The `amsxtra` package

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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`, `\spdddot`, `\spbreve`. 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\spdddot{^{\hbox{\raise\ex@\hbox{\normalfont...}}}}
12 \def\spbreve{^{\!\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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