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Nota di contenuto	; I. Baseball. Sabermetrics : the past, the present, and the future / Jim Albert -- Surprising streaks and playoff parity : probability problems in a sports context / Rick Cleary -- Did humidifying the baseball decrease the number of homers at Coors Field? / Howard Penn -- Streaking : finding the probability for a batting streak / Stanley Rothman and Quoc Le -- ; II. Basketball. Bracketology : how can math help? / Tim Chartier [and others] -- Down 4 with a minute to go / G. Edgar Parker -- Jump shot mathematics / Howard Penn -- ; III. Football. How deep is your playbook? / Tricia Muldoon Brown and Eric B. Kahn -- A look at overtime in the NFL / Chris Jones -- Extending the Colley method to generate predictive football rankings / R. Drew Pasteur -- When perfect isn't good enough : retrodictive rankings in college football / R. Drew Pasteur -- ; IV. Golf. The science of the drive / Douglas N. Arnold -- Is Tiger Woods a winner? / Scott M. Berry -- G.H. Hardy's golfing adventure / Roland Minton -- Tigermetrics / Roland Minton -- ; V. NASCAR. Can mathematics make a difference? Exploring tire troubles in NASCAR / Cheryll E. Crowe -- ; VI. Scheduling. Scheduling a tournament / Dalibor Froncek -- ; VII. Soccer -- Bending a soccer ball with math / Tim Chartier -- ; VIII. Tennis. Teaching mathematics and statistics using tennis / Reza Noubary -- Percentage play in tennis / G. Edgar Parker -- ; IX. Track and field. The effects of wind and altitude in the 400m sprint with various IAAF track geometries / Vanessa Alday and Michael Frantz -- Mathematical ranking of the Division III track and

field conferences / Chris Fiset -- What is the speed limit for men's 100 meter dash / Reza Noubary -- May the best team win : determining the winner of a cross country race / Stephen Szydluk -- Biomechanics of running and walking / Anthony Tongen and Roshna E. Wunderlich.

Sommario/riassunto

This book is an eclectic compendium of the essays solicited for the 2010 Mathematics Awareness Month web page on the theme of Mathematics and Sports. In keeping with the goal of promoting mathematics awareness to a broad audience, all of the articles are accessible to college level mathematics students and many are accessible to the general public. The book is divided into sections by the kind of sports. The section on football includes an article that evaluates a method for reducing the advantage of the winner of a coin flip in an NFL overtime game; the section on track and field examines the ultimate limit on how fast a human can run 100 meters; the section on baseball includes an article on the likelihood of streaks; the section on golf has an article that describes the double-pendulum model of a golf swing, and an article on modeling Tiger Wood's career. The articles provide source material for classroom use and student projects. Many students will find mathematical ideas motivated by examples taken from sports more interesting than the examples selected from traditional sources.
