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Titolo	Beyond the quadratic formula / / Ron Irving [[electronic resource]]
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Descrizione fisica	1 online resource (xvi, 228 pages) : digital, PDF file(s)
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Nota di contenuto	Polynomials -- Quadratic polynomials -- Cubic polynomials -- Complex numbers -- Cubic polynomials, II -- Quartic polynomials -- Higher-degree polynomials.
Sommario/riassunto	The quadratic formula for the solution of quadratic equations was discovered independently by scholars in many ancient cultures and is familiar to everyone. Less well known are formulas for solutions of cubic and quartic equations whose discovery was the high point of 16th century mathematics. Their study forms the heart of this book, as part of the broader theme that a polynomials coefficients can be used to obtain detailed information on its roots. A closing chapter offers glimpses into the theory of higher-degree polynomials, concluding with a proof of the fundamental theorem of algebra. The book also includes historical sections designed to reveal key discoveries in the study of polynomial equations as milestones in intellectual history across cultures. Beyond the Quadratic Formula is designed for self-study, with many results presented as exercises and some supplemented by outlines for solution. The intended audience includes in-service and prospective secondary mathematics teachers, high school students eager to go beyond the standard curriculum, undergraduates who desire an in-depth look at a topic they may have unwittingly skipped over, and the mathematically curious who wish to do some work to unlock the mysteries of this beautiful subject.