# The texvc package\*

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#### Abstract

This package provides all  $^1$  LaTeX command available in MediaWiki. This includes several packages like amsmath, and adds some specific commands such as  $\Reals$ .

## 1 Provided Macros

#### 1.1 Arrows

The first group of MediaWiki coustom command (other\_delimiters2) defines short hand notations for some arrorws.

\darr	Short hand notation for arrow $\downarrow$ .
\dArr	Short hand notation for arrow $\downarrow$ .
\Darr	Short hand notation for arrow $\downarrow$ .
\lang	Short hand notation for arrow $\langle$ .
\rang	Short hand notation for arrow $\rangle$ .
\uarr	Short hand notation for arrow $\uparrow$ .
\uArr	Short hand notation for arrow $\uparrow$ .
\Uarr	Short hand notation for arrow $\uparrow$ .

#### 1.2 Literals

The second group of MediaWiki coustom commands (other\_litereals3) defines short hand notations for some literals.

 $\begin{tabular}{ll} \verb&Short hand notation for literal $\mathbb{C}$. This command is deprecated. \\ \verb&N Short hand notation for literal $\mathbb{H}$. This command is deprecated. \\ \verb&N Short hand notation for literal $\mathbb{N}$. \\ \verb&Q Short hand notation for literal $\mathbb{Q}$. \\ \verb&R Short hand notation for literal $\mathbb{R}$. \\ \verb&Z Short hand notation for literal $\mathbb{Z}$. } \end{tabular}$ 

```
\allef
                  Short hand notation for literal \aleph.
                  Short hand notation for literal \aleph.
  \alefsym
    \Alpha
                  Short hand notation for literal A.
                  Short hand notation for literal \wedge. This command is deprecated.
       \and
       \ang
                  Short hand notation for literal \angle. This command is deprecated.
                  Short hand notation for literal B.
     \Beta
                  Short hand notation for literal •.
     \bull
                  Short hand notation for literal X.
       \Chi
                  Short hand notation for literal .
    \clubs
    \cnums
                  Short hand notation for literal \mathbb{C}.
                  Short hand notation for literal \mathbb{C}.
  \Complex
                  Short hand notation for literal ‡.
   \Dagger
                  Short hand notation for literal \diamondsuit.
 \diamonds
                  Short hand notation for literal \doteq.
    \Doteq
\doublecap
                  Short hand notation for literal \cap.
                  Short hand notation for literal \cup.
\doublecup
    \empty
                  Short hand notation for literal \emptyset.
                  Short hand notation for literal E.
  \Epsilon
       \Eta
                  Short hand notation for literal H.
    \exist
                  Short hand notation for literal \exists.
                  Short hand notation for literal \geq.
        \ge
                  Short hand notation for literal \gg.
    \gggtr
                  Short hand notation for literal \Leftrightarrow.
     \hAar
                  Short hand notation for literal \leftrightarrow.
     \harr
                  Short hand notation for literal \Leftrightarrow.
     \Harr
   \hearts
                  Short hand notation for literal \heartsuit.
                  Short hand notation for literal 3.
    \image
                  Short hand notation for literal \infty.
    \infin
     \Iota
                  Short hand notation for literal I.
                  Short hand notation for literal \in.
     \isin
    \Kappa
                  Short hand notation for literal K.
                  Short hand notation for literal \leftarrow.
     \larr
                  Short hand notation for literal \Leftarrow.
     \Larr
     \lArr
                  Short hand notation for literal \Leftarrow.
                  Short hand notation for literal \leq.
        \le
                  Short hand notation for literal \leftrightarrow.
    \lrarr
    \Lrarr
                  Short hand notation for literal \Leftrightarrow.
                  Short hand notation for literal \Leftrightarrow.
    \lrArr
                  Short hand notation for literal M.
        \Mu
                  Short hand notation for literal \mathbb{N}.
  \natnums
                  Short hand notation for literal \neq.
        \ne
                  Short hand notation for literal N.
        \Nu
         \0
                  Short hand notation for literal \emptyset.
```

<sup>\*</sup>This document corresponds to texvc v1.1, dated 2018/03/04.

 $<sup>^1\</sup>mathrm{The}$  command \or is only available if custom code is copied into your IATEX-file. See page 7 for details.

```
Short hand notation for literal o.
    \omicron
     \Omicron
                     Short hand notation for literal O.
                     Short hand notation for literal \vee. This command is deprecated.
           \or
                     Short hand notation for literal \partial. This command is deprecated.
        \part
      \plusmn
                     Short hand notation for literal \pm.
                     Short hand notation for literal \rightarrow.
        \rarr
                     Short hand notation for literal \Rightarrow.
        \Rarr
                     Short hand notation for literal \Rightarrow.
        \rArr
        \real
                     Short hand notation for literal \Re.
       \reals
                     Short hand notation for literal \mathbb{R}.
                     Short hand notation for literal \mathbb{R}.
       \Reals
                     Short hand notation for literal ↑.
\restriction
                     Short hand notation for literal P.
         \Rho
        \sdot
                     Short hand notation for literal \cdot.
                     Short hand notation for literal §.
        \sect
                     Short hand notation for literal \spadesuit.
      \spades
         \sub
                     Short hand notation for literal \subset.
                     Short hand notation for literal \subseteq.
        \sube
                     Short hand notation for literal \supseteq.
        \supe
                     Short hand notation for literal T.
         \Tau
   \thetasym
                     Short hand notation for literal \vartheta.
   \varcoppa
                     Short hand notation for literal 9.
                     Short hand notation for literal \wp.
      \weierp
        \Zeta
                     Short hand notation for literal Z.
```

