# How to insert figures into LaTeX

First, we need a figure. In what follows, we'll assume that you have a JPEG file (`filename.jpg`). If you do not, you can perform an image conversion.

### Example

Download the clown image which is currently a PNG file. Open a terminal window, and navigate to the folder. For example, if you put the image in the `Downloads` folder, in the terminal window, we would type:

```
cd Downloads
convert clown.png clown.jpg
```

The `convert` command conveniently performs the conversion from the PNG format and creates `clown.jpg` (in the JPEG format).

### Assuming we now have JPG:

For this example, download the file `Fig01A.jpg` from our class website (FYI- This was created using Maple, and that will typically be how we get the image files).

These instructions are a little more detailed than the video lecture, but you should use the `figure` environment, as we do below. Here are some step by step instructions:

- 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. Compile the LaTeX code to be sure the figure shows up.

  ```
  \begin{figure}[h]
  \centering
  \includegraphics[width=1.0in]{Fig01A}
  \caption{This is a sample sine function.}
  \label{Figure01}
  \end{figure}
  ```
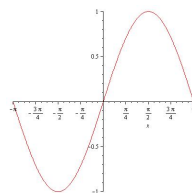


Figure 1: This is a sample sine function.

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

```
\begin{figure}[h]
\centering
\includegraphics[width=1.0in]{Fig01A} \quad
\includegraphics[width=1.0in]{Fig01A} \qquad
\includegraphics[width=1.0in]{Fig01A}
\caption{This is a sample sine function, replicated three times.}
\label{Figure02}
\end{figure}
```

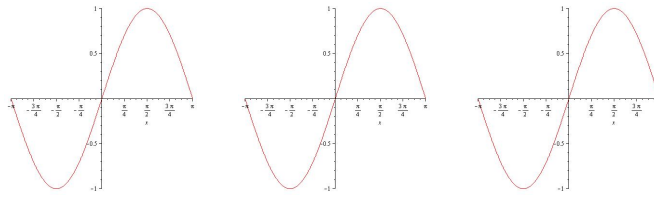(I made these very small- Normally you would size them to be easily viewed)



Figure 2: This is a sample sine function. Next is a cosine function, and last we have both.