Integrating Asymptote and TeXShop for Mac OS X

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1. Download Asymptote and place the *asymptote-x.xx.src.tgz* file on the desktop.

2. Open Terminal and type the following. Note that you will have to enter the root password for the final command.

```
cd Desktop
gunzip asymptote-x.xx.src.tgz
tar -xf asymptote-x.xx.src.tar
cd asymptote-x.xx
./configure
make all
sudo make install
```

   If you get an error at the `./configure` step, stating that you there is `no acceptable C compiler found in $PATH`, a solution is to download and install Xcode here: `http://developer.apple.com/TOOLS/Xcode/`.

3. We now create the engine that will typeset Asymptote in TeXShop. The easiest way to create this engine, which we will call *asyEngine.engine*, is to navigate to `~/Library/TeXShop/Engines` and duplicate one of the existing *.engine* files. Open the duplicate file and delete the code there. Type the following:

```
#!/bin/sh
location=$(dirname "$1")
basename="${1%.tex}"
#process
cd $location
pdflatex "$1"
asy "${basename}"-*.asy
pdflatex "$1"
```

   Save this file as *asyEngine.engine*.

4. Now we set our engine to be executable. In the terminal, navigate to the Engines directory and type:

   ```
   chmod +x asyEngine.engine
   ```

5. Finally, in the terminal, type:

   ```
   defaults write TeXShop OtherTeXExtensions -array-add "asy"
   ```

   This last command allows you choose the *asyEngine* option from the drop-down menu when you wish to typeset a document that includes asymptote.

Now, if you wish to typeset something simple, like the following red line, create a new document in TeXShop and type:

```
\documentclass[letterpaper,12pt]{article}
\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{asymptote}

\begin{document}
\begin{asy}
   size(300);
   draw((0,0)--(1,1),red);
\end{asy}
\end{document}
```

Choose the *asyEngine* option from the drop-down menu and press *Typeset*. Your red line will be created in a PDF Document.

On a final note, it is best to avoid using filenames with spaces in them. For example, avoid filenames such as `asy test.tex` and instead use filenames without spaces, such as `asyTest.tex`.