

Numerical Quadrature

Try to compute the following integrals by Romberg Integration (Pseudocode 6-2 p. 212)

a) $\int_0^1 \exp(x^2) dx$

b) $\int_0^1 x^x dx$

c) $\int_0^1 \sin 50x dx$

d) $\int_0^{10} \ln x dx$

e) $\int_0^1 x^{-1/2} \exp(x^2) dx$

f) $\int_1^5 (x-1)^{0.2} \cdot (x^2+1)^{-1} dx$

If program fails "message" input if you can. Explain why it fails.