L16: class exercise

Try to implement/solve the following problems in MATLAB.

Numerical Integration

Numerically integrate the following:

$$\int_0^3 \sqrt{y+1}\,dy$$

$$\int_{-1}^1 \frac{5r}{(4+r^2)^2}\,dr$$

$$\int_0^{\pi/6} \cos^{-3}(2\theta)\sin(2\theta)\,d\theta$$

$$\int_0^{\pi/2} e^{\sin(x)}\cos(x)\,dx$$

$$\int_0^{\sqrt{ln\pi}} 2xe^{x^2}\cos(e^{x^2})\,dx$$

$$\int_1^4 \frac{dy}{2\sqrt{y}(1+\sqrt{y})^2}$$