

# Elements of Numerical Integration: Quadrature and Interpolat

## Numerical Quadrature Formula

*This diagram illustrates the relationship between the numerical quadrature formula and its components. It shows how the integral of a function over a given interval can be approximated using the sum of weighted function values at specific points.*



# Newton-Cotes Formulae

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*This diagram showcases the classification of Newton-Cotes formulae based on the inclusion or exclusion of endpoints as nodes. It provides a visual*

*representation of the closed and open Newton-Cotes formulae, highlighting the differences in node selection.*

