

AMST_EX Reference Card

(See the T_EX Reference Card for further commands)

Formatting

<code>\pagewidth{<dimen>}</code>	set page width
<code>\pageheight{<dimen>}</code>	set page height
<code>\hcorrection{<dimen>}</code>	move page right
<code>\vcorrection{<dimen>}</code>	move page down
<code>\flushpar</code>	start a paragraph with no indentation
<code>\boxed#1</code>	boxed formula
<code>\NoBlackBoxes</code>	omit overfull hbox markers
<code>\comment ... \endcomment</code>	unprinted comments
<code>\pageno#1</code>	set page number
<code>\nopagenumbers</code>	turn off page numbering if not using <code>amsppst</code> style

Fonts

Text Fonts

<code>\rm</code>	roman
<code>\it</code>	italic
<code>\bf</code>	boldface
<code>\sl</code>	slant
<code>\smc</code>	small capitals

Math Mode Fonts

<code>\bold#1</code>	bold letter
<code>\loadbold</code>	load bold math symbols
<code>\boldkey#1</code>	bold keyboard symbol
<code>\boldsymbol#1</code>	bold math symbol (e.g. α)
<code>\Cal#1</code>	caligraphic (script) upper case
<code>\frak#1</code>	German Fraktur
<code>\goth#1</code>	German Fraktur (same as <code>\frak</code>)
<code>\Bbb#1</code>	blackboard bold
<code>\rom#1</code>	Roman

Loading Fonts & Symbols (if not using `amsppst` style)

<code>\loadmsam</code>	load <code>msam</code> symbol font
<code>\loadmsbm</code>	load <code>msbm</code> symbol font
<code>\UseAMSsymbols</code>	define all symbols from <code>msam</code> , <code>msbm</code> fonts
<code>\newsymbol</code>	define a particular symbol

Changing Font Sizes

<code>\tenpoint</code>	use 10 point fonts
<code>\eightpoint</code>	use 8 point fonts
<code>\dsize</code>	use display size
<code>\tsize</code>	use text size
<code>\ssize</code>	use subscript size
<code>\sssize</code>	use subsubscript size

Macro Definitions

<code>\define\cs{...}</code>	define a control sequence
<code>\redefine\cs{...}</code>	redefine a control sequence
<code>\predefine\newcs{\oldcs}</code>	assign new name to a control seq
<code>\operatorname#1</code>	new operator name
<code>\operatornamewithlimits#1</code>	new operator name with limits
<code>\newsymbol</code>	new symbol from <code>msam</code> , <code>msbm</code> fonts

Footnotes and Insertions

<code>\footnote#1</code>	footnote
<code>\footnote"*#1</code>	footnote with specified marker
<code>\topinsert ... \endinsert</code>	insert at top of page
<code>\midinsert ... \endinsert</code>	insert in middle of page
<code>\topcaption#1 ... \endcaption</code>	caption at top of insert
<code>\botcaption#1 ... \endcaption</code>	caption at bottom of insert
<code>\vspace{<dimen>}</code>	leave vertical space in an insert

Hyphenation

<code>\showhyphens#1</code>	show allowable hyphens
<code>\-</code>	discretionary hyphen
<code>\hyphenation#1</code>	add words to hyphenation list

Fractions and Such

<code>\frac#1#2</code>	fraction
<code>\dfrac#1#2</code>	display size fraction
<code>\tfrac#1#2</code>	text size fraction
<code>\fracwithdelims()#1#2</code>	fraction with paren. delimiters
<code>\binom#1#2</code>	binomial coefficient
<code>\dbinom#1#2</code>	display size binomial coefficient
<code>\tbinom#1#2</code>	text size binomial coefficient
<code>\underset#1\to#2</code>	typeset #1 under #2
<code>\overset#1\to#2</code>	typeset #1 over #2
<code>\overbrace#1^#2</code>	overbrace with label above
<code>\underbrace#1_#2</code>	underbrace with label below
<code>\sideset~#1\and~#2\to\bigop</code>	superscripts on side of operator
<code>\cfrac ... \endcfrac</code>	continued fraction
<code>\lcffrac ... \endcfrac</code>	continued fraction flush left
<code>\rcfrac ... \endcfrac</code>	continued fraction flush right

