Kenneth H. Rosen

Discrete Mathematics and Its Applications

Mc Graw Hill Education

Eighth Edition

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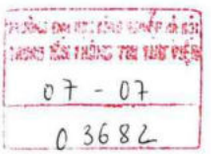

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formerly AT&T Laboratories

Mc Graw Hill Education

DISCRETE MATHEMATICS AND ITS APPLICATIONS

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About the Author

Kenneth H. Rosen received his B
Ann Arbor (1972), and his Ph.D
his thesis in number theory under the dir
in 1982, he held positions at the Univer
Columbus; and the University of Maine
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at Bell Labs, he taught at Monmouth Un
ing theory, and data security. After leavi
of computer science at Monmouth Univ
computer security and cryptography, an

Dr. Rosen has published numerous
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McGraw-Hill, currently in its eighth edit
more than 450,000 copies in North Am
copies throughout the rest of the world.
including Spanish, French, Portuguese,
author of *UNIX: The Complete Referenc*
UNIX Tips Ever, all published by Osb
150,000 copies, with translations into C

Preface

In writing this book, I was guid
discrete mathematics. For the s
able manner, with the concepts ar
demonstrated. My goal was to sho
students, who are often skeptical.
the mathematical foundations they
students an understanding of impo
these concepts are important for a
these goals without watering down

For the instructor, my purpose
proven pedagogical techniques in
of materials that they could use to
most appropriate manner for their
goals.

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and the significant investments tha

This text is designed for a one-
by students in a wide variety of maj
ing. College algebra is the only exp
maturity is needed to study discret
signed to meet the needs of almost
highly flexible and extremely comp
textbook, but also to serve as a val
and professional life.

Goals of a Discrete Mathematics Cour

A discrete mathematics course has
set of mathematical facts and how
students how to think logically an
mathematical reasoning and the di
interwoven in this text: mathemati
gorithmic thinking, and applicatio
should carefully blend and balance

1. *Mathematical Reasoning:* Stude
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of proof. Both the science and t