\LaTeX Command Summary

This listing contains short descriptions of the control sequences that are likely to be handy for users of \LaTeX v2.09 layered on \TeX v2.0. Some of these commands are \LaTeX macros, while others belong to plain \TeX; no attempt to differentiate them is made.

\LaTeX — ordinary space after period.
\LaTeX! — negative thin space = $-\frac{1}{6}\quad$ (math mode).
\LaTeX" makes an umlaut, as ¨o.
\LaTeX# prints a pound sign: #.
\LaTeX\$ prints a dollar sign: $.
\LaTeX\% prints a percent sign: %.
\LaTeX& prints an ampersand: &.
\LaTeX\' in tabbing environment moves current column to the right of the previous column. Elsewhere, acute accent, as ´o.
\LaTeX( — start math mode. Same as \begin{math} or $.
\LaTeX) — end math mode. Same as \end{math} or $.
\LaTeX* is a discretionary multiplication sign, at which a line break is allowed.
\LaTeX+ moves left margin to the right by one tab stop. Begin tabbed line.
\LaTeX, — thin space = $\frac{1}{6}\quad$; xx\LaTeX, x yields xx x. It is not restricted to math mode.
\LaTeX- in tabbing environment, moves left margin to the left by one tab stop. Elsewhere, optional hyphenation.
\LaTeX. puts a dot accent over a letter, as ó.
\LaTeX\^ inserts italics adjustment space.
\LaTeX; — medium space = $\frac{2}{3}\quad$; xx\LaTeX; x yields xx x (math mode).
\LaTeX\; — thick space = $\frac{2}{3}\quad$; xx\LaTeX\; x yields xx x (math mode).
\LaTeX< in tabbing environment, puts text to left of local left margin.
\LaTeX= in tabbing environment, sets a tab stop. Elsewhere, makes a macron accent, as ó.
\LaTeX> in tabbing environment is a forward tab. Otherwise, medium space = $\frac{2}{3}\quad$ (math mode).
\LaTeX\textbf{\@} declares the period that follows is to be a sentence-ending period.
\LaTeX\{ — same as \begin{displaymath} or $$.\LaTeX\} terminates a line, but disallows a pagebreak.
\LaTeX\| (math mode).
\LaTeX\} prints a curly right brace: \}.
\LaTeX\~ makes a tilde, as ˜n.
\LaTeX\aa is å. \LaTeX\AA is Å.
\LaTeX\acute makes an acute accent: á (math mode).
\LaTeX\addcontentsline{toc}{section}{name} adds the command \contentsline{section}{name} to the .toc file.
\LaTeX\address{text} declares the return address in the letter document style.
\LaTeX\addtocontents{toc}{text} writes text to the .toc file.
\LaTeX\addtocounter{name}{amount} adds amount to counter name.
\LaTeX\addtolength{\nl}{length} adds length to length command \nl. See also \setlength, \newlength, \settowidth.
\LaTeX\ae is æ. \LaTeX\AE is Æ.
\LaTeX\aleph is ℵ (math mode).
\LaTeX\alph{counter} prints counter as lower-case letters. \LaTeX\Alph{counter} prints upper-case letters.
\LaTeX\approx is ≈ (math mode).
\LaTeX\arabic{counter} prints counter as arabic numerals 1, 2, etc.
\LaTeX\arccos is arccos (math mode).
\LaTeX\arcsin is arcsin (math mode).
\arctan is arctan (math mode).
\arg is arg (math mode).
\arraycolsep — width of the space between columns in an array environment.
\arrayrulewidth — width of the rule created in tabular or array environment by \hline, or \vline.
\arraystretch — scale factor for interrow spacing in array and tabular environments.
\ast is * (math mode).
\asymp is \asymp (math mode).
\author{names} declares author(s) for the \maketitle command.
\b is a “bar-under” accent, as o¯.
\backslash is \ (math mode).
\bar puts a macron over a letter: \bar{a} (math mode).
\baselineskip — distance from bottom of one line of a paragraph to bottom of the next line.
\baselinestretch — factor by which \baselineskip is multiplied each time a type size changing command is executed.
\begin{environment} — always paired with \end{environment}. Following are the assorted environments.
\begin{abstract} starts an environment for producing an abstract.
\begin{array}{lrc} starts array environment with 3 columns, left-justified, right-justified, and centered. Separate columns with \&, and end lines with \\ . \@{text} between 1, r or c arguments puts text between columns.
\begin{center} starts an environment in which every line is centered. End lines with \\.
\begin{description} starts a labeled list. Items are indicated by \item{label}.
\begin{displaymath} sets mathematics on lines of its own. Same as \[ or \].
\begin{document} starts the actual text of a document. Required.
\begin{enumerate} starts a numbered list.
\begin{eqnarray} starts a displaymath environment in which more than one equation can be accommodated. Separate equations with \\ or $$$: use \nonumber to suppress numbering a particular equation.
\begin{eqnarray*} begins an environment like the eqnarray environment except that the equations aren’t numbered.
\begin{equation} starts a displaymath environment and adds an equation number.
\begin{figure} begins a floating environment, which may be optionally placed at pos (see positions on page 8). Document styles report and article use the default \tbp.
\begin{figure*} begins a two-column-wide figure. See \begin{figure}.
\begin{flushleft} starts environment with ragged left-hand margin. Separate lines with \ \. See \raggedright.
\begin{flushright} starts environment with ragged right-hand margin. Separate lines with \ \. See \raggedleft.
\begin{itemize} starts a “bulleted” (●) list. Start each item with \item.
\begin{landscape} begins a two-column-wide figure. See \begin{figure}.
\begin{itemize} begins a list environment. \item{labeling} specifies how items are labeled when \item has no argument. \item{spacing} is an optional list of spacing parameters.
\begin{itemize} begins an environment with wider margins, normal paragraph indenting, and offset from the text at top and bottom.
\begin{quote} begins an environment with wider margins, no paragraph indenting, and offset from the text at top and bottom.
\begin{tabbing} starts a columnar environment. Use commands \= (set tab), \> (tab), \< (backtab), \+ (indent one tab stop), \- (outdent one tab stop), \' (flush right), \' (flush left), \pushtabs, \poptabs, \kill, \.
\begin{table} begins a floating environment, which may be optionally placed at pos (see positions on page 8). Document styles report and article use the default \tbp.
