Package ‘onewaytests’

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Description Two or more samples in one-way independent groups design are compared via different tests.
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onewaytests-package  

One-Way Independent Groups Design

Description

Two or more samples in one-way independent groups design are compared via different tests.

Details

Package: onewaytests
Type: Package
Version: 1.2
Date: 2016-07-29
License: GPL (>=2)

ag.test  

A Function to Perform Alexander-Govern Test

Description

ag.test performs Alexander-Govern test.

Usage

ag.test(y, group, na.rm = TRUE)

Arguments

y  
a numeric vector of data values.

group  
a vector or factor object giving the group for the corresponding elements of y.

na.rm  
a logical value indicating whether NA values should be stripped before the computation proceeds.

Value

A list with class "htest" containing the following components:

statistic  
the Alexander-Govern test statistic.

parameter  
the parameter(s) of the approximate chi-squared distribution of the test statistic.

p.value  
the p-value of the test.
aov.test

Author(s)
Osman Dag, Anil Dolgun, N. Meric Konar

References

Examples

```
ag.test(iris$Sepal.Width, iris$Species)
```

---

**aov.test**

_A Function to Perform One-Way Analysis of Variance_

**Description**

*aov.test* performs one-way analysis of variance.

**Usage**

```
aov.test(y, group, na.rm = TRUE)
```

**Arguments**

- `y`: a numeric vector of data values.
- `group`: a vector or factor object giving the group for the corresponding elements of `y`.
- `na.rm`: a logical value indicating whether NA values should be stripped before the computation proceeds.

**Value**

A list with class "htest" containing the following components:

- `statistic`: the analysis of variance test statistic.
- `parameter`: the parameter(s) of the approximate F distribution of the test statistic.
- `p.value`: the p-value of the test.

**Author(s)**

Osman Dag, Anil Dolgun, N. Meric Konar
References


Examples

```r
aov.test(iris$Sepal.Length, iris$Species)
```

---

**bf.test**

*A Function to Perform Brown-Forsythe Test*

**Description**

`bf.test` performs Brown-Forsythe test.

**Usage**

```r
bf.test(y, group, na.rm = TRUE)
```

**Arguments**

- **y**: a numeric vector of data values.
- **group**: a vector or factor object giving the group for the corresponding elements of `y`.
- **na.rm**: a logical value indicating whether NA values should be stripped before the computation proceeds.

**Value**

A list with class "htest" containing the following components:

- **statistic**: the Brown-Forsythe test statistic.
- **parameter**: the parameter(s) of the approximate F distribution of the test statistic.
- **p.value**: the p-value of the test.

**Author(s)**

Osman Dag, Anil Dolgun, N. Meric Konar

**References**


Examples

```r
bf.test(iris$Sepal.Width, iris$Species)
```

```r
y = rnorm(10, 5, 2)
group = c(rep(1, times = 3), rep("two", times = 3), rep(8, times = 4))
bf.test(y, group)
```

---

**james.test**  
* A Function to Perform James Second Order Test

**Description**

`james.test` performs James second order test.

**Usage**

```r
james.test(y, group, alpha = 0.05, na.rm = TRUE)
```

**Arguments**

- `y`: a numeric vector of data values.
- `group`: a vector or factor object giving the group for the corresponding elements of `y`.
- `alpha`: a significance level. Defaults `alpha = 0.05`.
- `na.rm`: a logical value indicating whether NA values should be stripped before the computation proceeds.

**Value**

A list with class "htest" containing the following components:

- `statistic`: the James second order test statistic.
- `parameter`: the critical value of the James second order test statistic.

**Author(s)**

Anil Dolgun, Osman Dag, N. Meric Konar

**References**

kw.test

A Function to Perform Kruskal-Wallis Test

Description

kw.test performs Kruskal-Wallis test.

Usage

kw.test(y, group, na.rm = TRUE)

Arguments

y a numeric vector of data values.
group a vector or factor object giving the group for the corresponding elements of y.
na.rm a logical value indicating whether NA values should be stripped before the computation proceeds.

Value

A list with class "htest" containing the following components:

statistic the Kruskal-Wallis test statistic.
parameter the parameter(s) of the approximate chi-squared distribution of the test statistic.
p.value the p-value of the test.

Author(s)

Anil Dolgun, Osman Dag, N. Meric Konar

References


Examples

kw.test(iris$Sepal.Length, iris$Species)
**Description**

`welch.test` performs Welch’s heteroscedastic F test and Welch’s heteroscedastic F test with trimmed means and Winsorized variances.

**Usage**

```r
welch.test(y, group, rate = 0, na.rm = TRUE)
```

**Arguments**

- `y`: a numeric vector of data values.
- `group`: a vector or factor object giving the group for the corresponding elements of `y`.
- `rate`: the rate of observations trimmed and winsorized from each tail of the distribution. If `rate = 0`, it performs Welch’s heteroscedastic F test. Otherwise, Welch’s heteroscedastic F test with trimmed means and Winsorized variances is performed. Default is set to `rate = 0`.
- `na.rm`: a logical value indicating whether NA values should be stripped before the computation proceeds.

**Value**

A list with class ”htest” containing the following components:

- `statistic`: the value of the test statistic with a name describing it.
- `parameter`: the parameter(s) of the approximate F distribution of the test statistic.
- `p.value`: the p-value of the test.

**Author(s)**

Osman Dag, Anil Dolgun, N. Meric Konar

**References**

Examples

```
welch.test(iris$Sepal.Length, iris$Species, rate=0.1)

y=rnorm(10,5,2)
group=c(rep(1, times=3), rep("two", times=3), rep(8, times=4))
welch.test(y, group)
```
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