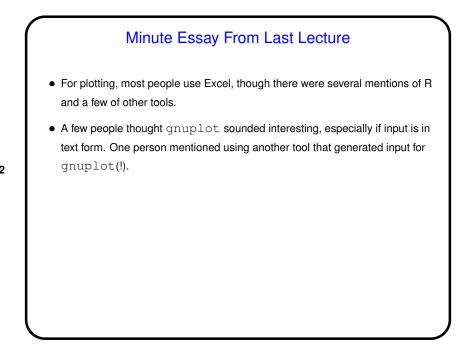


Slide 1



Slide 2

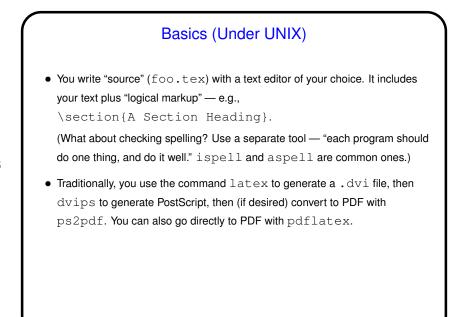
## Homework 5 Essays

- Several people commented on trouble with that last problem. It *was* hard. One said the expression he came up with "made my head hurt" (I totally relate!).
- Others mentioned annoyances: Many tools use regular expressions, but details of syntax vary. And when you need escape characters — it almost seems arbitrary. (But at least some tools have a way to specify that you're using a form in which they're not required.)

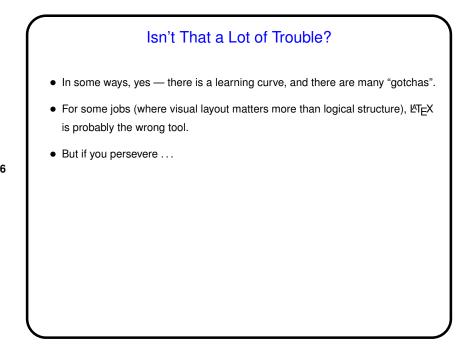
Slide 3

Slide 4

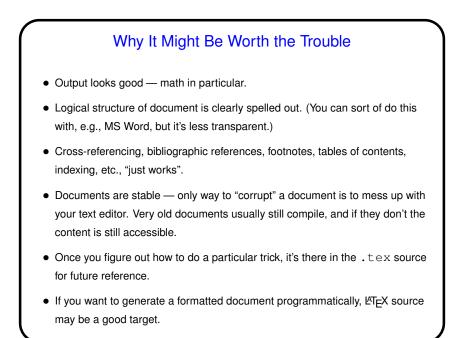
## What are TEX and LTEX? TEX — program for typesetting mathematics, developed by Knuth (1978) for his book *The Art of Computer Programming* and made freely available. (How it came to be — a "side project" that turned into much more!) LTEX — extensive set of macros for TEX originally written by Lamport (1985), that provide functionality needed for scholarly papers. Extended over the years by many people. These are "text formatters" not "word processors", and as such don't include a built-in editor. (But there are IDE-like programs for working with them.) Basic idea — you write "source code" for your document (text and markup) with a text editor, then use TEX or LTEX to turn it into a formatted document. Both available in zero-cost form for many platforms.



Slide 5

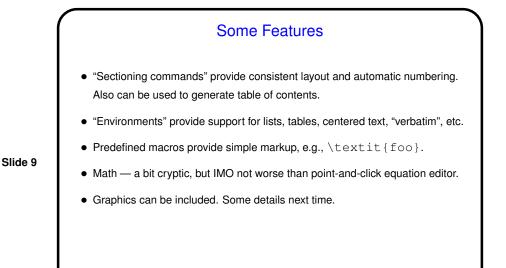


Slide 6

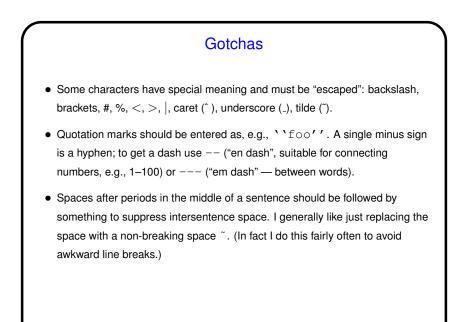


## Basics, Continued • Lage provides a small set of "document classes" — article, report, book, etc. These classes group definitions for section headers, lists, etc., in a way that everything looks good together. Also can have "packages" that group together related customizations, provide extra features. Slide 8 Slide 8 • Continued • Class [options] {foo} • Additional global definitions, packages, etc. • \begin{document} • Your text. "Paragraphs" delimited by blank lines. • \end{document}

Slide 7



More Features
Figures and tables can "float" (L<sup>A</sup>T<sub>E</sub>X will put them where they fit). More next time. (Footnotes also are placed where they fit.)
Lots of cross-referencing features — declare symbolic label (for section, figure, etc.) with \label{foo}, reference with \ref{foo}.
Support for bibliography / list of references — usually use companion package BIBT<sub>E</sub>X. More next time.
Support for indexes. (Also glossaries, through add-on packages.)
Facilities to define your own "commands" and "environments". Makes it easy to get consistent formatting; also can provide convenient shorthand ways of doing things. More next time.



Slide 11

Slide 12

Advice For Getting Started
Get hold of an example that looks somewhat similar to what you want to produce, plus some sort of documentation — a guide from online or a book.
Tinker with the example, putting in your prose and other stuff.
When something doesn't work — I used to say "ask a local expert", and that should work, but these days a Web search may well turn up good suggestions.

