and computations are presented on a generous scale. Quadratic fields, cyclotomic fields, units, class numbers, discriminants and differents are among the topics treated with meticulous care. The fundamental theorem–every ideal is uniquely a product of prime ideals–arrives on p. 387 (but in fairness it should be noted that the delay in getting there is due partly to strict adherence to the local-global plan).

At the end of every major episode there is a parallel treatment of the function field case. Where there is a big difference there is appropriate added material, e.g. the Riemann-Roch theorem.

It is trite but true: Every number-theorist should have this book on his or her shelf.

In closing I shall maintain the tradition of the reviewing craft by recording the typos I noticed: pages 99, 309, 388, 575, 616; lines -3, -6, 16, 7, 21; quadratic, been, is, fields, Rogers.

IRVING KAPLANSKY

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Combinatorial problems and exercises, by László Lovász, North-Holland, Amsterdam, 1979, 551 pp., $26.75.

Perhaps combinatorics is no longer deemed to be the slum of topology but it still has a remarkable polarising effect on mathematicians. The practitioners of combinatorics tend to idolise it as the only truly interesting branch of mathematics, while people not active in combinatorics are likely to have no respect for it and dismiss it as a collection of scattered results and trivial artificial problems. This highly unsatisfactory situation cannot be blamed entirely on the youth of the subject, though it is certainly one of the reasons. Those of us who work in combinatorics are also at fault, for most of our journals do publish more than their fair share of below par papers. Furthermore, as combinatorics fails to command the respect of the majority of the mathematical community, some combinatorialists feel entitled to disregard the huge developments in the main branches of mathematics.

There are signs that these lean years for combinatorics will soon be over. This is the hope expressed by Lovász in the Preface of *Combinatorial problems and exercises*. "Having vegetated on the fringes of mathematical science for centuries, combinatorics has now burgeoned into one of the fastest growing branches of mathematics–undoubtedly so if we consider the number of publications in this field, its applications in other branches of mathematics and in other sciences, and also, the interest of scientists, economists and engineers in combinatorial structures. The mathematical world has been attracted by the successes of algebra and analysis and only in recent years has it become clear, due largely to problems arising from economics, statistics, electrical engineering and other applied sciences, that combinatorics, the study of finite sets and finite structures, has its own problems and principles.