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Titolo	Mathematical Thinking : Why Everyone Should Study Math / / by Howard Karloff
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ISBN	3-031-33203-2
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (X, 198 p. 35 illus., 20 illus. in color.)
Collana	Compact Textbooks in Mathematics, , 2296-455X
Disciplina	510
Soggetti	Mathematics Number theory Probabilities General Mathematics Number Theory Probability Theory Matemàtica Llibres de text Raonament Llibres electrònics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Primes -- The Euclidean Algorithm -- Modular Arithmetic -- Irrationals -- *i* -- Infinities and Diagonalization -- Binary Search -- Newton's Method -- Graph Theory -- Probability -- Fractals -- Solutions to Puzzles -- Acknowledgements -- Bibliography -- Index.
Sommario/riassunto	This textbook invites readers to explore mathematical thinking by finding the beauty in the subject. With an accessible tone and stimulating puzzles, the author will convince curious non-mathematicians to continue their studies in the area. It has an expansive scope, covering everything from probability and graph theory to infinities and Newton’s method. Many examples of proofs appear as well, offering readers the opportunity to explore these topics with the amount of rigor that suits them. Programming exercises in Python are also included to show how math behaves in action.

Mathematical Thinking is an ideal textbook for transition courses aimed at undergraduates moving from lower level to more advanced topics, as well as for math recruitment and invitational courses at the freshman or sophomore level. It may also be of interest in computer science departments and can be used as a supplemental text for courses in discrete mathematics and graph theory.