Arrows & Commutative Diagrams

<code>@>#1>#2></code>	right arrow with labels
<code>@<#1<#2<</code>	left arrow with labels
<code>\CD ... \endCD</code>	commutative diagram (don't use &'s)
<code>@V#1V#2V</code>	down arrow with labels
<code>@A#1A#2A</code>	up arrow with labels
<code>@=</code>	long horizontal = sign
<code>@ </code>	long vertical equal sign
<code>@.</code>	leave out an arrow
<code>\pretend#1\haswidth#2</code>	make arrows longer

Accents

Type	Example	In Math	In Text
hat	\hat{a}	<code>\hat</code>	<code>\^</code>
expanding hat	\widehat{abc}	<code>\widehat</code>	none
check	\check{a}	<code>\check</code>	<code>\v</code>
tilde	\tilde{a}	<code>\tilde</code>	<code>\~</code>
expanding tilde	\widetilde{abc}	<code>\widetilde</code>	none
acute	\acute{a}	<code>\acute</code>	<code>\'</code>
grave	\grave{a}	<code>\grave</code>	<code>\`</code>
dot	\dot{a}	<code>\dot</code>	<code>\D</code>
double dot	\ddot{a}	<code>\ddot</code>	<code>\"</code>
breve	\breve{a}	<code>\breve</code>	<code>\u</code>
bar	\bar{a}	<code>\bar</code>	<code>\B</code>
vector	\vec{a}	<code>\vec</code>	none
cedilla	\c{c}	none	<code>\c</code>

Dimensions

Dimensions are specified as (number)(unit of measure).

point	pt	pica	pc	inch	in	centimeter	cm
m width	em	x height	ex	math unit	mu	millimeter	mm
1 pc = 12 pt		1 in = 72.72 pt		2.54 cm = 1 in		18 mu = 1 em	

Spacing and Dots

<code>\linebreak</code>	force a line break
<code>\newline</code>	force a new line, old line pushed left
<code>\mathbreak</code>	force line break
<code>\allowmathbreak</code>	allow line break
<code>\-</code>	discretionary hyphen
<code>\.</code>	abbreviation period
<code>\,</code> or <code>\thinspace</code>	thin space
<code>\medspace</code>	medium space
<code>\;</code> or <code>\thickspace</code>	thick space
<code>\!</code> or <code>\negthinspace</code>	negative thin space
<code>\negmedspace</code>	negative medium space
<code>\negthickspace</code>	negative thick space
<code>\quad</code>	quad space
<code>\qquad</code>	double quad space
<code>%</code>	comment line
<code>\</code>	one blank space
<code>\phantom#1</code>	blank space size of #1
<code>\hphantom#1</code>	blank space width of #1, no height
<code>\vphantom#1</code>	blank space height of #1, no width
<code>\smash#1</code>	ignore height and depth
<code>\topsmash#1</code>	ignore height
<code>\botsmash#1</code>	ignore depth
<code>\mathstrut</code>	strut to help vertical spacing
<code>\smallpagebreak</code>	small space between paragraphs
<code>\medpagebreak</code>	medium space between paragraphs
<code>\bigpagebreak</code>	big space between paragraphs
<code>\pagebreak</code>	force a page break
<code>\nopagebreak</code>	forbid a page break
<code>\newpage</code>	force a page break fill page with blank space
<code>\hdots</code>	horizontal dots
<code>\vdots</code>	vertical dots
<code>\ddots</code>	diagonal dots
<code>\dots</code>	dots in text or formulas
<code>\ldots</code>	low dots in text or formulas
<code>\cdots</code>	center dots in text or formulas

