List of Examples

1.1	Explaining why People vote	page 4
1.2	Graphing Ideal Points in the Senate	7
1.3	The "Cube Rule" in Votes to Seats	24
1.4	Child Poverty and Reading Scores	28
1.5	Coalition Cabinet Formation	31
2.1	An Expected Utility Model of Conflict Escalation	60
2.2	Testing for a Circular Form	63
2.3	Presidential Support as a Parabola	65
2.4	Elliptical Voting Preferences	68
2.5	Hyperbolic Discounting in Evolutionary Psychology and	
	Behavioral Economics	71
3.1	Vector Addition Calculation	84
3.2	Vector Subtraction Calculation	85
3.3	Scalar Multiplication Calculation	85
3.4	Scalar Division Calculation	85
3.5	Illustrating Basic Vector Calculations	86
3.6	Simple Inner Product Calculation	87
3.7	Vector Inner Product Calculations	88
3.8	Cross Product Calculation	91

XV111	List of Examples	
3.9	Outer Product Calculation	92
3.10	Difference Norm Calculation	94
3.11	Multiplication Norm Calculation	94
3.12	Votes in the House of Commons	95
3.13	Hölder's Inequality Calculation	97
3.14	The Political Economy of Taxation	97
3.15	Marriage Satisfaction	104
3.16	Matrix Addition	106
3.17	Matrix Subtraction	107
3.18	Scalar Multiplication	107
3.19	Scalar Division	107
3.20	Matrix Calculations	108
3.21	LU Matrix Decomposition	112
3.22	Matrix Permutation Calculation	115
3.23	Calculations with Matrix Transpositions	116
3.24	Kronecker Product	120
3.25	Distributive Property of Kronecker Products Calculation	123
4.1	Linear Transformation of Voter Assessments	137
4.2	Structural Shortcuts	143
4.3	Structural Equation Models	147
4.4	Matrix Norm Sum Inequality	150
4.5	Schwarz Inequality for Matrices	151
4.6	Calculating Regression Parameters	155
4.7	Solving Systems of Equations by Inversion	159
4.8	Basic Eigenanalysis	162
4.9	Analyzing Social Mobility with Eigens	164
4.10	LDU Decomposition	168
5.1	Quadratic Expression	181
5.2	Polynomial Ratio	181
5.3	Fractions and Exponents	181
5.4	Mixed Polynomials	182
5.5	Derivatives for Analyzing Legislative Committee Size	187

	List of Examples	X1X
5.6	Productivity and Interdependence in Work Groups	194
5.7	Security Trade-Offs for Arms Versus Alliances	198
5.8	Analyzing an Infinite Series for Sociology Data	202
5.9	The Median Voter Theorem	214
5.10	Utility Functions from Voting	223
6.1	The Relationship Between Age and Earnings	237
6.2	Indexing Socio-Economic Status (SES)	238
6.3	Power Cycle Theory	242
6.4	Double Integral with Constant Limits	251
6.5	Revisiting Double Integrals with Constant Limits	252
6.6	Double Integral with Dependent Limits	253
6.7	More Complicated Double Integral	254
6.8	The Nazification of German Sociological Genetics	256
6.9	Measuring Small Group Standing	257
6.10	Consecutive Integers	261
6.11	Telescoping Sum	261
6.12	Geometric Series	261
6.13	Repeating Values as a Geometric Series	262
6.14	An Equilibrium Point in Simple Games	263
7.1	Survey Sampling	289
7.2	A Single Die	292
7.3	Countably Finite Set	293
7.4	Multiple Views of Countably Finite	293
7.5	Countably Infinite Set	294
7.6	Uncountably Infinite Set	294
7.7	Single Die Experiment	299
7.8	Overlapping Group Memberships	302
7.9	Approval Voting	304
7.10	Single Coin Flip	307
7.11	Probabilistic Analysis of Supreme Court Decisions	310
7.12	Updating Probability Statements	312
7.13	Conditional Probability with Dice	312

7.14	Analyzing Politics with Decision Trees	319
7.15	Parental Involvement for Black Grandmothers	322
8.1	Measuring Ideology in the American Electorate	335
8.2	Binomial Analysis of Bill Passage	342
8.3	Poisson Counts of Supreme Court Decisions	345
8.4	Modeling Nineteenth-Century European Alliances	346
8.5	Poisson Process Model of Wars	346
8.6	Characterizing Income Distributions	352
8.7	Levels of Women Serving in U.S. State Legislatures	355
8.8	The Standard Normal CDF: Probit Analysis	357
8.9	Entropy and the Uniform Distribution	359
8.10	Employment by Race in Federal Agencies	362
8.11	Employment by Race in Federal Agencies, Continued	366
8.12	An Ethnoarchaeological Study in the South American Tropical	
	Lowlands	369
8.13	Craps in a Casino	373
9.1	Contraception Use in Barbados	395
9.2	Campaign Contributions	399
9.3	Shuffling Cards	401
9.4	Conflict and Cooperation in Rural Andean Communities	411
9.5	Population Migration Within Malawi	415