

## ESERCITAZIONI DI ANALISI 1

1. Calcolare i seguenti integrali.

$$\int_0^1 \frac{\sqrt{2}x + 2}{2x^2 + 2} dx,$$

$$\int_7^8 \frac{1}{x^2 - 5x + 6} dx,$$

$$\int_0^{\sqrt{\pi}} 3x \arctan(x^2) dx,$$

$$\int_0^1 \frac{(\arctan x)^9}{x^2 + 1} dx,$$

$$\int_0^{\pi/4} \frac{\sqrt{\tan(x)} - 1}{\cos^2(x)} dx,$$

$$\int_{\frac{\pi}{2}}^{\pi} \frac{\cos(3x)}{5 + 2 \sin(3x)} dx,$$

$$\int_0^{\pi} \sin(x)(1 - \cos^2(x)) dx,$$

$$\int_1^e x \ln(4x) dx,$$

$$\int_0^1 \arctan(4x) dx,$$

$$\pi \int_0^{\ln(2)} e^{3x} \sin(\pi e^{3x}) dx,$$

$$\int_{-1/7}^0 \frac{\sqrt{1+7x}}{\sqrt{1+7x}+1} dx,$$

$$\int e^{x^2} x^3 dx,$$

$$\int \frac{\ln(x)}{x^2} dx,$$

$$\int_{-1}^1 \left( 2|x| + x \arctan(x^2) \cos(x^2) \sin(x^2) \right) dx.$$