Miscellaneous Operations

<code>\bmod#1</code>	mod as binary operation
<code>\pmod#1</code>	mod with parentheses
<code>\mod#1</code>	same as <code>pmod</code> , but no parens
<code>\pod#1</code>	parentheses, but no "mod"
<code>\sqrt#1</code>	square root
<code>\root#1\of#2</code>	root
<code>\uproot{<number>}</code>	move root up/down
<code>\leftroot{<number>}</code>	move root left/right
<code>\iiint</code>	two integral signs
<code>\iiint</code>	three integral signs
<code>\idotsint</code>	integral signs with dots

AMS Preprint Style

`\input amstex`
`\documentstyle{amsppt}`
 (Preamble Commands)
`\topmatter`
 (Top Matter Commands)
`\endtopmatter`
`\document`
 (Body of Document)
`\enddocument`
Preamble Commands
`\TagsOnLeft` (default) or `\TagsOnRight`
`\TagsAsText` (default) or `\TagsAsMath`
`\NoPageNumbers`
`\NoRunningHeads`
`\Monograph`
`\define`
Top Matter Commands
`\title ... \endtitle`
`\author ... \endauthor`
`\affil ... \endaffil`
`\address ... \endaddress`
`\curraddr ... \endcurraddr`
`\email ... \endemail`
`\date ... \enddate`
`\dedicatory ... \enddedicatory`
`\thanks ... \endthanks`
`\translator ... \endtranslator`
`\keywords ... \endkeywords`
`\subjclass ... \endsubjclass`
`\abstract ... \endabstract`
`\toc ... \endtoc` (Table of Contents)
`\leftheadtext#1` (set left headline text)
`\rightheadtext#1` (set right headline text)
Body of Paper Commands
`\specialhead ... \endspecialhead`
`\head ... \endhead`
`\subhead ... \endsubhead`
`\subsubhead ... \endsubsubhead`
`\proclaim#1 ... \endproclaim`
`\rom#1` (Roman font in proclaim)
`\demo#1 ... \enddemo` (proof)
`\qed` (end of proof marker)
`\roster ... \endroster` (roster of listed items)
`\item` (start a new item in a roster)
`\item[(number)]` (specify roster item number)
`\item"*` (item with specified marker)
`\therosteritem#1` (refer to specified roster item)
`\widestnumber\item#1` (set width for roster labels)
`\nofrills` (turn off automatic font, spacing, punctuation)
`\usualspace` (usual space following punctuation)
`\definition#1 ... \enddefinition`
`\example#1 ... \endexample`
`\remark#1 ... \endremark`
`\block ... \endblock` (indented text)
`\cite` (cite a reference)

AMS Preprint Style — References

`\Refs ... \endRefs` list of references
`\refstyle#1` specify style A, B, or C
 A = initials, B = name, C = number
`\ref ... \endref` individual reference
`\no or \key` number or key for reference
`\widestnumber\no#1` or `\widestnumber\key#1`
`\by` author
`\bysame` same as previous author
`\paper` name of paper
`\vol` volume
`\yr` year of publication
`\jour` journal
`\page or \pages` page(s)
`\toappear` to appear
`\inbook` article in a book
`\moreref` additional reference information
`\paperinfo` extra information after paper title
`\procinfo` information about proceedings
`\issue` issue number
`\lang` language
`\transl` information about translated version
`\book` book
`\ed or \eds` editor(s)
`\publ` publisher
`\publaddr` publisher address
`\bookinfo` extra information after book title
`\finalinfo` extra information for end
`\miscnote` same as `\finalinfo`, in parens.