\begin{table*} begins a two-column-wide table. See \begin{table}.
\begin{tabular}{arg} begins an array environment which can be used in or out of math mode. arg contains column text positioning commands r, l, c, \@{…}, p{length} (see positions on page 8). \l produces vertical line between columns. \*{7}{r|l|} repeats that entry 7 times.
\begin{theorem} — see \newtheorem.
\begin{titlepage} is an environment with no page number, and causes following page to be numbered “1”.
\begin{verbatim} starts an environment which will be typeset exactly as you type it, carriage returns and all, usually in typewriter font.
\begin{verse} starts an environment for poetry with wider margins, no paragraph indenting, and ragged right margin.
\beta is \( \beta \) (math mode).
\bf switches to bold face type.
\bibitem{ref} text creates a bibliography entry text, numbers it, and labels it with reference label ref.
\bibliography{file} — insert bibliography from file name.bib at this point in text.
\bibliographystyle{style} — a format specifier, like \documentstyle.
\bigcap is \( \cap \) (math mode).
\bigcirc is \( \circ \) (math mode).
\bigcup is \( \cup \) (math mode).
\bigodot is \( \odot \) (math mode).
\bigoplus is \( \oplus \) (math mode).
\bigotimes is \( \otimes \) (math mode).
\bigtriangledown is \( \triangledown \) (math mode).
\bigtriangleup is \( \triangleup \) (math mode).
\bigskip — standard “big” vertical skip.
\bigskipamount — default length for \bigskip.
\bigsqcup is \( \sqcup \) (math mode).
\biguplus is \( \uplus \) (math mode).
\bigvee is \( \vee \) (math mode).
\bigwedge is \( \wedge \) (math mode).
\bmod is binary modulo expression \( u \mod m \) (math mode).
\boldmath changes math italics and math symbols to boldface. Should be used outside of math mode.
\bot is \( \bot \) (math mode).
\bottomfraction — maximum fraction of page occupied by floats at the bottom.
\bowtie is \( \bowtie \) (math mode).
\Box is \( \Box \) (math mode).
\breve makes a breve accent: \( \breve{a} \) (math mode).
\bullet is \( \bullet \) (math mode).
\c is a cedilla, as ç.
\cal produces calligraphic letters, as \( \mathcal{B} \) (math mode).
\cap is \( \cap \) (math mode).
\caption[loftitle]{text} creates a numbered caption in a figure or table environment. Optional loftitle contains entry for the list of figures if different from text.
\cc{text} declares list of copy recipients for letter document style.
\cdot is \( \cdot \) (math mode).
\cdots makes three dots centered on the line: \( \cdots \) (cf. \ldots) (math mode).
\centering declares that all text following is to be centered (cf. \begin{center}).
\chapter[toctitle]{text} begins a new section, automatically headed and numbered. Optional toctitle contains entry for the table of contents if different from text.
\chapter*{title} is like \chapter{title}, but adds no chapter number or table of contents entry.
\check makes a h´aˇcek, as \( \check{a} \) (math mode).
\chi is \( \chi \) (math mode).
\circ is \( \circ \) (math mode).
\circle{diameter} as a valid argument for \put in a picture environment, draws a circle.
\circle*{diameter} is like \circle, but draws a solid circle.
\cite[subcit]{ref} produces a reference, in square brackets, to a bibliographic item created with \bibitem{ref}. Optional sub-citation subcit can be inserted in the entry.
\cleardoublepage forces next page to be a right-hand, odd-numbered page.
\clearpage ends a page where it is, and puts pending figures or tables on separate float pages with no text.
\cline{i-j} draws a horizontal line across columns i through j inclusive in array or tabular environments.
\closing{text} declares the closing in letter document style.
\clubsuit is \( \clubsuit \) (math mode).
\columnsep — distance between columns in two-column text.
\columnseprule — width of the rule between columns on two-column pages.
\columnwidth — width of the current column. Equals \textwidth in single-column text.
\cong is \( \cong \) (math mode).
\coprod is \( \coprod \) (math mode).
\copyright is ©.
\cos is \cos (math mode).
\cosh is \cosh (math mode).
\cot is \cot (math mode).
\coth is \coth (math mode).
\csc is \csc (math mode).
\cup is \cup (math mode).
\d is a "dot under" accent, as \o.
\dag is † (math mode).
\dagger is ‡ (math mode).
\dashbox{dwid}(width, height)[pos]{text} creates a dashed rectangle around text in a picture environment. Dashes are dwid units wide; dimensions of rectangle are width and height; text is positioned at optional pos (see positions on page 8).
\dashv is \dashv (math mode).
\date{adate} declares the date for the \maketitle command. The default is \today.
\day — current day of the month.
\dblfloatpagefraction — minimum fraction of a float page that must be occupied by floats, for two-column float pages.
\dblfloatsep — distance between floats at the top or bottom of a two-column float page.
\dbltextfloatsep — distance between double-width floats at the top or bottom of a two-column page and the text on that page.
\dbltopfraction — maximum fraction at the top of a two-column page that may be occupied by floats.
\ddag is ‡.
\ddagger is ‡ (math mode).
\ddot makes a dieresis over a letter: æ (math mode).
\ddots produces a diagonal ellipsis ··· (math mode).
\deg is \deg (math mode).
\delta is δ. \Delta is Δ (math mode).
\det is \det (math mode).
\diamond is ◊. \Diamond is ◊ (both math mode).
\diamondsuit is ♦ (math mode).
\dim is \dim (math mode).
\displaystyle switches to displaymath or equation environment typesetting (math mode).
\div is ÷ (math mode).
\documentstyle{substyl}{sty} determines default font, headings, etc., for document of style sty (and optional substyle substyl).
\documentstyle{article, book, letter, report, slides} Substyles: 11pt, 12pt, acm, draft, fleqn, leqno, twocolumn, twoside.
\dot makes a dot over a letter: â (math mode).
\doteq is ≡ (math mode).
\dotfill expands to fill horizontal space with row of dots.
\doublerulesep — horizontal distance between vertical rules created by || in tabular or array environment.
\downarrow is ↓. \Downarrow is \Downarrow (math mode).
\ell is \ell (math mode).
\em toggles between roman and italic fonts for emphasis.
