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

- Front Matter
- 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
12: Partial Differential Equations

\[ \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = 0 \]

\[ \frac{\partial^2 v}{\partial x^2} + \frac{\partial^2 v}{\partial y^2} = 0 \]

• 13: Determinants

• 14: Vectors

• 15: Matrices