

# The `fnumprint` package\*

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## Abstract

The `fnumprint` package can decide to typeset a number either as number or as word name (only in English or German).  
Fork me on GitHub: <https://github.com/ypid/latex-packages>

## Contents

<b>Abstract</b>	<b>1</b>
<b>1 Introduction</b>	<b>1</b>
<b>2 Usage</b>	<b>2</b>
<b>3 Examples</b>	<b>2</b>
<b>4 Implementation</b>	<b>2</b>
4.1 Language checking . . . . .	2
4.2 Marco definition . . . . .	3

## 1 Introduction

The `fnumprint` package defines two macros which decide to typeset a number either as arabic number or as word name for the number. If the number is between zero and twelve (including zero and twelve) then the word name will be used. This package uses the `zahl2string` package to convert a number in the word name in German. The conversion of a number (0–12) to a english word number is implemented by this package. If the number is outside of the range then it will be typesetted with the `numprint` package.

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\*This document corresponds to `fnumprint` v1.0, dated 2012/08/22.

## 2 Usage

Just load the package placing

```
\usepackage{fnumprint}
```

in the preamble of your L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> source file. In this case the last by `fnumprint` supported language given as class option will be used. You can overwrite this with a package option like this:

```
\usepackage[english]{fnumprint}
```

`\fnumprintc`     The macro `\fnumprintc`  $\{\langle L^A T^E X \text{ counter name} \rangle\}$  takes a name of a LaTeX counter as its only not optional parameter and typesets it.

`\fnumprint`     The macro `\fnumprint`  $\{\langle number \rangle\}$  is like the `\fnumprintc` marco but it takes a number or a marco that expands to a number. A T<sub>E</sub>X counter can also used with this marco.

## 3 Examples

marco	expanded marco
<code>\fnumprint{-1}</code>	−1
<code>\fnumprint{0}</code>	zero
<code>\fnumprint{10}</code>	ten
<code>\fnumprint{12}</code>	twelve
<code>\fnumprint{13}</code>	13
<code>\fnumprint{\the\year}</code>	2012
<code>\fnumprintc{page}</code>	two

## 4 Implementation

This package depends on the these packages.

```
1 \RequirePackage{xifthen}
2 \RequirePackage{zahl2string,numprint}
```

### 4.1 Language checking

I used a counter `fnumprint@language` to save the (last) selected language. Meaning from the counter values:

value	meaning
0	no supported language selected
1	german selected
2	english selected

```
3 \newcounter{fnumprint@language}
4 \setcounter{fnumprint@language}{0}
5 \DeclareOption{german}{\setcounter{fnumprint@language}{1}}
6 \DeclareOption{ngerman}{\setcounter{fnumprint@language}{1}}
```

```

7 \DeclareOption{english}{\setcounter{fnumprint@language}{2}}
8 \DeclareOption{USenglish}{\setcounter{fnumprint@language}{2}}
9 \DeclareOption{american}{\setcounter{fnumprint@language}{2}}
10 \DeclareOption{UKenglish}{\setcounter{fnumprint@language}{2}}
11 \DeclareOption{british}{\setcounter{fnumprint@language}{2}}
12 \DeclareOption{canadian}{\setcounter{fnumprint@language}{2}}
13 \DeclareOption{australian}{\setcounter{fnumprint@language}{2}}
14 \DeclareOption{newzealand}{\setcounter{fnumprint@language}{2}}
15 \ProcessOptions\relax

```

If none of the supported languages was selected a package warning will appear.

```

16 \ifthenelse{\value{fnumprint@language} = 0}{%
17   \PackageWarning{\@currname}{No supported language selected
18     \MessageBreak
19     This package supports only english and german
20     \MessageBreak
21     There will be no word names printed}%
22 }{%

```

## 4.2 Marco definition

`\ns@en@neunzehn` This internal marco expands to the english word name for a number. It only goes from 0 to 19.

```

23 \newcommand{\ns@en@neunzehn}[1]{%
24   \ifcase#1 zero\or one\or two\or three\or four\or five\or six\or%
25   seven\or eight\or nine\or ten\or eleven\or twelve\or thirteen\or%
26   fourteen\or fifteen\or sixteen\or seventeen\or%
27   eighteen\or nineteen\fi%
28 }%
29 }

```

`\fnumprint` Here is the `\fnumprint` marco definition. It takes one not optional parameter. The parameter must be a number or a marco which expands to a number.

```

30 \DeclareRobustCommand{\fnumprint}[1]{%
31   \ifthenelse{#1 < 13}{%
32     \ifthenelse{#1 < 0}{%
33       \numprint{#1}%
34     }{%
35       \ifthenelse{\value{fnumprint@language} = 1}{\numstr{#1}}{%
36         \ifthenelse{\value{fnumprint@language} = 2}{%
37           \ns@en@neunzehn{#1}%
38         }{%
39           \numprint{#1}%
40         }%
41       }%
42     }%
43   }{%
44     \numprint{#1}%
45   }%
46 }

```

`\fnumprintc` Here is the `\fnumprintc` marco definition. It takes one not optional parameter. The parameter must be the name of a  $\text{\LaTeX}$  counter.

```

47 \DeclareRobustCommand{\fnumprintc}[1]{%
48   \ifthenelse{\value{#1} < 13}{%
49     \ifthenelse{\value{#1} < 0}{%
50       \cntprint{#1}%
51     }{%
52       \ifthenelse{\value{fnumprint@language} = 1}{\numstring{#1}}{%
53         \ifthenelse{\value{fnumprint@language} = 2}{%
54           \ns@en@neunzehn{\value{#1}}%
55         }{%
56           \cntprint{#1}%
57         }%
58       }%
59     }%
60   }{%
61     \cntprint{#1}%
62   }%
63 }
64 \endinput

```

## Change History

v0.1  
 General: Initial version . . . . . 1      tion and the  $\text{\LaTeX}$ -package and  
    added support for English . . . . 1

v1.0  
 General: Wrote this documenta-

## Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

<b>C</b>	<code>\fnumprintc</code> . . . . . 3, <u>45</u>	<code>\numprint</code> . . . 33, 37, <u>42</u>
<code>\cntprint</code> . . . 48, 52, 57	<b>N</b>	<code>\numstr</code> . . . . . 35
<b>F</b>	<code>\ns@en@neunzehn</code> . . .	<code>\numstring</code> . . . . . 50
<code>\fnumprint</code> . . . . . 3, <u>30</u>	. . . . . <u>23</u> , 36, 51	