

## General Information

LaTeX is a document markup language that will help you produce beautiful mathematical solutions. It allows you to produce professional-looking pdf or dvi documents with relative ease. It's used by science researchers to typeset their documents in a consistent way, that is, you fill in the information and LaTeX worries about the visual presentation. Genius.

There are a lot of free LaTeX distributions that you can easily acquire for any platform, or you can use the King computer labs. The current version is LaTeX2e. There is a tutorial on the course website, with *plenty* other useful pages on the web (including Wikipedia, of course).

## Math Stuff

Once you've done the tutorial, you'll be set to go. There is a skeleton LaTeX file on the website with the basics you'll need for your solutions. Just in case, though, here is a listing of some math symbols that will be useful to you. Math stuff must be enclosed by '\$'s or '\[ and \]'.

Set symbols:

symb	latex	symb	latex	symb	latex	symb	latex
$\subset$	<code>\subset</code>	$\not\subset$	<code>\not\subset</code>	$\cap$	<code>\cap</code>	$=$	<code>=</code>
$\subseteq$	<code>\subseteq</code>	$\not\subseteq$	<code>\not\subseteq</code>	$\cup$	<code>\cup</code>	$\neq$	<code>\neq</code>
$\overline{S}$	<code>\overline{S}</code>	$S \setminus T$	<code>S \setminus T</code>	$\{$	<code>\{</code>	$\approx$	<code>\approx</code>
$S \times T$	<code>S \times T</code>	$\bigcup_{i=0}^n S_i$	<code>\bigcup_{i=0}^n S_i</code>	$\}$	<code>\}</code>	$\notin$	<code>\notin</code>
$\emptyset$	<code>\emptyset</code>	$v_1, v_2, \dots, v_n$	<code>v_1, v_2, \ldots, v_n</code>	$\dots$	<code>\ldots</code>	$\in$	<code>\in</code>

Superscripts, Subscripts, etc.

$v_0$	<code>v_0</code>	$v^0$	<code>v^0</code>	$\bar{A}$	<code>\bar{A}</code>	$G'$	<code>G'</code>
$\tilde{a}$	<code>\tilde{a}</code>	$\hat{\delta}$	<code>\hat{\delta}</code>	$e_{ij}^2$	<code>e_{ij}^2</code>	$c^*$	<code>c^*</code>

Proof symbols:

$\forall$	<code>\forall</code>	$\leftarrow$	<code>\leftarrow</code>	$\stackrel{def}{=}$	<code>\stackrel{def}{=}</code>	$\square$	<code>\Box</code>
$\exists$	<code>\exists</code>	$\rightarrow$	<code>\rightarrow</code>	$\nexists$	<code>\not\exists</code>	$\iff$	<code>\iff</code>
$\Rightarrow$	<code>\Rightarrow</code>	$\Leftarrow$	<code>\Leftarrow</code>	$\nexists$	<code>\not\forall</code>	$\infty$	<code>\infty</code>

Other stuff:

$\div$	<code>\div</code>	$\geq$	<code>\geq</code>	$\text{rah}$	<code>\text{rah}</code>	$\lfloor x \rfloor$	<code>\lfloor x \rfloor</code>
$\sqrt{x}$	<code>\sqrt{x}</code>	$>$	<code>&gt;</code>	$\text{bah}$	<code>\text{bah}</code>	$\lceil y \rceil$	<code>\lceil y \rceil</code>
$\not\geq$	<code>\not\geq</code>	$\leq$	<code>\leq</code>	$\text{tah}$	<code>\text{tah}</code>	$\sum_{i=0}^n v_i$	<code>\sum_{i=0}^n v_i</code>
$\frac{x}{y}$	<code>\frac{x}{y}</code>	$<$	<code>&lt;</code>	$\text{pha}$	<code>\text{pha}</code>	$\prod_{i=0}^n v_i$	<code>\prod_{i=0}^n v_i</code>
$\varepsilon$	<code>\varepsilon</code>	$\Sigma$	<code>\Sigma</code>	$\wedge$	<code>\land</code>	$\vee$	<code>\lor</code>