

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 should be 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. I'll post 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:

| symbol | latex | symbol | latex | symbol | latex | symbol | 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> | | |
| $S \times T$ | <code>S \times T</code> | $\bigcup_{i=0}^n S_i$ | <code>\bigcup_{i=0}^n S_i</code> | $\}$ | <code>\}</code> | | |
| \emptyset | <code>\emptyset</code> | v_1, v_2, \dots, v_n | <code>v_1, v_2, \dots, v_n</code> | \notin | <code>\notin</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{v} | <code>\hat{v}</code> | $e_{ij}^{c^2}$ | <code>e_{ij}^{c^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> | \nforall | <code>\not\forall</code> | ∞ | <code>\infty</code> |

Other math symbols:

| | | | | | | | |
|---------------|--------------------------|---------|--------------------|--------------|-------------------------|---------------------|--------------------------------|
| \div | <code>\div</code> | \geq | <code>\geq</code> | rah | <code>\text{rah}</code> | $\lfloor x \rfloor$ | <code>\lfloor x \rfloor</code> |
| \sqrt{x} | <code>\sqrt{x}</code> | $>$ | <code>></code> | bah | <code>\text{bah}</code> | $\lceil y \rceil$ | <code>\lceil y \rceil</code> |
| $\not\geq$ | <code>\not\geq</code> | \leq | <code>\leq</code> | 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><</code> | pha | <code>\text{pha}</code> | $\prod_{i=0}^n v_i$ | <code>\prod_{i=0}^n v_i</code> |
| α | <code>\alpha</code> | β | <code>\beta</code> | \wedge | <code>\wedge</code> | \vee | <code>\vee</code> |