April 30, 2007

Question: I would like to horizontally group a mathematical expression together with a bracket or a parenthesis. I know you can do this with a brace in LaTeX but I really need to do this in a slightly different form. Is there any way to do this with LaTeX? Thanks.

Hi,

In standard LaTeX you can horizontally brace together a standard mathmatical expression with \underbrace and \overbrace, as follows:

```
$\underbrace{a + \overbrace{b + \cdots + y}^{24} + z}_{26}$
```

Additionally there is a LaTeX package called mathbarr that allows you to horizontally group together a mathematical expression using a bracket or a parenthesis as well as the standard brace. Just add the mathbarr package statement to the preamble of your document:

```
\documentclass{article}
\usepackage{mathbarr}
\begin{document}
```

Once you do that the following commands are then available for your use: \overbrack, \underbrack, \overparen and \underparen. The use of the \overbrack, \underbrack, \overparen and \underparen are much the same as the \overbrace and \underbrace commands as shown:

```
\[ \overbrack{x+\cdots+x}^{k\rm\;times} \qquad
   \underbrack{x+y+z}_{>\,0}            \qquad
   \overparen{x+\cdots+x}^{k\rm\;times} \qquad
   \underparen{x+y+z}_{>\,0} \]
```

The resultant grouping brackets and parentheses look a bit thick but are the exact same thickness as with the standard braces. And thanks to Michael Barr of McGill University, Canada for originally creating this very useful package.

Sincerely yours,

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