\emptyset is ∅ (math mode).
\encl{text} declares a list of enclosures for letter document style.
\end{environment} ends an environment begun by \begin{environment} (q.v.).
\epsilon is ϵ (math mode).
\equiv is \equiv (math mode).
\eta is η (math mode).
\evensidemargin — distance between left side of page and text’s normal left margin, for even-numbered pages in two-sided printing.
\exists is ∃ (math mode).
\exp is \exp (math mode).
\fbox{text} makes a framed box around text.
\fboxrule — thickness of ruled frame for \fbox and \framebox.
\fboxsep — space between frame and text for \fbox and \framebox.
\fill — rubber length (glue) that can stretch to arbitrary length. Usually used to justify text a particular way.
\flat is ♭ (math mode).
\floatpagefraction — minimum fraction of a float page occupied by floats.
\floatsep — distance between floats that appear at the top or bottom of a text page.
\flushbottom causes pages to be stretched to \textheight.
\fnsymbol{counter} prints counter as one of the set of “footnote symbols”. counter must be less than 10.
\footnotemark — height of strut placed at beginning of footnote.
\footnotesize — switches to footnote-sized type.
\footskip — vertical distance between bottom of last line of text and bottom of page footing.
\footnotetext{text} specifies the text for a footnote which was indicated by a \footnotemark.
\forall is ∀ (math mode).
\frac{numerator}{denominator} produces a fraction in math environments.
\frame{text} makes a framed (outlined) box around text, with no margin between the text and the frame.
\framebox[size][pos]{text} produces a framed box of dimension size containing text, optionally positioned l or r.
\frack{numerator}{denominator} produces a fraction in math environments.
\framebox{width,height}{pos}{text} creates a rectangle around text; dimensions of rectangle are width and height; text is positioned at optional pos (see positions on page 8).
\frown is ⌢ (math mode).
\fussy is the default declaration for the line-breaking algorithm (cf. \sloppy).
\gamma is γ. \Gamma is Γ (math mode).
\gcd is \text{gcd} (math mode).
\ge is ≥ (math mode).
\geq is ≥ (math mode).
\gets is ← (math mode).
\gg is ≫ (math mode).
\glossary{text} appends text to the .glo file by writing a \glossaryentry command.
\glossaryentry{text}{ref} is written to the .glo file for \glossaryentry{text} occurring at reference ref.
\grave makes a grave accent: à (math mode).
\H prints a long Hungarian umlaut, as ű.
\hat makes a circumflex: à (math mode).
\hbar is ħ (math mode).
\headheight — height of box at top of page that holds running head.
\headline — vertical distance between bottom of head and top of text.
\heartsuit is ♥ (math mode).
\hfill is \hspace{\fill} (cf. \fill).
\hline draws a horizontal line across all columns of a \texttt{tabular} or \texttt{array} environment.
\hom is \text{hom} (math mode).
\hookleftarrow is ← (math mode).
\hookrightarrow is → (math mode).
\hrulefill expands to fill horizontal space with horizontal rule.
\hspace{len} leaves a horizontal space of dimension len.
\hspace*{len} is like \hspace{len} but space is not removed at the beginning or end of a line.
\huge switches to a very large typeface. \Huge is even bigger.
\hyphenation{wordlist} declares hyphenation as indicated; wordlist contains words separated by spaces, with hyphens indicated (e.g. “aard-vark cal-i-bra-tion”).
\i is ĩ.
\iff is ⇐⇒ (math mode).
\Im is ℑ (math mode).
\imath is ı (math mode).
\in is ∈ (math mode).
\index{text} appends text to the .idx file by writing an \indexentry command.
\indexentry{text}{ref} is written to the .idx file for \indexentry{text} occurring at reference ref.
\indexspace puts blank space before first index entry starting with a new letter.
\iota is ι (math mode).
\item{text} indicates a list entry. text is optional, used in description environment.
\itemindent — extra indentation before label in list item. Default is 0\,mm.
\itemsep — vertical space between successive list items.
\j is \(j\).
\jmath is \(j\) (math mode).
\Join is \(\Join\) (math mode).
\kappa is \(\kappa\) (math mode).
\ker is \(\ker\) (math mode).
\kill — in a \tabbing environment, deletes previous line so tabs can be set without outputting text.
\l is \(l\). \L is \(L\).
\lbrack is [ (math mode).
\lceil is \(\lceil\) (math mode).
\ldots makes three dots at the base of the line: \ldots (cf. \cdots).
\le is \(\le\) (math mode).
\ll is \(\ll\) (math mode).
\ln is \(\ln\) (math mode).
\lnot is \(\lnot\) (math mode).
\log is \(\log\) (math mode).
\longleftarrow is \(\longleftarrow\) (math mode).
\Longleftarrow is \(\Longleftarrow\) (math mode).
\longleftrightarrow is \(\longleftrightarrow\) (math mode).
\Longleftrightarrow is \(\Longleftrightarrow\) (math mode).
\longmapsto is \(\longmapsto\) (math mode).
\longrightarrow is \(\longrightarrow\) (math mode).
\Longrightarrow is \(\Longrightarrow\) (math mode).
\lor is \(\lor\) (math mode).
\lq is a left-quote: ‘.
\makebox\{size\}[pos]\{text\} creates a box of dimension size containing text at optional pos. \makebox\{width, height\}[pos]\{text\} puts text in a box; dimensions of box are width and height; text is positioned at optional pos (see positions on page 8).
\makeglossary enables writing of \glossaryentry commands to a .glo file.
\makeindex enables writing of \indexentry commands to a .idx file.
\maketitle produces a title with \title, \author, and, optionally, \date.
\mapsto is \mapsto (math mode).
\marginpar\text puts text in the margin as a note.
\marginparpush — minimum amount of vertical space between two marginal notes.
\marginparsep — horizontal space between margin and marginal note.
\marginparwidth — width of a marginal note.
\markboth{lhs}{rhs} defines the left-hand heading lhs and the right-hand heading rhs for the headings and myheadings page styles.
\markright{rhs} defines the right-hand heading rhs for the headings and myheadings page styles.
\max is max (math mode).
\mbox{text} places text into a horizontal box.
\medskip — standard “medium” vertical skip.
\medskipamount — default length for \medskip.
\min is \min (math mode).
