# Package 'minsample2'

October 31, 2022

**Type** Package

**Title** The Minimum Sample Size

**Version** 0.1.0

**Description** Using this package, one can determine the minimum sample size required so that the mean square error of the sample mean and the population mean of a distribution becomes less than some pre-determined epsilon, i.e. it helps the user to determine the minimum sample size required to attain the pre-fixed precision level by minimizing the difference between the sample mean and population mean.

**License** GPL-3

**Encoding** UTF-8

**RoxygenNote** 7.2.1

**Suggests** knitr, rmarkdown, testthat (>= 3.0.0)

**VignetteBuilder** knitr

**Config/testthat/edition** 3

**NeedsCompilation** no

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**Repository** CRAN

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## R topics documented:

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l_exp                          *Prints the minimum size of the sample required to get epsilon neigh-*
                               *borhood for given value of epsilon for Exponential Distribution*

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### Description

This package helps determining the minimum sample size required to attain some pre-fixed precision level.

### Usage

```
l_exp(n, eps, theta = 1)
```

### Arguments

| | |
|---|---|
| n | a vector of proposed sample size |
| eps | a vector of the precision level |
| theta | the parameter for the underlying distribution, here Exponential Distribution |

### Details

in any distribution for a large sample the mean-squared error gradually tends to zero, the minimum number depends on the precision level i.e. the pre-fixed eplison.

### Value

report: the data frame containing the minimum value of the sample size corresponding to the pre-fixed epsilon

### References

Methods for this process is described in A.M.Gun,M.K.Gupta,B.Dasgupta(2019,ISBN:81-87567-81-3).

### Examples

```
l_exp(1:5,0.5,1)
```

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| l_norm | *Prints the minimum size of the sample required to get epsilon neighborhood for given value of epsilon for Normal Distribution* |
|---|---|

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### Description

This package helps determining the minimum sample size required to attain some pre-fixed precision level

### Usage

```
l_norm(n, eps, mu = 0, sigma = 1)
```

### Arguments

| | |
|---|---|
| n | a vector of proposed sample size |
| eps | a vector of the precision level |
| mu | the location parameter for the underlying distribution, here normal distribution(mean) |
| sigma | the scale parameter for the underlying distribution, here normal distribution(standard deviation) |

### Details

in any distribution for a large sample the mean-squared error gradually tends to zero, the minimum number depends on the precision level i.e. the pre-fixed eplison

### Value

report: the data frame containing the minimum value of the sample size corresponding to the pre-fixed epsilon

### References

Methods for this process is described in A.M.Gun,M.K.Gupta,B.Dasgupta(2019,ISBN:81-87567-81-3).

### Examples

```
l_norm(1:5,0.5,3,1)
```

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