TEX and LATEX without a net

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Goal oriented – moving TeX test to LaTeX

- Calc 3 test with graphics, tables, centering and spacing

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- Compare TeX to LaTeX

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- **Calc 3 test with graphics, tables, centering and spacing**

- **Compare TeX to LaTeX**

- **Watch the workflow from editor to viewer**

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- Calc 3 test with graphics, tables, centering and spacing

- Compare TeX to LaTeX

- Watch the workflow from editor to viewer

- Debugging problems (compiling to looking good)

Goal oriented – moving TEX test to LATEX

- **Calc 3 test with graphics, tables, centering and spacing**

- **Compare TEX to LATEX**

- **Watch the workflow from editor to viewer**

- **Debugging problems (compiling to looking good)**

- **References used**

TEX basics – version 3.14159

T_EX basics – version 3.14159

- "tex foo.tex" either error or "foo.dvi"

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- Minimum T_EX file: "\bye"

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- pdftex foo.tex yields foo.pdf

TEX basics – version 3.14159

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- If error "e" puts you in $TEXEDIT

- Minimum TEX file: "\bye"

- pdftex foo.tex yields foo.pdf

- dvitools: xdvi, dvips, dvi2pdf

T_EX in test2.tex.orig

TEX in test2.tex.orig

- **centering with spaces and \hfill**

TEX in test2.tex.orig

- centering with spaces and \hfill

- graphics with midinsert and special

TEX in test2.tex.orig

- centering with spaces and \hfill

- graphics with midinsert and special

- table

T_EX in test2.tex.orig

- centering with spaces and \hfill

- graphics with midinsert and special

- table

- display math $$<equation>$$

TEX in test2.tex.orig

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- centering with spaces and \hfill 4

- graphics with midinsert and special 5

- table 6

- display math $$<equation>$$ 7

- inline math $<inline>$ 8

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LaTeX 2ε basics

LATEX 2_ε basics

- LATEX 2_ε is a higher level layer atop TEX

LaTeX 2_ε basics

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- Not all TeX works in LaTeX

LaTeX 2_ε basics

- LaTeX 2_ε is a higher level layer atop TeX

- Not all TeX works in LaTeX

- "latex foo.tex", Minimal LaTeX 2_ε file:

$\backslash$ documentclass[$options$]$\{type\}$
$\backslash$ begin$\{$document$\}$
$\backslash$ end$\{$document$\}$

The itemize environment

The itemize environment

```
\begin{itemize}
\item item one
\item item two
\end{itemize}
```

The graphics environment

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```
\usepackage{graphicx}
\includegraphics[angle=90,scale=0.3]{foo.ps}
```

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\usepackage{graphicx}
\includegraphics[angle=90,scale=0.3]{foo.ps}
```

These graphics were created in Maple via the print dialog selecting the print to file options. By default these are landscape. Alternately one can save the maple file as latex which produces eps files.

The center environment

The center environment

```
\begin{center}
This is line one \\
This is line two \\
left \hfill right
\end{center}
```

The problems – test2-0.ps

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- Text too narrow, page breaks wrong.

The problems – test2-0.ps

- **Text too narrow, page breaks wrong.**

- **Itemize not a, b . . . and too spacy**

The problems – test2-0.ps

- **Text too narrow, page breaks wrong.**

- **Itemize not a, b . . . and too spacy**

- **Graphics not placed correctly**

The problems – test2-0.ps

- Text too narrow, page breaks wrong.

- Itemize not a, b . . . and too spacy

- Graphics not placed correctly

- But the table worked out of the box.

Debugging

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- TeX \nopagenumbers − \pagenumbering{none}

Debugging

- $\TeX$ \nopagenumbers – \pagenumbering{none}

- Random error with a strange error message.

Debugging

- T_EX \nopagenumbers − \pagenumbering{none}

- Random error with a strange error message.

- Tried to move the error.

Debugging

- TEX \nopagenumbers – \pagenumbering{none}

- Random error with a strange error message.

- Tried to move the error.

- Wholescale deletion.

Debugging

- TeX \nopagenumbers – \pagenumbering{none}

- Random error with a strange error message.

- Tried to move the error.

- Wholescale deletion.

- Needed \pagestyle{empty}

Text too narrow, page breaks wrong

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- Used \setlength to change textwidth, oddsidemargin, and more; placed before the \begin{document}

Text too narrow, page breaks wrong

- Used \setlength to change textwidth, oddsidemargin,
and more; placed before the \begin{document}

- Used \vspace{negative value} to reclaim space

Text too narrow, page breaks wrong

- Used \setlength to change textwidth, oddsidemargin, and more; placed before the \begin{document}

- Used \vspace{negative value} to reclaim space

- documentclass report instead of article?

Graphics not placed correctly

Graphics not placed correctly

- Use the center environment.

Graphics not placed correctly

- Use the center environment.

- \hspace{1in}

Graphics not placed correctly

- Use the center environment.

- \hspace{1in}

- \hfill

Graphics not placed correctly

- Use the center environment.

- \hspace{1in}

- \hfill

- Didn't tune. Perhaps better with eps files?

Itemize not right

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a. **Tried enumerate environment – counter from numbers to letters**

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`\renewcommand{\labelenumi}{\alph{enumi}.}`

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   `\renewcommand{\labelenumi}{\alph{enumi}.}`

b. **Too much space, found setlength parsep itemsep**

Itemize not right

a. **Tried enumerate environment – counter from numbers to letters**

```
\renewcommand{\labelenumi}{\alph{enumi}.}
```

b. **Too much space, found setlength parsep itemsep**

c. **Eventually created my own environment tightitem**

Summary

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Summary

- **Ended up with a similar test in $\LaTeX\,2_\varepsilon$**

Summary

- **Ended up with a similar test in LaTeX 2ε**

- **TeX gives a little more control**

Summary

- **Ended up with a similar test in LaTeX 2_ε**

- **TeX gives a little more control**

- **Didn't use LaTeX organizing or reference tools**

Summary

- **Ended up with a similar test in LaTeX 2_ε**

- **TeX gives a little more control**

- **Didn't use LaTeX organizing or reference tools**

- **Didn't use LaTeX table environment**

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References

- Books: A Guide to $\LaTeX$ by Kopka and Daly

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- Files: /opt/doc/NotSoShortIntroToLatex2e.pdf

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- People: The person next door.