The \textbf{bigints} package

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1 Introduction

This package (v1.1) helps you to write big integrals when needed. For example, you may want to write standard integrals before a matrix, but if you find them too small, you can use bigger integrals thanks to this package.

2 Use

2.1 Loading the Package

To load the package, please use
\usepackage{bigints}

Please note that this package loads the package ‘amsmath.’ Consequently, you do not need to load amsmath after having called bigints.

2.2 Available Options

The set of options is currently empty.
3 Examples

3.1 Possible Calls
Possible function calls are listed at Table 1.

<table>
<thead>
<tr>
<th>Integral’s command</th>
<th>Standard command</th>
<th>Integral’s command’s output</th>
</tr>
</thead>
<tbody>
<tr>
<td>\bigint</td>
<td>∫</td>
<td>∫</td>
</tr>
<tr>
<td>\bigints</td>
<td>∫</td>
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</tr>
<tr>
<td>\bigointssssss</td>
<td>∮</td>
<td>∮</td>
</tr>
</tbody>
</table>

*Table 1:* Possible calls of this package.
3.2 Practical Examples

3.2.1 Matrices With Five Rows

Compare
\[
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
-m + n \\
m - n
\end{pmatrix}
dt
\]
\[
\text{to}
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
-m + n \\
m - n
\end{pmatrix}
dt.
\]

To achieve
\[
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
-m + n \\
m - n
\end{pmatrix}
dt
\]
you simply need to use \texttt{\bigint} at the place of \texttt{\int} before the matrix.

3.2.2 Matrices With Four Rows

Compare
\[
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
-m + n \\
m - n
\end{pmatrix}
dt
\]
\[
\text{to}
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
-m + n \\
m - n
\end{pmatrix}
dt.
\]

To achieve
\[
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
-m + n \\
m - n
\end{pmatrix}
dt
\]
you simply need to use \texttt{\bigints} at the place of \texttt{\int} before the matrix.

3.2.3 Matrices With Three Rows

Compare
\[
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
\end{pmatrix}
dt
\]
\[
\text{to}
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
\end{pmatrix}
dt.
\]

To achieve
\[
\int_{t_i}^{t_f} \begin{pmatrix}
\frac{a(1-b) - cd - e^{\frac{dW}{k}}}{k} \\
\frac{f - gh}{k} \\
-i + jk + l \\
\end{pmatrix}
dt
\]
you simply need to use \texttt{\bigints} at the place of \texttt{\int} before the matrix.
3.2.4 Matrices With Two Rows

Compare

\[
\int_{t_i}^{t_f} \left( \frac{a(1-b)-cd-e^{4W}}{f - gh} \right) \, dt \quad \text{to} \quad \int_{t_i}^{t_f} \left( \frac{a(1-b)-cd-e^{4W}}{f - gh} \right) \, dt.
\]

To achieve

\[
\int_{t_i}^{t_f} \left( \frac{a(1-b)-cd-e^{4W}}{f - gh} \right) \, dt
\]

you simply need to use \texttt{\bigintsss} at the place of \texttt{\int} before the matrix.

3.2.5 Matrices With One Row

Compare

\[
\int_{t_i}^{t_f} \left( \frac{a(1-b)-cd-e^{4W}}{f - gh} \right) \, dt \quad \text{to} \quad \int_{t_i}^{t_f} \left( \frac{a(1-b)-cd-e^{4W}}{f - gh} \right) \, dt.
\]

To achieve

\[
\int_{t_i}^{t_f} \left( \frac{a(1-b)-cd-e^{4W}}{f - gh} \right) \, dt
\]

you simply need to use \texttt{\bigintsss} at the place of \texttt{\int} before the matrix. This is here a matter of taste, as both symbols are typographically acceptable.

The same concept can be used for integrals on closed contours, such as the standard \texttt{\oint}. You simply need to use \texttt{\bigoint}, \texttt{\bigoints}, \texttt{\bigointss}, \texttt{\bigointsss} and \texttt{\bigointssss}. 


4 Implementation

Here is the code of bigints.sty:

```latex
\documentclass{article}
\usepackage{bigints}
\begin{document}
\maketitle

\section{Implementation}

Here is the code of bigints.sty:

\begin{verbatim}
\newcommand{\bigint}{\textbf{\textit{\texttt{\textbackslash \bigint}}}}
\def{\bigint}{\textbf{\textit{\texttt{\textbackslash \bigint}}}}
\end{verbatim}

\end{document}
```
5 Limitations
This package has currently no limitation.

6 Remarks
Not yet.

7 Bugs
Not yet.

8 Version History
1. \texttt{v1.0}: package is introduced to the \LaTeX world,
2. \texttt{v1.1}: new commands (\verb!igoint!, \verb!igoints!, \verb!igointss!, \verb!igointsss! and \verb!igointssss!) are available.

9 Contact
If you have any question concerning this package (limitations, bugs, . . . ), please contact me at Luca.Merciadri@student.ulg.ac.be.

10 Credits
Thanks to pg for his related trick, in the message on

\url{http://www.les-mathematiques.net/phorum/read.php?10,472951}. 

\relax
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