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*Erdős on graphs. His legacy of unsolved problems.* (In English)

Wellesley, MA: A K Peters, (ISBN 1-56881-079-2/hbk). xiii, 142 p.  
\$ 30.00 (1998). [ISBN 1-56881-079-2/hbk]

This book is a compilation of graph theory problems posed by Paul Erdős along with many of his collaborators, but it is more than that. It gives some insight into the nature of the man Paul Erdős, and it provides the mathematical threads that tie together his many innocent looking and simply stated problems along with extensive helpful references. After some introductory remarks, an appropriate excerpt from a problem paper of Uncle Paul, and a very short introductory chapter with notation, definitions, and some general references, the book launches into six chapters entitled: 2. Ramsey Theory, 3. Extremal Graph Theory, 4. Coloring, Packing, and Covering, 5. Random Graphs and Graph Enumeration, 6. Hypergraphs, and 7. Infinite Graphs. The book ends with some interesting stories about Paul Erdős as told by Andy Vázsonyi, a boyhood friend of his from Budapest. Each of the chapters is broken into sections focusing on subtopics of the area. For example, in Ramsey Theory (the longest chapter), sections on classical, generalized, multicolor, size, induced, and hypergraph Ramsey theory are included. The problems are introduced in a relaxed and informal way by describing what led to the problem along with related results and problems. Information about sources is provided in footnotes, and when appropriate, the monetary value of an Erdős problem is also given. The format allows the book to be used for quick reference (the conjectures and problems are boxed for easy access), and it is well suited for casual and interesting reading. It is an appropriate tribute to one of the great mathematicians of our time who is accurately described as “the prince of problem solvers and the absolute monarch of problem posers”.

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Classification:

05C55 Generalized Ramsey theory

05C35 Extremal problems (graph theory)

05C15 Chromatic theory of graphs and maps

05C80 Random graphs

05C65 Hypergraphs

05C30 Enumeration of graphs and maps

00A07 Problem books

Keywords:

graph theory; problems