LaTeX NOTE: How to insert figures

To insert a figure into your LaTeX document, you will first need a figure. A note about formats: LaTeX itself will use Encapsulated Postscript (files with `.eps` ending) and PDFlatex will use JPEG files (end with `.jpg`). It is possible to get around this if you only have encapsulated postscript, but I think it is preferable to have both formats.

In particular, Maple (and later, Matlab) will export figures in both, so I usually save both.

For the sake of this example, suppose I have three figures, one of the sine function and one of the cosine function and one of them both that I obtained from Maple:

```
plot(sin(x),x=-Pi..Pi);
plot(cos(x),x=-Pi..Pi);
plot({sin(x),cos(x)},x=-Pi..Pi);
```

In each plot, right click the mouse and choose `Export`, then choose either Encapsulated Postscript or JPEG. Save in both formats, and call the files `Fig01A.eps`, `Fig01A.jpg`, then `Fig01B.eps`, `Fig01B.jpg` (etc). Now you should have 6 files. *Hint:* Save them all as eps first, then save them all as JPG.

Preparing the LaTeX file

- First, be sure that `\usepackage{graphicx}` appears in the second line (or somewhere before `\begin{document}`).

- Next, where you want the figure to appear, type the following:

  ```
  \begin{figure}[h]
  \centering
  \includegraphics[width=1.0in]{Fig01A}
  \caption{This is a sample sine function.}
  \label{Figure01}
  \end{figure}
  ```
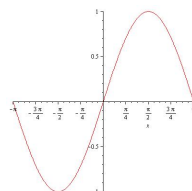
  This is what you'll see in Figure 1:

Figure 1: This is a sample sine function.

- Here's an example of putting more than one graph in your figure:

```
\begin{figure}[h]
\centering
\includegraphics[width=1.0in]{Fig01A}
\includegraphics[width=1.0in]{Fig01B}
\includegraphics[width=1.0in]{Fig01C}
\caption{This is a sample sine function.
Next is a cosine function, and last we have both.}
\label{Figure02}
\end{figure}
```

(I made these very small- Normally you would size them to be easily viewed)
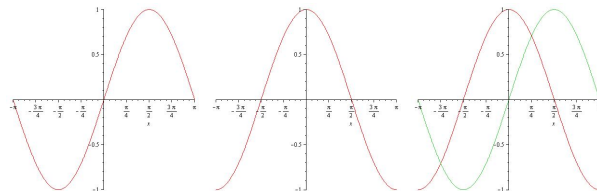
Figure 2: This is a sample sine function. Next is a cosine function, and last we have both.