\mid places \mbox{text} is \mid produces a title with \maketitle.
\mline breaks a line right where it is, with no stretching of terminated line (cf. \linebreak).
\newpage ends a page where it appears. (cf. \clearpage).
\newfont{name} declares a new font.
\newcounter\text{counter} declares a counter.
\newenvironment{env}{def1}{def2} defines a new environment, optionally with some number of arguments narg, def1 is executed when the environment in entered and def2 is executed when it is exited.
\newcounter\text{counter} defines a counter optionally to be zeroed whenever the \text{name} counter is incremented.
\newenvironment{envname}{def1}{def2} defines a new environment named envname (optionally with the same numbering scheme as \text{env} def1 is executed when the environment in entered and def2 is executed when it is exited.
\newenvironment{envname}{def1}{def2} defines a new environment named envname (optionally with the same numbering scheme as \text{env} def1 is executed when the environment in entered and def2 is executed when it is exited.
\newcommand{\cs}[narg]{def} defines a new control sequence \text{cs} with definition def.
\obeycr makes embedded carriage returns act like line terminators.
\textbf{\textbackslash oddsidemargin} — distance between left side of page and text's normal left margin.
\textbf{\textbackslash odot} is \( \odot \) (math mode).
\textbf{\textbackslash oe} is \( \OE \) (math mode).
\textbf{\textbackslash oint} is \( \oint \) (math mode).
\textbf{\textbackslash omega} is \( \omega \). \textbf{\textbackslash Omega} is \( \Omega \) (math mode).
\textbf{\textbackslash ominus} is \( \ominus \) (math mode).
\textbf{\textbackslash onecolumn} sets text in single column (default) (cf. \textbackslash twocolumn).
\textbf{\textbackslash opening}\{text\} declares an opening for letter document style.
\textbf{\textbackslash opus} is \( \oplus \) (math mode).
\textbf{\textbackslash oslash} is \( \oslash \) (math mode).
\textbf{\textbackslash otimes} is \( \otimes \) (math mode).
\textbf{\textbackslash oval}\{x,y\} as an argument to \textbackslash put draws an oval x units wide and y units high.
\textbf{\textbackslash overbrace}\{text\} gives \( \overbrace{\text{expression}} \) (math mode).
\textbf{\textbackslash overline}\{text\} gives \( \overline{\text{expression}} \) (math mode).
\textbf{\textbackslash owns} is \( \owns \) (math mode).
\textbf{\textbackslash P} is \( \Psi \).
\textbf{\textbackslash pagebreak}\{n\} forces a page break at that point (cf. \textbackslash linebreak on page 6).
\textbf{\textbackslash pagenumbering}\{style\} determines page number style; \textit{style} may be \texttt{arabic} (3), \texttt{roman} (iii), \texttt{Roman} (III), \texttt{alph} (c), \texttt{Alph} (C).
\textbf{\textbackslash pageref}\{text\} is the page number on which \textbf{\textbackslash label}\{text\} occurs.
\textbf{\textbackslash pagesize}\{sty\} determines characteristics of a page’s head and foot. \textit{sty} may be \texttt{plain} (page number only), \texttt{empty} (no page number), headings (running headings on each page), myheadings (user headings).
\textbf{\textbackslash paragraph}\{tocitle\}\{text\} begins a new paragraph, automatically headed and numbered. Optional \textbf{\textbackslash tocitle} contains entry for the table of contents if different from \texttt{text}.
\textbf{\textbackslash paragraph}\star\{text\} begins a paragraph and prints a title, but doesn’t include a number or make a table of contents entry.
\textbf{\textbackslash parallel} is \( \parallel \) (math mode).
\textbf{\textbackslash parbox}\{pos\}\{size\}\{text\} is a box created in paragraph mode. \textit{text} is positioned optionally at \textit{pos} (see \textit{positions} on page 8). Width is \textit{size}.
\textbf{\textbackslash parindent} — horizontal indentation added at beginning of paragraph.
\textbf{\textbackslash parsep} — extra vertical space between paragraphs within a list item.
\textbf{\textbackslash parskip} — extra vertical space between paragraphs, normally.
\textbf{\textbackslash part}\{tocitle\}\{text\} begins a new part, automatically headed and numbered. Optional \textbf{\textbackslash tocitle} contains entry for the table of contents if different from \texttt{text}.
\textbf{\textbackslash part}\*\{text\} begins a part and prints a title, but doesn’t include a number or make a table of contents entry.
\textbf{\textbackslash partial} is \( \partial \) (math mode).
\textbf{\textbackslash partopsep} — extra vertical space added before first list item if environment starts a new paragraph.
\textbf{\textbackslash perp} is \( \perp \) (math mode).
\textbf{\textbackslash phi} is \( \phi \). \textbf{\textbackslash Phi} is \( \Phi \) (math mode).
\textbf{\textbackslash pi} is \( \pi \). \textbf{\textbackslash Pi} is \( \Pi \) (math mode).
\textbf{\textbackslash pm} is \( \pm \) (math mode).
\textbf{\textbackslash pmod}\{modulus\} is “parenthesized” modulo expression \( u \mod 2^e - 1 \) (math mode).
\textbf{\textbackslash poptabs} undoes the previous \textbf{\textbackslash pushtabs} command (restore prior tab settings).
\textbf{\textbackslash positions}, for boxing commands: \texttt{t=top, b=bottom, h=here, l=left, c=center, r=right, p=new page (figure environment), p=parbox (tabular environment)}.
\textbf{\textbackslash pounds} is £.
\textbf{\textbackslash Pr} is \( \Pr \) (math mode).
\textbf{\textbackslash prec} is \( \prec \) (math mode).
\textbf{\textbackslash preceq} is \( \preceq \) (math mode).
\textbf{\textbackslash prime} is \( \prime \) (math mode).
\textbf{\textbackslash prod} is \( \prod \) (math mode).
\textbf{\textbackslash propto} is \( \propto \) (math mode).
\textbf{\textbackslash protect} permits the use of “dangerous” commands in \texttt{\$-expressions}, or in sectioning command and \texttt{\caption} arguments.
\textbf{\textbackslash ps} in \texttt{letter} document style permits additional text after \texttt{\closing}.
\textbf{\textbackslash psi} is \( \psi \). \textbf{\textbackslash Psi} is \( \Psi \) (math mode).
\textbf{\textbackslash pushtabs} in \texttt{tabbing} environment lets you stack tab stop definitions. Undo with \textbackslash poptabs.
