## **CONTENTS**

	Preface vii	4.4	The Lognormal Distribution 143	
Chai	pter 1	4.5	The Exponential Distribution 147	
Summarizing Univariate Data 1 Introduction 1		4.6	Some Other Continuous Distributions 151	
		4.7	Probability Plots 157	
1.1 1.2	Sampling 3 Summary Statistics 11	4.8	The Central Limit Theorem 161	
1.3	Graphical Summaries 20	Cha	pter 5	
	pter 2		t and Interval Estimation for igle Sample 172	
Sum	marizing Bivariate Data 37		Introduction 172	
	Introduction 37	5.1	Point Estimation 173	
2.1 2.2	The Correlation Coefficient 37 The Least-Squares Line 49	5.2	Large-Sample Confidence Intervals for a Population Mean 176	
2.3	Features and Limitations of the Least-Squares Line 56	5.3	Confidence Intervals for Proportions 189	
Chapter 3		5.4	Small-Sample Confidence Intervals for a Population Mean 195	
Prob	pability 66 Introduction 66	5.5	Prediction Intervals and Tolerance Intervals 204	
3.1	Basic Ideas 66	Cha	Chapter 6 Hypothesis Tests for a Single Sample 212	
3.2	Conditional Probability and Independence 74			
3.3	Random Variables 84		Introduction 212	
3.4	Functions of Random Variables 104	6.1	Large-Sample Tests for a Population Mean 212	
Chapter 4 Commonly Used Distributions 119		6.2	Drawing Conclusions from the Results of Hypothesis Tests 221	
Con	Introduction 119	6.3	Tests for a Population Proportion 229	
4.1	The Binomial Distribution 119	6.4	Small-Sample Tests for a Population Mean 233	
4.2	The Poisson Distribution 127	6.5	The Chi-Square Test 239	
4.3	The Normal Distribution 134	6.6	Fixed-Level Testing 248	

6.7	Power 253	9.3	Two-Factor Experiments 421		
6.8	Multiple Tests 262	9.4	Randomized Complete Block Designs 441		
Chapter 7		9.5	2 <sup>p</sup> Factorial Experiments 448		
Infer	nferences for Two Samples 268		Chapter 10		
	Introduction 268	•			
7.1	Large-Sample Inferences on the Difference Between Two Population Means 268	Statistical Quality Control 477 Introduction 477			
		40.4			
7.2	Inferences on the Difference Between Two Proportions 276		Basic Ideas 477		
			Control Charts for Variables 480		
7.3	Small-Sample Inferences on the Difference Between Two Means 284		Control Charts for Attributes 499		
			The CUSUM Chart 504		
7.4	Inferences Using Paired Data 294	10.5	Process Capability 507		
7.5	The F Test for Equality of Variance 303		Appendix A: Tables 514		
Chapter 8		Appendix B: Bibliography 537			
Inference in Linear Models 312					
	Introduction 312		Answers to Selected Exercises 540		
8.1	Inferences Using the Least-Squares Coefficients 313		Index 574		
8.2	Checking Assumptions 335				
8.3	Multiple Regression 345				
8.4	Model Selection 362				
Chapter 9					
Factorial Experiments 396					
ract	Introduction 396				
0.1					
9.1	One-Factor Experiments 396				
9.2	Pairwise Comparisons in One-Factor Experiments 415				