  \end{enumerate}
  ```

Math Mode comments

- You may not have math modes within a math mode such as $$ x^2 x^2+1 $$. This creates an error in the document.
- The \text command should only be used within math modes, not when typing normal text.
- If you want to create one sided brackets, use \left. or \right. whichever is appropriate in the case.
- Example:

$$\sum_{i=1}^{\infty} \frac{x^n}{n!} \Bigg)$$

Code:
$$\left.\sum_{i=1}^{\infty}\frac{x^n}{n !}\right)$$