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SOLVED PROBLEMS10 - Linear and Nonlinear Partial Differential Equations; FIRST ORDER EQUATIONS; SOLVED PROBLEMS; 11 - Functional Optimization and Variational Methods; FUNCTIONAL OPTIMIZATION; SOLVED PROBLEMS; 12 - Finite Difference Methods for Differential Equations; ORDINARY DIFFERENTIAL EQUATIONS; PARTIAL DIFFERENTIAL EQUATIONS; SOLVED PROBLEMS; 13 - Introduction to the Finite Element Method; APPROXIMATION METHODS; THE FINITE ELEMENT METHOD; SOLVED PROBLEMS; Index

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## Sommario/riassunto

This book can be used as either a primary text or a supplemental reference for courses in applied mathematics. Its core chapters are devoted to linear algebra, calculus, and ordinary differential equations. Additional topics include partial differential equations and approximation methods. Each chapter features an ample selection of solved problems. These problems were chosen to illustrate not only how to solve various algebraic and differential equations but also how to interpret the solutions in order to gain insight into the behavior of the system modeled by the equation. In addition to th

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