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BOOK REVIEWS — РЕЦЕНЗИИ

P. Erdős, A. Hajnal, A. Máthé, R. Rado: COMBINATORIAL SET THEORY: PARTITION RELATIONS FOR CARDINALS. Akadémiai Kiadó, Budapest 1984, 347 pages.

Recently, there has been a great upsurge in the study of finite combinatorial problems. There is also a significant, though more manageable, interest in the combinatorial properties of infinite sets. This book deals solely with combinatorial questions pertinent to infinite sets.

The aim of the authors, from which Erdős, Hajnal and Rado are wellknown and great specialists in the subject, is to present the most important combinatorial ideas in the partition calculus for cardinals. Partition calculus was developed originally as a collection of generalizations of the celebrated Ramsey's theorem, published in 1930.

An introductory chapter contains the Zermelo—Fraenkel axiom system of set theory and there are described the partition symbols used in the sequel. The axiom of choice is assumed throughout the whole book. After preliminaries in the chapter II, the chapter III contains a comprehensive guide to fundamentals about partition relations. It involves also the classical Ramsey's theorem and the Erdös—Dushnik—Milner theorem. In the chapters IV and V the positive and negative ordinary partition relations are treated. The chapter VI consists of the general Canonization Lemma and the chapter VII gives results in large cardinals. The chapters VIII and IX contain a discussion of the ordinary partition relations with superscript $r=2$ and $r\geqslant 3$. An interesting part of the present book is the chapter X, where are included some applications of partition relations and combinatorial methods connected with them in topology and in the theory of set mappings. The last chapter XI contains a brief survey of the square bracket relation.

The book is well provided by detailed bibliography and also by author and subject indexes. At the difference of the book of N. H. Williams "Combinatorial Set Theory" (1977), which is devoted to the broader area of infinite combinatorics, the present one can be regarded as an excelent guidebook on partition calculus for cardinals.

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