\textbf{\textbackslash put}\{x,y\}\{stuff\} is the basic picture-drawing command. \( (x,y) \) is the \textit{reference point}, whose meaning varies for different \textit{stuff}. \textit{stuff} may be anything that goes in an \texttt{\mbox}.
\textbf{\textbackslash raggedbottom} causes pages to assume natural height.
\textbf{\textbackslash raggedleft} declares all text that follows is to be flush against the right margin (cf. \texttt{\begin{flushright}}).
\raggedright declares all text that follows is to be flush against the left margin (cf. \begin{flushleft}).
\raisebox{dim}{d2}{d3}{text} moves text up by dim (which may be negative). Optional d2 makes system think that text extends d2 above the baseline (and optionally d3 below it).
\rangle is ) (math mode).
\rbrace is } (math mode).
\rbrack is ] (math mode).
\Re is ℜ (math mode).
\ref{text} is the section number in which \label{text} occurs.
\renewcommand{\cs}{def} redefines an existing control sequence \cs with definition def. Optionally, nargs is the number of arguments, indicated in def as #1, #2, etc.
\renewenvironment{envname}{def1}{def2} redefines an existing environment. See \newenvironment.
\restorecr undoes the \obeycr command (makes carriage return a space-producing character).
\reversemarginpar causes opposite margin to be used for marginal notes (e.g., left margin on odd-numbered pages).
\rfloor is ⌋ (math mode).
\rhd is \rangle (math mode).
\rho is ρ (math mode).
\right* (where * is a delimiter) must be paired with \left* (not necessarily using the same delimiter). ‘.’ acts as a null delimiter (math mode).
\rightarrow is →. \Rightarrow is ⇒ (math mode).
\rightharpoondown is → (math mode).
\rightharpoonup is → (math mode).
\rightleftharpoons is ⇔ (math mode).
\rightmargin — in list environment, horizontal distance between right margin of enclosing environment and right margin of list. Default 0in.
\rm switches to Roman type.
\roman{counter} prints counter in lower-case roman numerals. \Roman{counter} prints upper-case roman numerals.
\rq is a right-quote: ′.
\rule{height}{length}{width} makes a rectangular blob of ink length long, width wide, with optional height above baseline.
\$ is §.
\savebox{\binname}{width}{pos}{text} is exactly like \makebox (q.v.), but saves box definition in bin \binname. Access with \usebox{\binname}.
\sbox{\binname}{text} saves text in box \binname (see \savebox, above).
\sc switches to caps and small caps font.
\scriptsize switches subscript size type.
\scriptstyle switches to sub- or superscript-sized typesetting.
\scriptscriptstyle switches to second-level (very small) sub- or superscript-sized typesetting (math mode).
\searrow is ↘ (math mode).
\sec is sec (math mode).
\section{toctitle}{text} begins a new section, automatically headed and numbered. Optional toctitle contains entry for the table of contents if different from text.
\section*{text} begins a section, prints a title, but doesn’t include a number or make a table of contents entry.
\setcounter{counter}{value} resets the value of counter.
\setlength{\nl}{length} sets value of length command \nl to length. See also \addtolength, \newlength, \settowidth.
\setminus is \ (math mode).
\settowidth{\nl}{text} sets value of length command \nl to the width of text. See also \setlength, \newlength, \addtolength.
\sharp switches to sans serif font.
\sharp is ′ (math mode).
\shortstack{pos}{x\{y\}z} yields z, a one-column tabular arrangement of its arguments. Optional pos can be l or r for text position.
\sigma is σ. \Sigma is Σ (math mode).
\signature{text} declares a signature for letter document style.
\sim is ~ (math mode).
\simeq is ≃ (math mode).
\sin is sin (math mode).
\sinh is sinh (math mode).
\texttt{\textbackslash sl} switches to slanted typeface.
\texttt{\textbackslash sloppy} relaxes the line-breaking algorithm to allow more or less distance between words.
Default is \texttt{fussy}.
\texttt{\textbackslash small} switches to smaller than \texttt{\textbackslash normalsize} typeface.
\texttt{\textbackslash smallskip} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash smallskipamount} — default length for \texttt{\textbackslash smallskip}.
\texttt{\textbackslash smile} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash spadesuit} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sqcap} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sqcup} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sqrt[3]{\textbackslash arg}} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sqsubset} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sqsubseteq} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sqsupset} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sqsupseteq} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash ss} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash stackrel{\textbackslash stuff}{\textbackslash delimit}} puts \texttt{\textbackslash stuff} above the \texttt{\textbackslash delimit}; \texttt{\textbackslash stackrel{\textbackslash f}{\textbackslash longrightarrow}} yields \texttt{\textbackslash f} (math mode).
\texttt{\textbackslash star} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash stop} — type this if \TeX stops with a * and no error message.
\texttt{\textbackslash subparagraph[\textbackslash toctitle]{\textbackslash text}} begins a subparagraphs, automatically headed and numbered. Optional \texttt{\textbackslash toctitle} contains entry for the table of contents if different from \texttt{\textbackslash text}.
\texttt{\textbackslash subparagraph*{\textbackslash text}} begins a subparagraph and prints a title, but doesn’t include a number or make a table of contents entry.
\texttt{\textbackslash subsection[\textbackslash toctitle]{\textbackslash text}},
\texttt{\textbackslash subsubsection[\textbackslash toctitle]{\textbackslash text}} begin new subsections, automatically headed and numbered. Optional \texttt{\textbackslash toctitle} contains entry for the table of contents if different from \texttt{\textbackslash text}.
\texttt{\textbackslash subsection*{\textbackslash text}} begins subsections, but suppress section number and table of contents entry.
