logit( ) — Log odds and complementary log–log

Description Syntax Conformability Diagnostics Also see

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