# 2 Deprecations

According to the decision of Wikimedia Community User Group Math<sup>2</sup> the following macros have been deprecated<sup>3</sup>:

- 1. \$
- 2. %
- $3. \$
- $4. \setminus or$
- 5. \part
- $6. \n$
- 7. \C
- 8. \H

<sup>&</sup>lt;sup>2</sup>https://meta.wikimedia.org/w/index.php?oldid=19705444

<sup>&</sup>lt;sup>3</sup>See https://phabricator.wikimedia.org/T197842 for the discussion.

- $9. \setminus bold$
- 10. \Bbb

The commands 1,2,4,9,10 have never been part of this package, but were available from within Wikipedia.

## 3 Implementation

- \darr This macro does the following replacement.
  - 1 \newcommand{\darr}{\downarrow}
- \dArr This macro does the following replacement.
  - 2 \newcommand{\dArr}{\Downarrow}
- \Darr This macro does the following replacement.
  - 3 \newcommand{\Darr}{\Downarrow}
- \lang This macro does the following replacement.
  - 4 \newcommand{\lang}{\langle}
- \rang This macro does the following replacement.
  - 5 \newcommand{\rang}{\rangle}
- \uarr This macro does the following replacement.
  - 6 \newcommand{\uarr}{\uparrow}
- \uArr This macro does the following replacement.
  - 7 \newcommand{\uArr}{\Uparrow}
- \Uarr This macro does the following replacement.
  - 8 \newcommand{\Uarr}{\Uparrow}
  - \C This macro does the following replacement.
    - 9 %\newcommand{\C}{\mathbb{C}}
  - \H This macro does the following replacement.
    - 10 \renewcommand{\H}{\mathbb{H}}
  - \N This macro does the following replacement.
    - 11  $\mbox{newcommand}(\N){\mathbb{N}}$
  - \Q This macro does the following replacement.
    - $12 \mbox{ } 12 \$
  - \R This macro does the following replacement.
    - 13  $\mbox{newcommand}(\R){\mathbb{R}}$

- \Z This macro does the following replacement.

  14 \newcommand{\Z}{\mathbb{Z}}
- \alef This macro does the following replacement.

  15 \newcommand{\alef}{\aleph}
- \alefsym This macro does the following replacement.
  16 \newcommand{\alefsym}{\aleph}
  - \Alpha This macro does the following replacement.

    17 \newcommand{\Alpha}{\mathrm{A}}
    - \and This macro does the following replacement.

      18 \renewcommand{\and}{\land}
    - \ang This macro does the following replacement.
      19 \newcommand{\ang}{\angle}
  - \Beta This macro does the following replacement.
    20 \newcommand{\Beta}{\mathrm{B}}
  - \bull This macro does the following replacement.
    21 \newcommand{\bull}{\bullet}
  - \Chi This macro does the following replacement.
    22 \newcommand{\Chi}{\mathrm{X}}
  - \clubs This macro does the following replacement.
    23 \newcommand{\clubs}{\clubsuit}
  - \cnums This macro does the following replacement.
    24 \newcommand{\cnums}{\mathbb{C}}
- \Complex This macro does the following replacement.
  25 \newcommand{\Complex}{\mathbb{C}}
- \Dagger This macro does the following replacement.
  26 \newcommand{\Dagger}{\ddagger}
- \diamonds This macro does the following replacement.
  27 \newcommand{\diamonds}{\diamondsuit}
  - \Doteq This macro does the following replacement.
    28 \renewcommand{\Doteq}{\doteqdot}
- \doublecap This macro does the following replacement.
  29 \renewcommand{\doublecap}{\Cap}

- \doublecup This macro does the following replacement.
  30 \renewcommand{\doublecup}{\Cup}
  - \empty This macro does the following replacement.
    31 \renewcommand{\empty}{\emptyset}
  - \Epsilon This macro does the following replacement.
    32 \newcommand{\Epsilon}{\mathrm{E}}
    - \Eta This macro does the following replacement.
      33 \newcommand{\Eta}{\mathrm{H}}
    - \exist This macro does the following replacement.
      34 \newcommand{\exist}{\exists}
      - \ge This macro does the following replacement.

