Equivalences between Traditional Statistical Tests and PRE/F* of Model C/Model A Comparisons

Traditional Name	Equivalent Test and Comments	Cont. Pred.	Cat(Lev)[1] Predictor	Transform	Chapt[2]
One-Sample t-test	SQRT(F*) for Simple Model H_0: $\beta_0 = \mathbf{B}_0$	0	0	---	5
Two-Sample t-test (independent)	SQRT(F*) for H_0: $\beta_1 = 0$	0	B: 1(2) W: 0	---	11
One-Way ANOVA	Omnibus F*	0	B: 1(>2) W: 0	---	11
Two-Way ANOVA	Omnibus tests for row, col, and interactions	0	B: 2(≥2) W: 0	---	12
n-Way Factorial ANOVA	Many omnibus tests	0	B:>2(≥2) W: 0	----	12
ANCOVA or Equivalence of Regression Models		≥1	B:≥1(≥2) W: 0	---	13
Simple Regression	H_0: $\beta_1 = 0$	1	0	---	6,7
Multiple Regression (Additive)	Omnibus R^2 and individual PRE's	≥2	0	---	8
Multiple Regression (Interactions)	Product variables in Multiple Regression	≥2	0	---	10
R^2, Coef. of Multiple Determination	Omnibus PRE	≥2	0	---	8
Coef. of Partial Determination	PRE for 1 predictor	≥2	0	---	8
Partial Correlation	SQRT(PRE) 1 predictor	≥2	0	---	8

[1]B represents "between-subject" categorical variables and W represents "within-subject" categorical variables. The number in parentheses is the number of levels of the categorical variable.
[2]Chapter reference to Judd and McClelland (1989).

Traditional Name	Equivalent Test and Comments	Cont. Pred.	Cat(Lev)[3] Predictor	Transform	Chapt[4]
Correlation	SQRT(PRE)	1	0	---	7
Point-Biserial Correlation	SQRT(PRE)	0	B: 1(2) W: 0	---	11
Spearman Rho	SQRT(PRE)	1	0	Ranks	7,16
Mann-Whitney	isomorphic to 2-sample t independent	0	B: 1(2) W: 0	Ranks	11,16
Kruskal-Wallis	1-way ANOVA	0	B: 1(≥3) W: 0	Ranks	11,16
Two-Sample t-test (dependent)	SQRT(F*) for Simple Model $H_0: \beta_0 = 0$	0	B: 0 W: 1(2)	$W_i = Y_{i,1}-Y_{i,2}$	14
One-Way ANOVA (Repeated Measures)	see Chapt. 14	0	B: 0 W: 1(≥3)	W's	14
Two-Way ANOVA (Rpeated Measures)	see Chapt. 14	0	B: 0 W: 2(≥2)	W's	14
Between-Within ANOVA	see Chapt. 14	0	B: 1 (≥2) W: 1(≥2)	W's	14
Sign Test or Wilcoxon	isomorphic to 2-sample t (dependent)	0	B: 0 W: 1(2)	Ranks	16
Friedman	isomorphic to 1-way ANOVA (repeated)	0	B: 0 W: 1(≥3)	Ranks & W's	14,16
Chi-Square	none	---	---	---	---

[3]B represents "between-subject" categorical variables and W represents "within-subject" categorical variables. The number in parentheses is the number of levels of the categorical variable.
[4]Chapter reference to Judd and McClelland (1989).