Overlines and Underlines

`\underline#1` underline
`\overline#1` overline
`\overarrow#1` over right arrow
`\underarrow#1` under right arrow
`\overleftarrow#1` over left arrow
`\underleftarrow#1` under left arrow
`\overleftrightarrow#1` over left-right arrow

Delimiters

`[\lbrack` or `\l[` { `\lbrace` or `\{` `<` `\langle`
`]` `\rbrack` or `\]` } `\rbrace` or `\}` `>` `\rangle`
`|` `\vert` or `\|` `⌊` `\lfloor` `⌈` `\lceil`
`||` `\Vert` or `\|` `⌋` `\rfloor` `⌉` `\rceil`
`↑` `\uparrow` `↕` `\Uparrow` `⇕` `\updownarrow`
`↓` `\downarrow` `⇓` `\Downarrow` `⇓` `\updownarrow`
`⌈` `\lceil` `((` `\l(` `⟨` `\langle` `\!` `\!` `\rangle`
`⌋` `\rceil` `)` `\!` `\!` `\rangle` `\!` `\!` `\rangle`

`\left#1 \right#1` expanding delimiters
`\left. \right.` empty delimiters
`\bigl#1 \bigr#1` big delimiters
`\Bigl#1 \Bigr#1` bigger delimiters
`\biggl#1 \biggr#1` even bigger delimiters

Non-Italic Function Names

`\arccos` `\cos` `\csc` `\exp` `\ker` `\limsup` `\min` `\sinh`
`\arcsin` `\cosh` `\deg` `\gcd` `\lg` `\ln` `\Pr` `\sup`
`\arctan` `\cot` `\det` `\hom` `\lim` `\log` `\sec` `\tan`
`\arg` `\coth` `\dim` `\inf` `\liminf` `\max` `\sin` `\tanh`

Alignments and Displayed Equations

`\` separate lines
`&` separate items in a line
`\align ... \endalign` align equations, full width of page
`\alignat#1 ... \endalignat` align #1 pairs
`\xalignat#1 ... \endxalignat` equally spaced
`\xxalignat#1 ... \endxxalignat` equally spaced, flush
`\aligned ... \endaligned` align equations, width as needed
`\alignedat#1 ... \endalignedat` align #1 pairs
`\topaligned ... \endtopaligned` align along top
`\botaligned ... \endbotaligned` align along bottom
`\gather ... \endgather` centered equations, full width of page
`\gathered ... \endgathered` centered equations, width as needed
`\multiline ... \endmultiline` first line left, middle lines centered, last line right
`\shoveleft#1` shove lines left
`\shoveright#1` shove lines right
`\multlinegap{<dimen>}` change margins
`\cases ... \endcases` case construction
`\split ... \endsplit` align split equations with variable tag placement
`\Sb ... \endSb` multi-line subscript
`\Sp ... \endSp` multi-line superscript
`\text#1` text within formula
`\intertext#1` text between lines
`\foldedtext#1` lines of text in formula
`\topfoldedtext#1` top-aligned folded text
`\botfoldedtext#1` bottom-aligned folded text
`\foldedwidth{<dimen>}` set width of folded text
`\allowdisplaybreak` allow page break after line
`\allowdisplaybreaks` allow page breaks after any line
`\displaybreak` force page break after line
`\vspace{<dimen>}` extra space between two lines
`\spreadlines{<dimen>}` extra space between every line
`\spreadmatrixlines{<dimen>}` same for a matrix
`\jot` unit of vertical space
`\tag#1` tag for a formula
`\thetag#1` refer to tag in current style
`\tag"*` tag exactly as specified
Matrices
`\matrix ... \endmatrix` matrix alignment
`\pmatrix ... \endpmatrix` matrix with parentheses
`\bmatrix ... \endbmatrix` matrix with brackets
`\vmatrix ... \endvmatrix` matrix with vertical lines
`\Vmatrix ... \endVmatrix` matrix with double vertical lines
`\smallmatrix ... \endsmallmatrix` small matrix
`\format` specify a format for a matrix
`\c \l \r` format entry center, left, right

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