HodgesLehmann {DescTools} R Documentation

Hodges-Lehmann Estimator of Location

Description

Function to compute the Hodges-Lehmann estimator of location in the one sample case.
Simple wrapper to extract the value from the result of `wilcox.test`.

Usage

```
HodgesLehmann(x, y = NULL, conf.level = NA, na.rm = FALSE)
```

Arguments

`x`	a numeric vector.
`y`	an optional numeric vector of data values: as with x non-finite values will be omitted.
`conf.level`	confidence level of.
`na.rm`	logical. Should missing values be removed? Defaults to FALSE.

Details

The Hodges-Lehmann estimator is the median of the combined data points and Walsh averages. It is the same as the Pseudo Median returned as a by-product of the function `wilcox.test`.
Note that in the two-sample case the estimator for the difference in location parameters does not estimate the difference in medians (a common misconception) but rather the median of the difference between a sample from x and a sample from y. The confidence interval for the "pseudo median" is extracted from `wilcox.test` (`conf.int = TRUE`).

Value

the Hodges-Lehmann estimator of location as a single numeric value if no confidence intervals are requested, and otherwise a numeric vector with 3 elements for the estimate, the lower and the upper confidence interval

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References

Hodges, J.L., and Lehmann, E.L. (1963), Estimates of location based on rank tests. *The Annals of Mathematical Statistics*, **34**, 598–611.

See Also

wilcox.test, median, MedianCI

Examples

```
set.seed(1)
x <- rt(100, df = 3)
HodgesLehmann(x)

# same as
wilcox.test(x,  conf.int = TRUE)$estimate
```
