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Recursively enumerable sets and degrees: A study of computable functions and computably generated sets, by Robert I. Soare. Perspectives in Mathematical Logic, Springer-Verlag, Berlin, Heidelberg, New York, 1987, xviii + 437 pp., \$35.00. ISBN 3-540-15299-7

One of the tantalizing aspects of twentieth century mathematical logic is the juxtaposition of the highly theoretical with the very practical. Logical investigations, aimed at giving precise mathematical definitions of “theorem”, “proof”, and “mathematical truth”, led naturally to a study of computable processes. As a result, it is now generally recognized that recursive function theory provides the theoretical foundation for computer science.