Package 'ptvalue'

August 29, 2025

Type Package

Title Working with Precision Teaching Values

Version 0.1.0

Description An implementation of an S3 class based on a double vector for storing and displaying precision teaching measures, representing a growing or a decaying (multiplicative) change between two frequencies. The main format method allows researchers to display measures (including data.frame) that respect the established conventions in the precision teaching community (i.e., prefixed multiplication or division symbol, displayed number <= 1). Basic multiplication and division methods are allowed and other useful functions are provided for creating, converting or inverting precision teaching measures. For more details, see Pennypacker, Gutierrez and Lindsley (2003, ISBN: 1-881317-13-7).

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URL <https://github.com/agkamel/ptvalue>

BugReports <https://github.com/agkamel/ptvalue/issues>

Imports cli, rlang, vctrs

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

Encoding UTF-8

RoxygenNote 7.3.2

NeedsCompilation no

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Repository CRAN

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abs_sign   *Find 'absolute' ptvalue*

Description

Find 'absolute' ptvalue

Usage

```
abs_sign(x = double(), sign = "times")
```

Arguments

x	A vector of class `ptvalue` or of type `double`.
sign	Either `"times"` or `"div"`. Default to 'times'.

Value

A vector of class `ptvalue` with absolute ptvalue.

Examples

```
x <- c(0.5, 1.4, 2)
abs_sign(x)
```

invert_sign   *Invert ptvalue sign*

Description

Invert ptvalue sign

Usage

```
invert_sign(x = double())
```

Arguments

x	A vector of class `ptvalue` or of type `double`.

Value

A vector of class `ptvalue` with inverted sign.

Examples

```
x <- c(0.5, 1.4, 2)
invert_sign(x)
```

---

ptvalue   *ptvalue: Working with precision teaching values*

Description

This class allow to print precision teaching mesures with the times or the division symbols like $\times 2$ or $\div 1.4$ by converting numeric values to precision teaching values. More specifically, input values between $]0, 1[$ will return output values greater or equal than 1 prefixed with $\div$; input values between $[1, \infty[$ will return output values greater or equal than 1 prefixed with $\times$.

Usage

```
ptvalue(x = double())

is_ptvalue(x)

as_ptvalue(x, ...)

## Default S3 method:
as_ptvalue(x, ...)
```

Arguments

x   A numeric vector. Values must be greater than 0.

...   Other values passed to method.

Details

A few arithmetic operations will be allowed in the futur. It is currently under development.

Value

A numeric vector of class **ptvalue** that represent precision teaching mesures.

Examples

```
x <- c(0.5, 0.8, 1, 1.25, 2)
ptvalue(x)
x <- c(0.5, 1, 2)
as_ptvalue(x)
```

---

times   *Create times or div vector of class* **ptvalue***.*

Description

times() and div() are convenient and stricter functions for creating growing or decaying precision teaching values with values with values greater or equal than 1 (or otherwise raise an error).

Usage

```
times(x = double())

div(x = double())
```

Arguments

x   A numeric vector. Values must be greater or equal than 1.

Value

A numeric vector of class **ptvalue** that represent precision teaching mesures.

Examples

```
times(c(1, 2, 4))
div(c(1, 2, 4))
```

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