Question: I have two thesis type questions that are driving me mad! How do you create a hypothesis statement using LaTeX and the isuthesis package? And how can I get a bold lowercase Greek character in LaTeX?

The hypothesis statement that I want would look something like this:

Hypothesis 1: This is my hypothesis and I know that it is true because I went through all this work to make sure it was at least mostly true before I started my thesis work.

and I simply can't figure out how to produce bold lowercase Greek letters.

Help !

Sincerely yours,
Sleepless Sam

Dear Sleepless,

Take it easy, Sam. I have solutions to both of these vexing problems that I also ran across while doing my own thesis.

For the hypothesis problem, where what you basically want to do is a hanging indent style theorem- try using the \newtheorem command:

```
\newtheorem{guess}{Hypothesis}[chapter]
```

then for each hypothesis enter:

```
\begin{guess}
\begin{minipage}[t]{4.5 in}
This is my theory which is correct which shows that my theory is correct and
it belongs to me and thus no one else.  I composed this theory using two
separate experiments which I also created which are not contained in this
document at all.
\end{minipage}
\end{guess}
```

The output from my above example would look like this:

Hypothesis 1.1 This is my theory which is correct which show that my theory is correct and it belongs to me and thus no one else. I composed this theory using two separate experiments which I also created which are not contained in this document at all.

The \newtheorem command allows you to create an environment which may optionally be numbered at a specified sectional unit level (in my example I numbered it at the chapter level). The \newtheorem command declaration should be placed in the preamble (between the \documentclass line and the \begin{document} line) but can also be place anywhere in your document before the environment that it creates is used. The minipage command used with the \newtheorem environment gives the output that hanging indent style that major professors and thesis committee members so often look for in a thesis style paper.

You already seem to know that to get an uppercase greek bold letter you simply have to use \mathbf:

$\mathbf{2^{ft} \Psi \psi}$

This gets you bold uppercase greek letters but not bold lowercase greek letters. To get bold lowercase greek letters, you need to use the \boldmath command instead:

\boldmath $2^{ft} \Psi \psi$ \unboldmath

Further information on both of these examples can be found in "LaTeX: User's Guide and Reference Manual" (Updated for LaTeX2e) by Leslie Lamport.

Follow-up Question

But what would you do if you want to limited \boldmath as boldmath wants to bold everything in the equation?

Follow-up Answer

Hi,

\mbox is useful when you want to limit \boldmath:

Normal Bold Math: $\mathbf{ \Psi \psi}$

With the boldmath command: \boldmath $ \Psi \psi$ \unboldmath

The boldmath command with an mbox:

\(\Psi \psi 4^{36} \alpha +
    \mbox{\boldmath$ \Psi \psi$} = 0 \)

\boldmath can only be used in text mode but you can use \mbox to put a text mode within a math mode environment- if that makes any sense.

Sincerely yours,

Joe Struss
Creative Services, ITS, Iowa State