

BOOK REVIEWS

Edited by ANDY LIU

Learn from the Masters! edited by Frank Swetz, John Fauvel, Otto Bekken, Bengt Johansson, Victor Katz, published by the MAA, Classroom Resource Materials Series, 1995, ISBN# 0-88385-703-0, softcover, 312+ pages, \$23.00.

Reviewed by **Maria de Losada**, Bogotá, Colombia.

A rich and varied collection of thoughts directed primarily toward the use of the history of mathematics for effective and enriched teaching (and learning), these are papers given at the “Kristiansand (Norway) Conference” of 1988. The areas and topics cover a broad range corresponding to different tastes and personal interests, divided in sections on school and higher mathematics. Frank Swetz’s **Using Problems from the History of Mathematics in Classroom Instruction** is a superb example of history transcending anecdotal information and grasping the relationship between problem solving and the gradual construction of meaning (especially clear in the section *Illustrating the growth of mathematical proficiency*), an essential component of each individual student’s coming to grips with mathematical concepts. The choice of problems and the orientation involving the specific ways in which they can be used to enrich instruction is excellent. Other papers that focus on mathematical thinking explore algorithms and analogies, modelling and heuristic reasoning, as well as Man-Keung Siu’s **Mathematical Thinking and History of Mathematics**.

In the latter section, amidst the very fine selection offered, the article by Israel Kleiner **The Teaching of Abstract Algebra: An Historical Perspective** stands out. Kleiner describes his approach as genetic, but notes that he tries “to show how attempts to solve the problems give rise to the abstract theory. This is, of course, the historical sequence of events.” He further addresses the question of how “history provides the opportunity to raise a number of general issues about the nature of mathematics”.

It is most unfortunate that the random sprinkling of photographs of notable mathematicians throughout the book should place that of Emmy Noether opposite the title **In Hilbert’s Shadow**.

Definitely of interest to those who lean toward using history as a resource for enriching their teaching and the mathematical thinking of their students, as well as to those whose interest in historical subjects is just beginning to be awakened.

