Alternate integral signs with LaTeX

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Abstract

The package esint.sty allows you to use new integral symbols.

1 License

The LATEX Project Public License

2 Using esint

Load the package with `\usepackage{esint}`, and enjoy!

- BE CAREFUL: if you are using `amslatex`, you must load `esint` AFTER `amslatex`.
- This package is available with two options: intimits and intnolimits.

  When loading with `\usepackage[nointlimits]{esint}` (default), `\[\int_0^1f(x)dx\]` gives

$$\int_0^1 f(x)dx$$

  When loading width `\usepackage[intlimits]{esint}`, `\[\int_0^1f(x)dx\]` gives

$$\int\limits_0^1 f(x)dx$$

  .

Available integrals signs:

Commande	textstyle	displaystyle
`\int`	$\int$	$\displaystyle\int$
`\iint`	$\iint$	$\displaystyle\iint$
`\iiint`	$\iiint$	$\displaystyle\iiint$
`\iiiint`	$\iiiint$	$\displaystyle\iiiint$
`\idotsint`	$\int\cdots\int$	$\displaystyle\int\cdots\int$
`\oint`	$\oint$	$\displaystyle\oint$
`\oiint`	$\oiint$	$\displaystyle\oiint$
`\varoiint`	$\varoiint$	$\displaystyle\varoiint$
`\sqint`	$\sqint$	$\displaystyle\sqint$
`\sqiint`	$\sqiint$	$\displaystyle\sqiint$
`\ointctrclockwise`	$\ointctrclockwise$	$\displaystyle\ointctrclockwise$
`\ointclockwise`	$\ointclockwise$	$\displaystyle\ointclockwise$
`\varointclockwise`	$\varointclockwise$	$\displaystyle\varointclockwise$
`\varointctrclockwise`	$\varointctrclockwise$	$\displaystyle\varointctrclockwise$
`\fint`	$\fint$	$\displaystyle\fint$
`\landupint`	$\landupint$	$\displaystyle\landupint$
`\landdownint`	$\landdownint$	$\displaystyle\landdownint$

You can customize the space between integral sign in multiple integrals. You have

to modify lines 12 and 13 of the `esint10.mf` file: `tdec#` and `ddec#` are spaces between signs. If you modify `esint10.mf`, delete `esint10.tfm`, the generated `*.pk` files, and run METAFONT on `esint10.mf`. Of course, you have to remove pub files: the type 1 version will not be modified!

3 Updates

- 20/01/2005: change in esint.fd in order to avoid a problem inside align environment. Thank's to Eckhard Neber. Font files (mf, pfb, tfm...) are unchanged.
- 2019/07/19: add intlimits and nointlimits options, and modify `\dotsint` command as `\idotsint` to modify all amsmath symbols (request from Frank Mittelbach).
- 2019/08/21: correction of wrong esint.dtx file.
- 2019/08/27: correction of wrong esint.ins file.

4 The code

The package identifies himself

```
⟨*package⟩
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{esint}
```

To redifine symbols

```
\DeclareOption{intlimits}{\let\ilimits@\displaylimits}
\DeclareOption{nointlimits}{\let\ilimits@\nolimits}
\ExecuteOptions{nointlimits}
\ProcessOptions
\def\re@DeclareMathSymbol#1#2#3#4{%
        \let#1=\undefined
        \DeclareMathSymbol{#1}{#2}{#3}{#4}}
```

Definition of the symbol font:

```
\DeclareSymbolFont{largesymbolsA}{U}{esint}{m}{n}
```

Definition of the new symbols:

```
\re@DeclareMathSymbol{\intop}{\mathop}{largesymbolsA}{'001}
        \def\int{\intop\ilimits@}
\re@DeclareMathSymbol{\iintop}{\mathop}{largesymbolsA}{'003}
        \def\iint{\iintop\ilimits@}
\re@DeclareMathSymbol{\iiintop}{\mathop}{largesymbolsA}{'005}
        \def\iiint{\iiintop\ilimits@}
\re@DeclareMathSymbol{\iiiintop}{\mathop}{largesymbolsA}{'007}
        \def\iiiint{\iiiintop\ilimits@}
\re@DeclareMathSymbol{\dotsintop}{\mathop}{largesymbolsA}{'011}
        \def\dotsint{\dotsintop\ilimits@}
\re@DeclareMathSymbol{\ointop}{\mathop}{largesymbolsA}{'013}
        \def\oint{\ointop\ilimits@}
\re@DeclareMathSymbol{\oiintop}{\mathop}{largesymbolsA}{'015}
        \def\oiint{\oiintop\ilimits@}
```

```
\re@DeclareMathSymbol{\sqintop}{\mathop}{largesymbolsA}{'017}
        \def\sqint{\sqintop\ilimits@}
\re@DeclareMathSymbol{\sqiintop}{\mathop}{largesymbolsA}{'021}
        \def\sqiint{\sqiintop\ilimits@}
\re@DeclareMathSymbol{\ointctrclockwiseop}{\mathop}{largesymbolsA}{'027}
        \def\ointctrclockwise{\ointctrclockwiseop\ilimits@}
\re@DeclareMathSymbol{\ointclockwiseop}{\mathop}{largesymbolsA}{'031}
        \def\ointclockwise{\ointclockwiseop\ilimits@}
\re@DeclareMathSymbol{\varointclockwiseop}{\mathop}{largesymbolsA}{'033}
        \def\varointclockwise{\varointclockwiseop\ilimits@}
\re@DeclareMathSymbol{\varointctrclockwiseop}{\mathop}{largesymbolsA}{'035}
        \def\varointctrclockwise{\varointctrclockwiseop\ilimits@}
\re@DeclareMathSymbol{\fintop}{\mathop}{largesymbolsA}{'037}
        \def\fint{\fintop\ilimits@}
\re@DeclareMathSymbol{\varoiintop}{\mathop}{largesymbolsA}{'041}
        \def\varoiint{\varoiintop\ilimits@}
\re@DeclareMathSymbol{\landupintop}{\mathop}{largesymbolsA}{'043}
        \def\landupint{\landupintop\ilimits@}
\re@DeclareMathSymbol{\landdownintop}{\mathop}{largesymbolsA}{'045}
        \def\landdownint{\landdownintop\ilimits@}
\let\idotsint\dotsint
```

⟨/package⟩

⟨*fdfile⟩

Font definition file:

```
\ProvidesFile{uesint.fd}
\DeclareFontFamily{U}{esint}{}
\DeclareFontShape{U}{esint}{m}{n}{
   <-> esint10
   }{}
```

⟨/fdfile⟩