

Package ‘nombre’

July 22, 2025

Title Number Names

Version 0.4.1

Description Converts numeric vectors to character vectors of English number names. Provides conversion to cardinals, ordinals, numerators, and denominators. Supports negative and non-integer numbers.

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URL <https://nombre.rossellhayes.com>,
<https://github.com/rossellhayes/nombre>

BugReports <https://github.com/rossellhayes/nombre/issues>

Depends R (>= 2.10)

Imports fracture (>= 0.2.1)

Suggests testthat (>= 3.0.0)

Encoding UTF-8

Language en-US

RoxygenNote 7.2.0

Config/testthat/edition 3

NeedsCompilation no

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Repository CRAN

Date/Publication 2022-05-23 16:20:02 UTC

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adverbial	<i>Convert numbers to adverbial character vectors (once, twice, three times)</i>
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Description

Convert numbers to adverbial character vectors (once, twice, three times)

Usage

```
adverbial(x, thrice = FALSE, ...)
```

```
nom_adv(x, thrice = FALSE, ...)
```

```
nom_times(x, thrice = FALSE, ...)
```

Arguments

x	A numeric vector
thrice	A logical of length one. If TRUE, the adverbial of 3 will be "thrice". If FALSE, the adverbial of 3 will be "three times". Defaults to FALSE.
...	Additional arguments passed to cardinal()

Value

A character vector of the same length as x

See Also

Other number names: [cardinal\(\)](#), [collective\(\)](#), [denominator\(\)](#), [numerator\(\)](#), [ordinal\(\)](#), [ratio\(\)](#)

Examples

```
nom_adv(1:4)
nom_adv(1:4, thrice = TRUE)
```

cardinal	<i>Convert numbers to cardinal character vectors (one, two, three)</i>
----------	--

Description

Convert numbers to cardinal character vectors (one, two, three)

Usage

```
cardinal(x, max_n = Inf, negative = "negative", ...)
```

```
nom_card(x, max_n = Inf, negative = "negative", ...)
```

Arguments

x	A numeric vector
max_n	A numeric vector. When the absolute value of x is greater than max_n, x remains numeric instead of being converted to words. If max_n is negative, no xs will be converted to words. (This can be useful when max_n is passed by another function.) Defaults to Inf, which converts all xs to words.
negative	A character vector to append to negative numbers. Defaults to "negative".
...	Arguments passed on to fracture::frac_mat
	denom If denom is not <code>NULL</code> , all fractions will have a denominator of denom. This will ignore all other arguments that affect the denominator.
	base_10 If TRUE, all denominators will be a power of 10.
	common_denom If TRUE, all fractions will have the same denominator. If the least common denominator is greater than max_denom, max_denom is used.
	max_denom All denominators will be less than or equal to max_denom. If base_10 is TRUE, the maximum denominator will be the largest power of 10 less than max_denom. A max_denom greater than the inverse square root of machine double epsilon will produce a warning because floating point rounding errors can occur when denominators grow too large.

Value

A character vector of the same length as x

Fractions

Decimal components of x are automatically converted to fractions by [fracture::frac_mat\(\)](#).

See Also

[uncardinal\(\)](#) to convert character vectors to numbers

Other number names: [adverbial\(\)](#), [collective\(\)](#), [denominator\(\)](#), [numerator\(\)](#), [ordinal\(\)](#), [ratio\(\)](#)

Examples

```
nom_card(2)
nom_card(1:10)
nom_card(2 + 4/9)
nom_card(-2)
nom_card(-2, negative = "minus")

nom_card(5:15, max_n = 10)

paste("There are", nom_card(525600), "minutes in a year.")
paste("There are", nom_card(3.72e13), "cells in the human body.")

nom_card(1 / 2^(1:4))
nom_card(1 / 2^(1:4), common_denom = TRUE)
nom_card(1 / 2^(1:4), base_10 = TRUE)
nom_card(1 / 2^(1:4), base_10 = TRUE, common_denom = TRUE)

nom_card(1 / 2:5)
nom_card(1 / 2:5, base_10 = TRUE)
nom_card(1 / 2:5, base_10 = TRUE, max_denom = 100)
```

collective	<i>Convert numbers to collective character vectors (the, both, all three)</i>
------------	---