\texttt{\textbackslash subset} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash subseteq} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash succ} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash suceq} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sum} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash sup} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash supset} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash supseteq} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash surd} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash swarrow} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash symbol{\textbackslash cc}} produces the symbol (glyph) character code \texttt{\textbackslash cc} in the current font.
\texttt{\textbackslash t} prints a “tie-after” accent, as òó.
\texttt{\textbackslash tabbingsep} — distance to left of a tab stop moved by \texttt{\textbackslash t}.
\texttt{\textbackslash tabcolsep} — half the width of the space between columns in \texttt{\textbackslash tabular} environment.
\texttt{\textbackslash tableofcontents} produces a table of contents. A .toc file must have been generated during a previous \TeX run.
\texttt{\textbackslash tan} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash tanh} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash tau} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash \TeX} produces the \TeX logo.
\texttt{\textbackslash textfloatsep} — distance between floats at the top or bottom of a single-column page and the text on that page.
\texttt{\textbackslash textfraction} — minimum fraction of a text page that must contain text.
\texttt{\textbackslash textheight} is the normal vertical dimension of the body of the page.
\texttt{\textbackslash textstyle} switches to \texttt{\textbackslash math} environment typesetting (math mode).
\texttt{\textbackslash textwidth} is the normal horizontal dimension of the body of the page.
\texttt{\textbackslash \thanks{\textbackslash footnote}} adds an acknowledgement footnote to an author’s name used in a \texttt{\maketitle} command.
\texttt{\textbackslash theta} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash \theta} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash thicklines} is an alternate line thickness for lines in a \texttt{\picture} environment. See also \texttt{\linethickness}.
\texttt{\textbackslash thinlines} is the default declaration for line thicknesses in a \texttt{\picture} environment. See \texttt{\thicklines}.
\texttt{\textbackslash thispagestyle{\textbackslash sty}} determines characteristics of head and foot for the current page only. Used to override \texttt{\pagestyle (q.v.)} temporarily.
\texttt{\textbackslash tilde} makes a tilde, as: ã (math mode).
\texttt{\textbackslash times} is \texttt{\textbackslash fussy}.
\texttt{\textbackslash tiny} switches to a very small typeface.
\texttt{\textbackslash title{\textbackslash text}} declares a document title for the \texttt{\maketitle} command.
\texttt{\textbackslash to} is \texttt{\textbackslash fussy}.
\today generates today’s date.
\top is $\top$ (math mode).
\topfraction — maximum fraction at the top of a single-column page that may be occupied by floats.
\topmargin — space between top of \TeX page (1 inch from top of paper) and top of header.
\topsep — extra vertical space added before first list item and after last list item.
\topskip — minimum distance between top of page body to bottom of first line of text.
\triangle is $\triangle$ (math mode).
\triangleleft is $\triangleleft$ (math mode).
\triangleright is $\triangleright$ (math mode).
\tt switches to typewriter type.
\twocolumn[\text] declares a two-column page, with optional full-page width heading \text.
\typein[\cs]{\text} displays \text on the screen and waits for you to enter stuff which will be put in the document at that point. Optional control sequence \cs can be assigned the value of your input, to be used later.
\typeout{\text} displays \text on the screen and writes it to the .lis file.
\u prints a breve accent, as ˘o.
\unboldmath unembolds math italics and math symbols. Should be used outside of math mode.
\underbrace{\text} gives \text (math mode).
\underline{\text} gives \text (math mode or not).
\unitlength — length of coordinate units for picture environment.
\unlhd is $\unlhd$ (math mode).
\unrhd is $\unrhd$ (math mode).
\uparrow is ↑. \Uparrow is $\Uparrow$ (math mode).
\updownarrow is $\updownarrow$. \Updownarrow is $\Updownarrow$ (math mode).
\uplus is $\uplus$ (math mode).
\upsilon is $\upsilon$. \Upsilon is $\Upsilon$ (math mode).
\usebox{\binname} recalls box definition saved in box \binname.
\usecounter{\counter} is used in a list environment to cause \counter to be used to number the items.
\v prints a háček, as ˇo.
\value{\counter} produces the numeric value of \counter.
\varepsilon is ε (math mode).
\varphi is $\varphi$ (math mode).
\varpi is $\varpi$ (math mode).
\varsigma is $\varsigma$ (math mode).
\vartheta is $\vartheta$ (math mode).
\vdash is $\vdash$ (math mode).
\vdots is ... (math mode).
\vec puts a vector over a letter: $\vec{a}$ (math mode).
\vector(x,y){\text} in picture environment, in put command, draws vector from put argument with length \text and slope (x,y), with arrowhead.
\vee is $\vee$ (math mode).
\verb/text/ creates a local verbatim environment for \text, printed in typewriter font. Note that \text is not in curly braces; it is between two identical delimiters, neither of which appears in \text.
\verb*/text/ is like \verb/text/, but spaces print out as $\cdot$.
\vert is |. \Vert is $\Vert$ (math mode).
\vfill is \vspace{\fill} (cf. \fill).
\vspace{\text} leaves a vertical space of dimension \text.
\vspace*{\text} is like \vspace{\text} but space is not removed at the beginning or end of a page.
\wedge is $\wedge$ (math mode).
\widehat{\text} is $\widehat{\text}$ (math mode).
\wr is $\wr$ (math mode).
\xi is $\xi$. \Xi is $\Xi$ (math mode).
\year — current year (A.D.).
\zeta is $\zeta$ (math mode).
\LaTeX Command Summary

