

Mathematics Preparatory Course - MSc in EEEL

Integrals

Exercises

1. Solve the following integral

- $\int \frac{1-2x^2}{3x} dx$
- $\int \sqrt{1-3x} dx$
- $\int \frac{\sqrt{x}}{x+\sqrt{x}} + \frac{x^2}{1+x} + \frac{2x}{(x^2-3)^{\frac{3}{2}}} dx$
- $\int \frac{\sin \sqrt{x}}{\sqrt{x}} + \frac{e^{\frac{x}{2}}}{1+e^x} + x\sqrt{x+1}$
- $\int \sqrt{1-3x} + \frac{x-1}{x+1} + x^2 \cos(x^3)$
- $\int \frac{x^3+x}{\sqrt{x}}$
- $\int \ln(x+4) dx$
- $\int x \cos x dx$
- $\int \frac{x}{1+\sqrt{x}}$
- $\int_0^1 \sqrt{x} x^2 dx$
- $\int_0^1 x^2 e^{x^3}$
- $\int_1^2 \ln x dx$