Description

Convert numbers to collective character vectors (the, both, all three)

Usage

```
collective(x, all_n = TRUE, of_the = FALSE, cardinal = TRUE, ...)
```

```
nom_coll(x, all_n = TRUE, of_the = FALSE, cardinal = TRUE, ...)
```

Arguments

x	A numeric vector.
all_n	Whether to include the cardinal number after "all" for collectives of 3 or more. Defaults to TRUE.
of_the	Whether to include "of the" for collectives other than 1. Defaults to FALSE.
cardinal	Whether to convert the number after "all" with cardinal() when all_n is TRUE. Defaults to TRUE.
...	Additional arguments passed to cardinal() when cardinal is TRUE.

Value

A character vector of the same length as x.

See Also

Other number names: [adverbial\(\)](#), [cardinal\(\)](#), [denominator\(\)](#), [numerator\(\)](#), [ordinal\(\)](#), [ratio\(\)](#)

Examples

```
paste(nom_coll(0:3), "fish")
paste(nom_coll(9:12, max_n = 10), "fish")
```

denominator

Convert numbers to denominator character vectors (whole, half, third)

Description

Convert numbers to denominator character vectors (whole, half, third)

Usage

```
denominator(x, numerator = 1, quarter = TRUE, ...)
```

```
nom_denom(x, numerator = 1, quarter = TRUE, ...)
```

Arguments

x	A numeric vector
numerator	A numeric vector. The numerator(s) associated with the denominator(s). When numerator is not 1 or -1, the denominator will be pluralized.
quarter	A logical of length one. If TRUE, the denominator of 4 will be "quarter(s)". If FALSE, the denominator of 4 will be "fourth(s)". Defaults to TRUE.
...	Additional arguments passed to ordinal()

Value

A character vector of the same length as x

See Also

Other number names: [adverbial\(\)](#), [cardinal\(\)](#), [collective\(\)](#), [numerator\(\)](#), [ordinal\(\)](#), [ratio\(\)](#)

Examples

```

nom_denom(2)
nom_denom(1:10)
nom_denom(1:10, numerator = 2)
nom_denom(1:10, numerator = 1:10)

nom_denom(4)
nom_denom(4, quarter = FALSE)

nom_denom(1:10, numerator = 2, cardinal = FALSE)
nom_denom(5:15, numerator = 2, max_n = 10)

```

numerator	<i>Convert numbers to numerator character vectors (one, two, three)</i>
-----------	---

Description

`nom_numer()` and `numerator()` are equivalent to `nom_card()` and `cardinal()` for integers, but `cardinals` support fractional components while numerators do not.

Usage

```

numerator(x, ...)

nom_numer(x, ...)

```

Arguments

<code>x</code>	A numeric vector
<code>...</code>	Additional arguments passed to <code>cardinal()</code>

See Also

Other number names: `adverbial()`, `cardinal()`, `collective()`, `denominator()`, `ordinal()`, `ratio()`

ordinal	<i>Convert numbers to ordinal character vectors (first, second, third)</i>
---------	--

Description

Adds ordinal suffixes to numbers (or a character vector of number-like words). Converts numeric vectors to cardinal numbers before adding prefixes unless `cardinal` is `FALSE`.

Usage

```
ordinal(x, cardinal = TRUE, ...)
```

```
nom_ord(x, cardinal = TRUE, ...)
```

Arguments

`x` A numeric or character vector.

`cardinal` Whether to convert a numeric vector with `cardinal()` before applying ordinal suffixes. When TRUE, 1 -> "first". When FALSE, 1 -> "1st". Defaults to TRUE.

`...` Further arguments passed to `cardinal()` when `cardinal` is TRUE.

