

Homework 09

1. Evaluate the definite integral

$$I = \int_0^1 \left(\frac{1-x}{x}\right)^{1/2} \frac{1}{(x+2)^2} dx.$$

2. Evaluate the definite integral

$$I = \int_{-1}^1 [(1-x)(1+x)^3]^{1/4} \frac{1}{(1+x^2)} dx.$$

3. Evaluate the definite integral

$$I = \int_0^1 [x(1-x)^3]^{1/4} \frac{1}{(1+x)^3} dx.$$