# TFN

- INTRODUCTION
  - 1.1 What is Statistics?
  - 1.2 The uses of Statistics.
- EMPIRICAL FREQUENCY DISTRIBUTIONS 8

  - 2.1 Frequency distributions.2.2 Cumulative frequency distributions.2.3 Graphic presentation.
- DESCRIPTIVE MEASURES
  - 3.1 Introduction.
  - 3.2 Symbols and summation notation. 3.3 Measures of location.

26

- The mean.
- 3.5 The weighted mean.
- 3.6 The median.
- 3.7 The mode.
- 3.8 Selecting a measure of location.
- 3.9 Measures of variation.
- 3.10 The Range.

4.	ELEMENTARY PROBABILITY	66
	4.1 Introduction.	
	4.2 The meaning of probability.	
	4.3 Factorial notation.	
	4.4 Permutations and combinations.	
	4.5 Combined events.	
	4.6 Some rules concerning probability.	
	4.7 Repeated independent trials.	
	4.8 A diagrammatic approach.	
	4.9 Empirical probabilities.	
5.	POPULATIONS, SAMPLES, AND THEORETICAL DISTRIBUTIONS	88
	5.1 Populations.	
	5.2 Samples.	
	5.3 Random variables.	
	5.4 Theoretical distributions of random variables.	
	5.5 Parameters and statistics.	
	5.6 The binomial distribution.	
	5.7 Normal distributions.	

3.11 The variance and standard deviation.3.12 Changes of scale (coding).3.13 The coefficient of variation.

5.9	The normal Sampling of The centro	listributio		binomial.
STATI	STICAL	INFE	RENCE I	[:
NOR	MAL PO	PULA	TIONS	132
6.1	Introductio	n.		
	Estimation	-		
6.3	Estimating	paramete.	rs of normal e	distribution

- s.
- 6.4 Interval estimates.
- 6.5 A confidence interval for the mean of a normal distribution.
- 6.6Sample size.
- 6.7 Tests of hypotheses.
- 6.8 Hypotheses concerning the mean of a normal  $\hat{d}istribution.$
- 6.9 Two-sample techniques.
- 6.10 Comparing the effects of two treatments.

### STATISTICAL INFERENCE II: DISCRETE DATA

- 7.1 Introduction.
- 7.2 Binomial populations.
- 7.3 Estimates—binomial populations.
- 7.4 Confidence limits for p.
- 7.5 Testing hypotheses about p.
- 7.6 The multinomial chi-square.
- A test for goodness of fit.
- 7.8 Contingency tables.

## REGRESSION AND CORRELATION

190

- Simple linear regression.
- 8.2 Partitioning the sum of squares.
- Variance estimates.
- 8.4 Confidence intervals and tests of hypotheses.
- 8.5 The coefficient of determination.
- Some uses of regression.
- Correlation.

# ANALYSIS OF VARIANCE: SINGLE CLASSIFICATION

04 7 1 . 7 . 12 ....

212

y.1	Introduction.
9.2	The model.
9.3	Constructing the analysis of variance table.
9.4	A numerical example.
9.5	Estimation.
	The hypothesis of equal means.
9.7	The effects of unequal size groups.

9.8 The completely randomized design.
9.9 The role of randomization.
9.10 Nested classifications.
9.11 Estimating components of variance.

#### APPENDIX 249

TABLE I. TABLE II.	Binomial coefficients, (*n). 249 Areas of the standard normal distribution. 252
TABLE III.	Values of t for given probability levels. 257
Table $IV$ .	95% confidence intervals (percent) for binomial
	distributions. 258
Table $V$ .	Percentage points of the chi-square
	distribution. 259
Table $VI$ .	Random numbers. 260
TABLE VII.	"Normal" population of 1000 observation with
	mean = 4000  and  variance = 1,000,000. 264
TABLE VIII.	Relationship between $z$ and $r$ (or $\mu_z$ and $\rho$ ). 275
TABLE $IX$ .	Percentage points of the F-distribution. 276