

Contents

Formulas Useful for Linear Regression Analysis and Related Matrix Theory	1
1 The Model Matrix & Other Preliminaries	1
2 Fitted Values and Residuals	8
3 Regression Coefficients	10
4 Decompositions of Sums of Squares.	15
5 Distributions	18
6 Best Linear Predictor	27
7 Testing Hypotheses	33
8 Regression Diagnostics	39
9 BLUE: Some Preliminaries	44
10 Best Linear Unbiased Estimator.	48
11 The Relative Efficiency of OLSE	57
12 Linear Sufficiency and Admissibility	63
13 Best Linear Unbiased Predictor	65
14 Mixed Model.	68
15 Multivariate Linear Model	72
16 Principal Components, Discriminant Analysis, Factor Analysis	74
17 Canonical Correlations	77
18 Column Space Properties and Rank Rules.	79
19 Inverse of a Matrix	82
20 Generalized Inverses	87
21 Projectors	91
22 Eigenvalues.	96
23 Singular Value Decomposition & Other Matrix Decompositions	105
24 Löwner Ordering	110
25 Inequalities	112
26 Kronecker Product, Some Matrix Derivatives	115



<http://www.springer.com/978-3-642-32930-2>

Formulas Useful for Linear Regression Analysis and
Related Matrix Theory

It's Only Formulas But We Like Them

Puntanen, S.; Styan, G.P.H.; Isotalo, J.

2013, XII, 125 p. 3 illus., 2 illus. in color., Softcover

ISBN: 978-3-642-32930-2