This text introduces students to mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry.

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- 1: Before We Begin...

- 2: Complex Numbers

- 3: Series
4: First Order Ordinary Differential Equations

5: Second Order Ordinary Differential Equations

6: Power Series Solutions of Differential Equations

7: Fourier Series
8: Calculus in More than One Variable

- 9: Exact and Inexact Differentials

- 10: Plane Polar and Spherical Coordinates

- 11: Operators
\[
\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} \\
\frac{\partial^2 v}{\partial x^2} + \frac{\partial^2 v}{\partial y^2}
\]

12: Partial Differential Equations

- 13: Determinants

- 14: Vectors

- 15: Matrices
16: Formula Sheets

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