Algebraic and Transcendental Equation and It's Applications

Madhu N R[1], Shashidhar S N[1], Meenakshi H[1], Reshma S R[1]

Department of Mathematics[1]

R. L. Jalappa Institute of Technology, Doddaballapur, Bangalore, India

Corresponding author: Madhu N R, email: madhunr@rljit.in

Abstract: *Algebraic and transcendental equations are fundamental mathematical constructs that arise in numerous scientific and engineering disciplines. Algebraic equations involve only algebraic functions and polynomial expressions, while transcendental equations include a combination of algebraic and transcendental functions. Solving these equations is crucial for understanding relationships between variables and obtaining solutions to complex problems. This abstract provides an overview of the methods used to solve algebraic and transcendental equations, exploring both analytical and numerical techniques*

Keywords: Algebraic and transcendental equations

REFERENCES

[1]. Numerical Recipes: The Art of Scientific Computing by William H. Press, Saul A. Teukolsky, William T. Vetterling, and Brian P. Flannery - This classic book covers a wide range of numerical methods, including methods for solving algebraic and transcendental equations.

[2]. Numerical Methods for Scientists and Engineers by Richard W. Hamming - This book provides a comprehensive introduction to various numerical techniques used in science and engineering, including root-finding methods.

[3]. Elementary Numerical Analysis: An Algorithmic Approach by S.D. Conte and Carl de Boor - This book introduces basic numerical methods, including methods for solving equations, in a clear and concise manner.

[4]. Introduction to Numerical Analysis by J. Stoer and R. Bulirsch - This book covers various numerical methods, including root-finding algorithms, and provides in-depth explanations of the underlying principles.

[5]. Applied Numerical Methods with MATLAB for Engineers and Scientists by Steven C. Chapra This book emphasizes the practical application of numerical methods using MATLAB, including methods for solving equations.

[6]. Numerical Methods in Engineering with MATLAB by Jaan Kiusalaas - This book focuses on the application of numerical methods to engineering problems and includes topics related to equation solving.

[7]. Mathematical Methods in Engineering and Physics by Gary N. Felder and Kenny M. Felder - This book provides an introduction to mathematical methods commonly used in engineering and physics, including methods for solving equations.

[8]. Advanced Engineering Mathematics by Erwin Kreyszig - This comprehensive textbook covers a wide range of mathematical methods used in engineering, including methods for solving equations.

[9]. Elementary Analysis: The Theory of Calculus by Kenneth A. Ross - This book introduces the fundamental concepts of analysis, including methods for solving equations.