

Math 235: Calculus Lab

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Olin 234

Week 2

This week:

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

Software NOTES:

LaTeX

- ▶ Install Miktex (for PCs) or Mactex (for Macs).
- ▶ The website for the author of Texmaker has been unavailable.
A “work around” should be available soon...
An alternative: TexWorks

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

Today we'll look at:

- ▶ How to insert a figure into LaTeX.
- ▶ How to label and reference a figure.
- ▶ How to label and reference other objects (like equations and section numbers).

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}`).

```
\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}`).



(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

```
\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:

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

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:

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

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

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

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.