

The `amsxtra` package

American Mathematical Society
Michael Downes

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1 Introduction

The `amsxtra` package contains a few rarely used commands that were present in version 1.1 of the `amstex` package: `\fracwithdelims`, `accentedsymbol`, `\sphat`, `\spcheck`, `\sptilde`, `\spdot`, `\spddot`, `\spdddotted`, `\spbrev`. If any of these commands were used in existing documents, the `amsxtra` package provides a way to get them. But for 99% of documents using the `amstex` package these commands are just wasted overhead.

```
1 \ProvidesPackage{amsxtra}[1999/11/15 v1.2c]
```

We need to ensure that either the `amstex` package or the `amsmath` package is loaded. This means we need something a little more complicated than `\RequirePackage`.

```
2 \@ifpackageloaded{amstex}{}%
3 \RequirePackage{amsmath}[1996/10/01 v1.2]}
```

Superscripted accent characters.

```
4 \def\sphat{~{\mathchoice{}{}%
5 {\,\,\, \smash[b]{\hbox{\lower4\ex@\hbox{\m@th\widehat{\null}$}}}}%
6 {\,\,\, \smash[b]{\hbox{\lower3\ex@\hbox{\m@th\hat{\null}$}}}}}}
7 \def\spcheck{~\vee}
8 \def\sptilde{~\sim}
9 \def\spdot{~{\hbox{\raise\ex@\hbox{\normalfont .}}}}
10 \def\spddot{~{\hbox{\raise\ex@\hbox{\normalfont ..}}}}
11 \def\spdddotted{~{\hbox{\raise\ex@\hbox{\normalfont ...}}}}
12 \def\spbrev{~{\!\smash[b]{\hbox{\lower4\ex@\hbox{\u{}}}}}}
```

The `\fracwithdelims` command is skipped if the base package is `amsmath`; it is only needed if the base package is `amstex`.

```
13 \@ifpackageloaded{amstex}{%
14 \def\fracwithdelims#1#2{\new@ifnextchar[{\fracwithdelims@#1#2}%
15 {\fracwithdelims@#1#2[\@empty]}}
16 \def\fracwithdelims@#1#2[#3]#4#5{\relax
17 \ifx\@empty#3#4\overwithdelims#1#2#5\else
18 #4\abovewithdelims#1#2#3\relax#5\fi}
19 }
```

Perhaps `\accentedsymbol` should use `\newsavebox`, but I don't know of any compelling reason at the moment. [mjd,5-Sep-1994] `\accentedsymbol` can only produce a single size of the given symbol, so you'd need two different versions for main size and subscript size.

```
20 \def\accentedsymbol#1#2{%
21 \expandafter\newbox
22 \csname\expandafter@gobble\string#1@box\endcsname
23 \expandafter\setbox
24 \csname\expandafter@gobble\string#1@box\endcsname
```

```

25     \hbox{${\m@th#2$}}%
26 \newcommand{#1}{%
27   \expandafter\copy
28     \csname\expandafter@gobble\string#1@box\endcsname{}}%
29 }

```

Change the definition of `~` to automatically remove a preceding space as well as a following space, if present.

```

30 \def~{\nobreakspace}
31 \DeclareRobustCommand{\nobreakspace}{\unskip\nobreak\ignorespaces}

```

The usual `\endinput` to ensure that random garbage at the end of the file doesn't get copied by `docstrip`.

```
32 \endinput
```

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