

Math 235: Calculus Lab

Prof. Doug Hundley

Olin 222

Week 2

This week:

- ▶ More about LaTeX.
- ▶ Introduce Maple.
- ▶ Homework this week: A couple of problems to solve using Maple.

Software NOTES:

LaTeX

- ▶ Install Miktex (for PCs) or Mactex (for Macs).
- ▶ Install Texmaker (Latex editor and shortcut buttons)

Maple

<http://math.whitman.edu/Maple-17/>

*During the installation accept the defaults, **except** choose the **network license** option and use `winapp.whitman.edu` as the license server and "27001" as the port number.*

More on LaTeX

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The latex file is on our class website...

Inserting a Figure

```
\documentclass[12pt]{article}
\usepackage{graphicx,fullpage}

\begin{document}

Text...

\includegraphics[width=2.0in]{NameFile}

\end{document}
```

We always put the graphics in a figure environment (for labeling, getting a figure number, for captioning, etc.)

```
\begin{figure}[h]
\centering
\includegraphics[width=3.0in]{clown}
\caption{The photo of a famous clown.}
\label{AFace}
\end{figure}
```

Back in the text, we can now reference the figure (see Figure `\ref{AFace}`).

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(See example on the class website)

Labels and Referencing: An Equation

```
\begin{equation}
\label{LabelName1}
x=\frac{-b\pm \sqrt{b^2-4ac}}{2a}
\end{equation}
```

In the text, if I now want to refer to the formula (see Equation `\ref{LabelName1}`).

Result:

Labels and Referencing: An Equation

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x=\frac{-b\pm \sqrt{b^2-4ac}}{2a}
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Result:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{1}$$

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Result:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{1}$$

In the text, if I now want to refer to the formula (see Equation 1).

Labels and Referencing: A Section

```
\section{Formulas}  
\label{Label2}
```

In the text we can refer back to it (see, for example, Section `\ref{Label2}`).

Result:

Labels and Referencing: A Section

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\section{Formulas}  
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```

In the text we can refer back to it (see, for example, Section `\ref{Label2}`).

Result:

1 Formulas

In the text we can refer back to it (see, for example, Section 1).

See the example latex document and PDF output on the class website. We'll be using it more next week.

Next: Introduction to Maple.