        35 \renewcommand{\ge}{\geq}
    - \gggtr This macro does the following replacement.
      36 \renewcommand{\gggtr}{\ggg}
    - \hAar This macro does the following replacement.
      37 \newcommand{\hAar}{\Leftrightarrow}
    - \harr This macro does the following replacement.

      38 \newcommand{\harr}{\leftrightarrow}
    - \Harr This macro does the following replacement.
      39 \newcommand{\Harr}{\Leftrightarrow}
  - \hearts This macro does the following replacement.
    40 \newcommand{\hearts}{\heartsuit}
  - \image This macro does the following replacement.
    41 \newcommand{\image}{\Im}
  - \infin This macro does the following replacement.
    42 \newcommand{\infin}{\infty}
  - \Iota This macro does the following replacement.
    43 \newcommand{\Iota}{\mathrm{I}}
  - \isin This macro does the following replacement.
    44 \newcommand{\isin}{\in}
  - \Kappa This macro does the following replacement.
    45 \newcommand{\Kappa}{\mathrm{K}}

\larr This macro does the following replacement.
46 \newcommand{\larr}{\leftarrow}

\Larr This macro does the following replacement.
47 \newcommand{\Larr}{\Leftarrow}

\lambda This macro does the following replacement.
48 \newcommand{\larr}{\Leftarrow}

\lambda This macro does the following replacement.
49 \renewcommand{\le}{\leq}

\lambda This macro does the following replacement.
50 \newcommand{\lrarr}{\leftrightarrow}

\Lrarr This macro does the following replacement.
51 \newcommand{\Lrarr}{\Leftrightarrow}

\lambda This macro does the following replacement.
52 \newcommand{\lrArr}{\Leftrightarrow}

\Mu This macro does the following replacement.
53 \newcommand{\Mu}{\mathrm{M}}

\natnums This macro does the following replacement.
54 \newcommand{\natnums}{\mathbb{N}}

\ne This macro does the following replacement.

55 \renewcommand{\ne}{\neq}

\Nu This macro does the following replacement.
56 \newcommand{\Nu}{\mathrm{N}}

\O This macro does the following replacement. 57 \renewcommand{\O}{\emptyset}

\omicron This macro does the following replacement.
58 \newcommand{\omicron}{\mathrm{0}}

\Omicron This macro does the following replacement.
59 \newcommand{\Omicron}{\mathrm{0}}

or This is a problematic macro, since it redefines the plain TeX macro \or. For instance, the \thanks command uses a custom function to determine the footnotesymol, which relies on the availability of the \or command in math mode. Thus, the macro has to be defined after \maketitle was executed. However, there might be more commands that use \or used in mathmode. Thus we don't

overwrite \or in this pacakge. To enable the overwriting copy the code below to an appropriate position in your IATEX-file. However, it might be easier to manually replace \or with \lor which is all what the macro above does.

60 %\let\@oldor\or

61 %\def\or{\ifmmode\lor\else\expandafter\@oldor\fi}

\part This macro does the following replacement.

62 \renewcommand{\part}{\partial}

\plusmn This macro does the following replacement.

63 \newcommand{\plusmn}{\pm}

\rarr This macro does the following replacement.

64 \newcommand{\rarr}{\rightarrow}

Rarr This macro does the following replacement.

65 \newcommand{\Rarr}{\Rightarrow}

\rArr This macro does the following replacement.

\real This macro does the following replacement.

67 \newcommand{\real}{\Re}

\reals This macro does the following replacement.

 $68 \mbox{ } {\mathbb{R}}$ 

\Reals This macro does the following replacement.

69 \newcommand{\Reals}{\mathbb{R}}

\restriction This macro does the following replacement.

70 \renewcommand{\restriction}{\upharpoonright}

\Rho This macro does the following replacement.

 $71 \mbox{ } \mbox{\mbox{$1$ \newcommand{\ho}_{\nownormalfont}}}$ 

\sdot This macro does the following replacement.

 $72 \mbox{newcommand{\sdot}{\cdot}}$ 

\sect This macro does the following replacement.

73 \newcommand{\sect}{\S}

\spades This macro does the following replacement.

74 \newcommand{\spades}{\spadesuit}

\sub This macro does the following replacement.

75 \newcommand{\sub}{\subset}

\sube This macro does the following replacement.  $76 \mbox{ \newcommand{\sube}{\subsetteq}}$ \supe This macro does the following replacement. 77 \newcommand{\supe}{\supseteq} \Tau This macro does the following replacement. \thetasym This macro does the following replacement. 79  $\mbox{\newcommand{\thetasym}{\vartheta}}$ This macro does the following replacement. \varcoppa 80 \newcommand{\varcoppa}{\mbox{\coppa}} This macro does the following replacement. \weierp 81 \newcommand{\weierp}{\wp} This macro does the following replacement. 82  $\mbox{\mbox{\mbox{$\sim$}}}$ 

## **Change History**

v1.0	document usage of or 1
General: Initial version $\dots 1$ v1.1	v1.2
General: Fix bug with varcoppa,	General: Document deprecations . 1

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