Value

A character vector of the same length as `x`

See Also

Other number names: [adverbial\(\)](#), [cardinal\(\)](#), [collective\(\)](#), [denominator\(\)](#), [numerator\(\)](#), [ratio\(\)](#)

Examples

```
nom_ord(2)
nom_ord(1:10)
nom_ord(525600)

nom_ord(1:10, cardinal = FALSE)
nom_ord(5:15, max_n = 10)

nom_ord(c("n", "dozen", "umpteen", "eleventy", "one zillion"))
nom_ord(9 + 3/4)
```

ratio	<i>Convert numbers to ratio character vectors (two to one, one in three, five out of ten)</i>
-------	---

Description

Convert numbers to ratio character vectors (two to one, one in three, five out of ten)

Usage

```
ratio(x, sep = "in", max_n = Inf, negative = "negative", ...)
```

```
nom_ratio(x, sep = "in", max_n = Inf, negative = "negative", ...)
```

Arguments

<code>x</code>	A numeric vector
<code>sep</code>	A character vector separating components of the ratio. Defaults to "in".
<code>max_n</code>	A numeric vector. When the absolute value of <code>x</code> is greater than <code>max_n</code> , <code>x</code> remains numeric instead of being converted to words. If <code>max_n</code> is negative, no <code>xs</code> will be converted to words. (This can be useful when <code>max_n</code> is passed by another function.) Defaults to <code>Inf</code> , which converts all <code>xs</code> to words.
<code>negative</code>	A character vector to append to negative numbers. Defaults to "negative".
<code>...</code>	Arguments passed on to <code>fracture::frac_mat</code>
<code>denom</code>	If <code>denom</code> is not <code>NULL</code> , all fractions will have a denominator of <code>denom</code> . This will ignore all other arguments that affect the denominator.
<code>base_10</code>	If <code>TRUE</code> , all denominators will be a power of 10.
<code>common_denom</code>	If <code>TRUE</code> , all fractions will have the same denominator. If the least common denominator is greater than <code>max_denom</code> , <code>max_denom</code> is used.
<code>max_denom</code>	All denominators will be less than or equal to <code>max_denom</code> . If <code>base_10</code> is <code>TRUE</code> , the maximum denominator will be the largest power of 10 less than <code>max_denom</code> . A <code>max_denom</code> greater than the inverse square root of <code>machine double epsilon</code> will produce a warning because floating point rounding errors can occur when denominators grow too large.

Details

`x` is converted to a fraction by `fracture::frac_mat()`.

Value

A character vector of the same length as `x`

See Also

Other number names: `adverbial()`, `cardinal()`, `collective()`, `denominator()`, `numerator()`, `ordinal()`

Examples

```
paste0("Our team is outnumbered ", nom_ratio(10), ".")
paste0("The chances of winning are ", nom_ratio(1/1000000, sep = "in"), ".")

nom_ratio(c(1, 10, 100))
nom_ratio(c(0, 0.5, 1.5))
nom_ratio(c(0, 0.125, 0.625, 1), sep = "out of", common_denom = TRUE)
nom_ratio(5 / 10, sep = "in", base_10 = TRUE)
nom_ratio(6 / 25, sep = "in")
nom_ratio(6 / 25, sep = "out of", max_denom = 10)
```

`uncardinal`*Convert cardinal character vectors to numbers*

Description

This function is in experimental development. It currently only supports English cardinal integers or character vectors produced by one of [nombre](#)'s functions.

Usage

```
uncardinal(x)
```

```
nom_uncard(x)
```

Arguments

`x` A character vector of the cardinal names of numbers

Value

A numeric vector the same length as `n`. NAs will be produced for numbers with fractions or decimals or non-cardinal numbers (e.g. ordinals).

See Also

[cardinal\(\)](#) to convert numeric vectors to number names

Examples

```
uncardinal("one")
uncardinal("negative one hundred fifty-seven")
uncardinal(
  c(
    "twenty-five",
    "one million two hundred thirty-four thousand five hundred sixty-seven"
  )
)
uncardinal("infinity")

card <- cardinal(25)
uncardinal(card)
ord <- ordinal(25)
uncardinal(ord)
```

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