## The Slide Rule and Logarithmic Tables, J. J. Clark, 1957

 The purpose of this text, according to the Preface, is to provide, "... in one volume, instructions for the use of all styles of slide rules, instructions in the use of log and trig tables, and a complete set of such tables.  It is at once a textbook and a reference work, arranged... to be of real usefulness to those already familiar with the subject as well as to the beginner." Based on the type and complexity of examples In the book, it seems that the tutorial sections of the book are best aimed at college freshman-level students in technical curricula, although they may also be used by advanced high-school students in science or pre-engineering courses of study.  The author maintains that, "... the text arrangement is suitable for either individual or classroom study..."  Chapter VI, entitled "Systems of Logarithms", is probably the least threatening and most accessible explanation of logarithms I have ever read.  Although the mathematical principles and manipulations used in the book can certainly serve business and finance practitioners, there are no such examples or suggestions in the text.

The author provides both theory and practical instruction on the use of the rule, but does not tie the instructional material to the underlying theoretical basis.  In other words, by following this text, one can readily learn to use the slide rule proficiently, yet not be immersed in theory if that is of no interest.  Almost all the exercises and examples in the book are purely numerical; there are only five applied exercises in any specific scientific or engineering fields and those are in the chapter on operations with logarithms.

The scale sets used in instructions and exercises emphasize the C, D, CI, A, B, L, S, T scales common to Mannheim and Polyphase rules.  Interestingly, although the author cites the K scale's existence on Mannheim rules, he does not use it in any examples or exercises, using the C, B, and A scales to determine cubes and higher powers.  Log-Log (LL) scales are discussed and instructions for finding fractional roots and powers are provided.  LL scales are also used to determine hyperbolic logarithms although hyperbolic trig functions are not directly mentioned.  No specific slide rules or manufacturers are recommended.

The book contains a number of helpful tables: logarithms of trig functions, natural trig functions, a 4-place log table, and a 10-place (!)  log table.  The book's 8-page index is well-constructed and adds significantly to the text's usefulness as a reference book.


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