Convergence Analysis of Romberg Integration Integration of $x^{1/4}$ 10⁰ Integration of $4x^4$ Machine Precision Region 10^{-2} Log Absolute Error ($\log_{10} | Error |$) 10^{-4} 10^{-6} 10^{-8} 10-10 10-12 10⁻¹⁴ + 10^{-16} 10 11 3 4 5 8 9 12 13 14 15 6 Romberg Iteration Step