

logit() — Log odds and complementary log–log

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Description

`logit(X)` returns the log of the odds ratio of the elements of X , $\ln\{x/(1-x)\}$.

`invlogit(X)` returns the inverse of the `logit()` of the elements of X , $\exp(x)/\{1 + \exp(x)\}$.

`cloglog(X)` returns the complementary log–log of the elements of X , $\ln\{-\ln(1-x)\}$.

`invcloglog(X)` returns the elementwise inverse of `cloglog()` of the elements of X , $1 - \exp\{-\exp(x)\}$.

Syntax

real matrix `logit(real matrix X)`

real matrix `invlogit(real matrix X)`

real matrix `cloglog(real matrix X)`

real matrix `invcloglog(real matrix X)`

Conformability

All functions return a matrix of the same dimension as input containing element-by-element calculated results.

Diagnostics

`logit(X)` and `cloglog(X)` return missing when $x \leq 0$ or $x \geq 1$.

Also see

[M-4] [Statistical](#) — Statistical functions

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