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**Cuoco, Al; Rotman, Joseph J.**

**Learning modern algebra. From early attempts to prove Fermat's last theorem.**

MAA Textbooks. Washington, DC: The Mathematical Association of America (MAA) (ISBN 978-1-939512-01-7/hbk; 978-1-61444-612-5/ebook). xix, 459 p. (2013).

This book is destined for college students in the U.S. who intend to teach mathematics in high school. The reviewer finds it even more apt as a text for algebra courses. Special features in the book are side-notes given and printed prominently at the margins of the pages, like: How to think about it, Historical notes, Etymology of notions and words. One finds chapters on: Early number theory (Greek: Euclid, Diophantus, trigonometry, integration), Induction, Renaissance (classical formulae, complex numbers, roots, powers, lattice point triangles), Modular arithmetic (codes, rings, patterns in decimal expansions), Abstract algebra, Arithmetic of polynomials, Quotients, fields, and classical problems (ruler-compass constructions), Cyclotomic integers (Gauss, Eisenstein, Fermat's last theorem for exponent 3), Epilog references (Abel, Galois, solvability by radicals, groups, Wiles and Fermat's last theorem, elliptic integrals, elliptic curves), and Appendices on basic linear algebra and a cyclotomic integer calculator. The above summing up, is by far not exhaustive. The reviewer considers the book a refreshing reading among the vast amount of books dealing with similar topics.

*Robert W. van der Waall (Huizen)*

*Classification:* H19 B50

*Keywords:* teacher education; teacher learning processes; comprehensive work in algebra; methodology of mathematics; didactics; number theory; field theory and polynomials; cyclotomic integers; Fermat's last theorem