Technical Writing Rules

# Writing in Paragraphs

# Equations

## Basic Rules

## When to Display

## Punctuation

# Theorems/Proofs/Propositions/Etc.

When forming any of the following, be sure to define all variables in the result (e.g. a proof in an appendix where the variables are be defined is NOT sufficient).

## Theorem

* Major result of independent interest
* Proof is nontrivial
* Do not label all results as theorems, just the very important ones
* When in doubt, call it a *lemma*

## Lemma

* Auxiliary result
* Stepping stone towards a theorem
* Proof may be easy or difficult
* OR it could be worth encapsulating but does not warrant the *theorem* title

## Proposition

* Less clear meaning
* More like a minor theorem
* Sometimes used as a less daunting-looking theorem

## Corollary

* A direct consequence of a theorem, lemma, or proposition
* Does NOT imply its parent
* Not an extension or generalization of the result

## Conjecture

* Author thinks may be true, but is unable to prove or disprove
* Usually accompanied by strong evidence
* Not necessarily bad if later disproved, because the question might have some important meaning

## Hypothesis

* Statement taken as a basis for further reasoning
* Usually in a proof

## Proof

* Readers want to understand the key ideas, but don’t care much about the details
* They hope it can be applied to other applications
* Emphasize the structure and difficulty of the steps
* Omit intermediate steps for simplifications, but explain manipulations occurred

## Example

## Definition

# Symbols

## Usage

## Typical Meanings

# Miscellaneous