

Package ‘nombre’

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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>

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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

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

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

<code>x</code>	A numeric vector
<code>numerator</code>	A numeric vector. The numerator(s) associated with the denominator(s). When <code>numerator</code> is not 1 or -1, the denominator will be pluralized.
<code>quarter</code>	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.
<code>...</code>	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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