Functions for Testing Goodness-of-Fit

The file `Test_GoF.r` (available on the web site) contains a number of R functions to perform various goodness-of-fit tests. The tests are discussed in Chapter 7 of the Red Book.

Test R-Function	Arguments	Output
χ^2-test `Chi.Square`	`Z`, residuals Z_x `Npar`, number of fitted parameters	`Chis2`, value of χ^2 `DF`, df `Sig.Pr`, significance probability
Standardized deviations `Standard.Area` (equal cell area form)	`Z`, residuals Z_x `N`, number of cells	`Boundary`, boundaries of cells `Obs`, O_i; `Exp`, E_i; `DF`, df `Chis2`, value of χ^2 `Sig.Pr`, significance probability
Standardized deviations `Standard.Width` (equal cell width form)	`Z`, residuals Z_x `W`, width of internal cells	`Boundary`, boundaries of cells `Obs`, O_i; `Exp`, E_i; `DF`, df `Chis2`, value of χ^2 `Sig.Pr`, significance probability
Sign test `Sign`	`Z`, residuals Z_x	`N.plus`, number of +'s `N.minus`, number of −'s `Sig.Prob`, significance probability
Change of sign test `Change.Sign`	`Z`, residuals Z_x	`N`, number of Z_x `Change`, number of changes `Sig.Pr`, significance probability
Runs test `Runs.test`	`Z`, residuals Z_x	`n1`, number of +'s `n2`, number of −'s `g`, number of groups of + signs `Sig.Pr`, significance probability
Runs test (permutation test) `Runs.Test.Perm`	`Z`, residuals Z_x	`Runs`, number of runs `Null.dist`, null distribution `Sig.Pr`, significance probability
Serial correlation test `Serial`	`Z`, residuals Z_x	`Serial`, correlation coef. `Sig.Pr`, significance probability