

Introduction to Week Four

Elementary Integration Formulas

Composite Integration Formulas

- ✓

Video: Composite Quadrature Rules | Lecture 39
12 min
- ✓

Reading: Simpson's 3/8 Rule
10 min
- ✓

Video: Gaussian Quadrature | Lecture 40
8 min
- ✓

Reading: Three-point Legendre-Gauss Quadrature
10 min
- ▶

Video: Adaptive Quadrature | Lecture 41
11 min
- 📖

Reading: Computing the Error in an Adaptive Quadrature
10 min

Quadrature in MATLAB

Interpolation

Interpolation in MATLAB

Quiz

Programming Assignment: Bessel Function Zeros

Three-point Legendre-Gauss Quadrature

Determine the weights and nodes of the three-point Legendre-Gauss quadrature rule. You may assume from symmetry that $x_1 = -x_3$, $w_1 = w_3$, and $x_2 = 0$.

✓ Completed Go to next item

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