

Contents

PART I

Preface	7
1. Introduction	9
2. Logarithms Simply Explained	10
3. The Mathematical Basis of Slide Rule Calculations	14
4. Description of a Simple Slide Rule	16
5. Multiplication	19
6. Continued Products	22
7. Division	22
8. Combined Multiplication and Division	25
9. Proportions	28
10. Gauge Points	30
11. Squares	30
12. Square Roots	32
13. Computation involving Squares and Square Roots	33
14. Cubes	40
15. Cube Roots	41
16. Scale of Reciprocals	42
17. Solving Equations by Slide Rule	46
18. The Mantissa Scale L	51
19. The Sine Scale S	54
20. The Tangent Scale T	62

PART II

21. Rules with Log Log Scales	67
22. Raising any Number to any Power: A^x	69
23. Finding Roots to any Index: $\sqrt[x]{a}$	70
24. Logarithms to any Base: $\text{Log}_x a$	71
25. Rules with a Pythagoras Scale	72
26. The Folded Scales CF, DF and CIF	73
27. Special-purpose Instruments	76
28. The Accuracy of the Slide Rule	79

PART III

29. Multiplication, Division, and Combined Operations (§§5, 6, 7, 8, 9)	85
30. Examples on Proportions (§§1, 7)	91
31. Examples on Squares and Square Roots (§§11, 12, 13)	94
32. Examples on Cubes and Cube Roots (§§14, 15)	101
33. Examples showing the Advantages of the Inverted Scale CI (§16)	102
34. Examples using the Mantissa Scale L (§18)	106
35. Examples using the Sine Scale S (19)	108
36. Examples using the Tangent Scale T (§20)	111
37. Examples using the Folded Scales (§26)	113
38. Examples using the Log Log Scales (§21)	114
Aide Memoire	117