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Titolo	How to Count : An Introduction to Combinatorics and Its Applications / / by Robert A. Beeler
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-13844-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (XV, 361 p. 61 illus., 2 illus. in color.)
Disciplina	511.6
Soggetti	Combinatorics Probabilities Probability Theory and Stochastic Processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preliminaries -- Basic Counting -- The Binomial Coefficient -- Distribution Problems -- Generating Functions -- Recurrence Relations -- Advanced Counting - Inclusion and Exclusion -- Advanced Counting - Polya Theory -- Application: Probability -- Application: Combinatorial Designs -- Application: Graph Theory -- Appendices.
Sommario/riassunto	Providing a self-contained resource for upper undergraduate courses in combinatorics, this text emphasizes computation, problem solving, and proof technique. In particular, the book places special emphasis the Principle of Inclusion and Exclusion and the Multiplication Principle. To this end, exercise sets are included at the end of every section, ranging from simple computations (evaluate a formula for a given set of values) to more advanced proofs. The exercises are designed to test students' understanding of new material, while reinforcing a working mastery of the key concepts previously developed in the book. Intuitive descriptions for many abstract techniques are included. Students often struggle with certain topics, such as generating functions, and this intuitive approach to the problem is helpful in their understanding. When possible, the book introduces concepts using combinatorial methods (as opposed to induction or algebra) to prove identities. Students are also asked to prove identities using combinatorial methods as part of their exercises. These methods have several

advantages over induction or algebra.