

TABLE OF CONTENTS

	Page
EQUIPMENT LISTS.	1
 Chapter 1. MEASUREMENT.	 5
1.1 Introduction.	5
1.2 Measurements, Magnitudes and Units.	5
1.3 Exercise 1	9
1.3 Measurement	9
Exercise 2	11
1.4 - 1.5 Measurement of Length: Ideas of Accuracy	12
Exercise 3	12
1.6 Addition of Lengths	12
Exercise 4	13
1.7 Unequal Numbers	14
Exercise 5	14
1.8 More on Inequalities.	14
Exercise 6	15
1.9 Unequal Lengths	17
Exercise 7	17
1.10 Measurement and Standard Units: A Classroom Experiment	18
1.11 Standard Units.	18
1.12 Length Measurement and Counting	19
1.13 Further Properties of Order: The Transitive Property	19
Exercise 8	21
1.14 Further Properties of Order: Addition.	22
Exercise 9	23
Sample Test Items.	25
Answers to Sample Test Items	27
 Chapter 2. LENGTH AND THE NUMBER LINE	 31
2.1 Using Related Units in Measuring.	31
2.2 Unmarked Stick Experiment	32
Exercise 1	36
2.3 The Metric System of Length	37
Exercise 2	38

2.4 and 2.5	Successive Approximations to a Length Measure and The Determination of Length Measure	39
	Exercise 3	40
	Exercise 4	41
2.6	How Lengths are Quoted in Practice.	42
	Exercise 5	43
2.7	Exponents	44
	Exercise 6	44
2.8	Negative Exponents. Scientific Notation	45
	Exercise 7	46
2.9	The Number Line	47
	Exercise 8	48
	Sample Test Items.	50
	Answers to Sample Test Items	51
Chapter 3. RELATIONS, FUNCTIONS AND GRAPHING.		53
3.1	Introduction.	53
3.2	Ordered Pairs	54
3.3	Relations	54
	Exercise 1	55
3.4	An Experiment (Cantilever Experiment)	56
3.5	Graphing of Ordered Pairs	57
	Exercise 2	58
3.6	Functions	62
	Exercise 3	63
3.7	More Graphing (The Irregular Bottle Experiment)	64
3.8	A coordinate System in a Plane.	68
	Exercise 4	69
3.9	Quadrants	73
	Exercise 5	73
3.10	Graphing an Experiment.	74
	Exercise 6	74
	Sample Test Items.	76
	Answers to Sample Test Items	79
Chapter 4. THE LINEAR FUNCTION.		83
4.1	Graphing Linear Functions Through the Origin.	83
	Exercise 1	87

4.2	Representing Linear Functions by Sentences.	88
	Exercise 2	88
4.3	Functions of the Form: $y = mx$	89
	Exercise 3	89
4.4	Slope	90
	Exercise 4	94
4.5	Coat Hanger Experiment.	95
	Exercise 5	95
4.6	Graphing Linear Functions in General - Spring Experiment.	97
	Exercise 6	97
4.7	The Centigrade - Fahrenheit Experiment.	98
	Exercise 7	99
	Sample Test Items.	100
	Answers to Sample Test Items	102