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6.5 Extended QR Codes, Square Root Bound, and Groups of QR Codes; 6.6 Permutation Decoding; 6.7 Decoding the Golay Code; Problems; 7 Bose-Chaudhuri-Hocquenghem (BCH) Codes; 7.1 Cyclic Codes Given in Terms of Roots; 7.2 Vandermonde Determinants; 7.3 Definition and Properties of BCH Codes; 7.4 Reed-Solomon Codes; 7.5 More on the Minimum Distance; 7.6 Decoding BCH Codes; Problems; 8 Weight Distributions; 8.1 Preliminary Concepts and a Theorem on Weights in Homogeneous Codes; 8.2 MacWilliams Equations; 8.3 Pless Power Moments; 8.4 Gleason Polynomials
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Sommario/riassunto

A complete introduction to the many mathematical tools used to solve practical problems in coding. Mathematicians have been fascinated with the theory of error-correcting codes since the publication of Shannon's classic papers fifty years ago. With the proliferation of communications systems, computers, and digital audio devices that employ error-correcting codes, the theory has taken on practical importance in the solution of coding problems. This solution process requires the use of a wide variety of mathematical tools and an understanding of how to find mathematical techniques to sol
