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Learning mathematics through DERIVE. (English)

Ellis Horwood Series in Mathematics and its Applications. New York, NY: Ellis Horwood. xi, 371 p. \$ 27.00 (1993). [ISBN 0-13-037532-2/pbk]

This book covers material on functions, calculus, and algebra that was taught by the authors at the University of Plymouth.

The material is presented in a unique fashion using the computer algebra system DERIVE as central didactical tool. This is an interesting new approach in teaching mathematics, and the book uses this approach consequently.

In my feeling, the text emphasizes a little too much on the use of DERIVE for pattern recognition (e.g., the differentiation of x^n for different values of $n \in$ or the development of the binomial theorem) rather than on the mathematical concepts themselves. But, nevertheless, the book is a valuable contribution to the use of computer algebra in mathematical education.

W.Koepf (Berlin)

Keywords : functions; calculus; algebra; computer algebra system DERIVE

Classification:

- 26-01 Textbooks (real functions)
- 68Q40 Symbolic computation, algebraic computation
- 68W30 Symbolic computation and algebraic computation