\LaTeX typefaces
\begin{itemize}
\item \texttt{\textbackslash rm} Roman
\item \texttt{\textbackslash it} Italic
\item \texttt{\textbackslash bf} Boldface
\item \texttt{\textbackslash sl} Slanted
\item \texttt{\textbackslash sf} Sans serif
\item \texttt{\textbackslash sc} SMALL CAPS
\item \texttt{\textbackslash tt} Typewriter
\end{itemize}

Dimensions or lengths
\begin{itemize}
\item \texttt{pt} point (72.27 pt/in)
\item \texttt{pc} pica (12 pt/pc)
\item \texttt{in} inch
\item \texttt{bp} big point (72 bp/in)
\item \texttt{cm} centimeter (2.54 cm/in)
\item \texttt{mm} millimeter (10 mm/cm)
\item \texttt{dd} didot point (1157 dd = 1238 pt)
\item \texttt{cc} cicero (12 dd/cc)
\item \texttt{sp} scaled point (65536 sp/pt)
\item \texttt{em} font-dependent; “quad” width
\item \texttt{ex} font-dependent; “x”-height
\end{itemize}

\LaTeX environments
\begin{itemize}
\item \texttt{abstract} figure quote
\item \texttt{array} flushleft tabbing
\item \texttt{center} flushright table
\item \texttt{description} itemize tabular
\item \texttt{displaymath} list theorem
\item \texttt{enumerate} math titlepage
\item \texttt{eqnarray} minipage verbatim
\item \texttt{equation} picture verse
\item \texttt{quotation}
\end{itemize}

