Title

logit( ) — Log odds and complementary log-log

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*)

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*, $1 - \exp\{-\exp(x)\}$.

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