SOME USEFUL SYMBOLS, ETC, FOR HOMEWORKS

Your first homework is mostly logic, sets, and quantifiers. It may help to know how to get the following symbols, all of which are done in math mode (either in a sentence but enclosed in a pair of $ symbols, or within an equation environment like that inside a pair of \begin{equation}, \end{equation} delimiters.

- For a set, \{ and \} produce the braces { and }
- The element symbol $\in$ is obtained using \in
- The quantifier $\forall$ is \forall, and $\exists$ is \exists
- The arrow $\implies$ is \implies. The double one $\iff$ is \iff.
- If you need a word in the middle of a formula, put \text and then enclose the word in braces. This is useful in cases like NOT$P \implies Q$, which I got by writing \$\text{NOT}P\implies Q\$.
- A decent way to make a truth table is to use a tabular environment. You should look it up (eg here: https://en.wikibooks.org/wiki/LaTeX/Tables) to see the details of how it works, but a template for one is as follows. Type

```
\begin{tabular} {|c|c|c|}
\hline
P & Q & P$\implies$Q\\
\hline
T & T & T\\
T & F & F\\
F & T & T\\
F & F & T\\
\hline
\end{tabular}
```

to get the following output

P	Q	P $\implies$ Q
T	T	T
T	F	F
F	T	T
F	F	T