Text-mode accents
\begin{itemize}
\item \texttt{\textbackslash o} \texttt{\textbackslash \acute{o}} \texttt{\textbackslash \grave{o}} \texttt{\textbackslash \tilde{o}} \texttt{\textbackslash \breve{o}} \texttt{\textbackslash \grave{a}} \texttt{\textbackslash \vec{a}}
\end{itemize}

National symbols
\begin{itemize}
\item \texttt{ae} \texttt{\oe} \texttt{\oe}
\item \texttt{AE} \texttt{\OE} \texttt{\OE}
\item \texttt{\ae} \texttt{\ae}
\item \texttt{\AE} \texttt{\AE}
\end{itemize}

Miscellaneous symbols
\begin{itemize}
\item \texttt{\dag} \texttt{\ddag} \texttt{\S} \texttt{\copyright}\texttt{\textbackslash copyright}
\item \texttt{\£} \texttt{\pounds}
\end{itemize}

Math-mode accents
\begin{itemize}
\item \texttt{\hat{a}} \texttt{\dot{a}} \texttt{\check{a}} \texttt{\ddot{a}} \texttt{\tilde{a}} \texttt{\breve{a}}
\item \texttt{\grave{a}} \texttt{\vec{a}}
\end{itemize}

Greek letters (math mode)
\begin{itemize}
\item \texttt{\alpha} \texttt{\beta} \texttt{\gamma} \texttt{\delta} \texttt{\epsilon} \texttt{\zeta} \texttt{\eta} \texttt{\theta} \texttt{\iota} \texttt{\kappa} \texttt{\lambda} \texttt{\mu}
\item \texttt{\nu} \texttt{\xi} \texttt{\omicron} \texttt{\pi} \texttt{\rho} \texttt{\sigma} \texttt{\tau} \texttt{\upsilon} \texttt{\phi} \texttt{\chi} \texttt{\psi} \texttt{\omega}
\item \texttt{\varepsilon} \texttt{\varsigma} \texttt{\vartheta} \texttt{\varpi} \texttt{\varrho} \texttt{\Gamma} \texttt{\Delta} \texttt{\Theta} \texttt{\Lambda} \texttt{\Xi} \texttt{\Pi}
\item \texttt{\nu} \texttt{\xi} \texttt{\omicron} \texttt{\pi} \texttt{\rho} \texttt{\sigma} \texttt{\tau} \texttt{\upsilon} \texttt{\phi} \texttt{\chi} \texttt{\psi} \texttt{\omega}
\item \texttt{\varepsilon} \texttt{\varsigma} \texttt{\vartheta} \texttt{\varpi} \texttt{\varrho} \texttt{\Gamma} \texttt{\Delta} \texttt{\Theta} \texttt{\Lambda} \texttt{\Xi} \texttt{\Pi}
\end{itemize}
### Binary operations (math mode)

<table>
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### Variable-sized symbols (math mode)

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### Relations (math mode)

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### Delimiters (math mode)

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### "Log-like" functions (math mode)

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Arrows (math mode)

← \leftarrow \longleftarrow 
⇐ \Leftarrow \Longleftarrow 
→ \rightarrow \longrightarrow 
⇒ \Rightarrow \Longrightarrow 
↔ \leftrightarrow \longleftrightarrow 
⇔ \Leftrightarrow \Longleftrightarrow 
 ↩ \hookleftarrow \hookrightarrow 
↼ \leftharpoonup \rightharpoonup 
↽ \leftharpoondown \rightharpoondown 
⇌ \rightleftharpoons 
↑ \uparrow \Updownarrow 
⇑ \Uparrow \nearrow 
↓ \downarrow \searrow 
⇓ \Downarrow \swarrow 
↕ \updownarrow \nwarrow 

Miscellaneous symbols (math mode)

\aleph \hbar \emptyset \prime \imath \nabla \jmath \surd \ell \top \wp \neg \Re \parallel \angle \partial \infty \infy \backslash \Box \Diamond \forall \sharp \exists \clubsuit \neg \diamondsuit \flat \heartsuit \natural \spadesuit \mho