

## 1 Integrali indefiniti

Calcolare i seguenti integrali indefiniti

$$\int \frac{2x+1}{4x+3} dx \quad (1.1)$$

$$\int \frac{4-3x}{(x^2+1)(x-3)^2} dx \quad (1.2)$$

$$\int \frac{1}{5x^2+2} dx \quad (1.3)$$

$$\int \frac{1}{1+e^x} dx \quad (1.4)$$

$$\int \frac{x^2-3x+2}{(x-1)^3} dx \quad (1.5)$$

$$\int \frac{x^3-2x^2-x+3}{x^2-3x+2} dx \quad (1.6)$$

$$\int \frac{x^2+2x+2}{x(x+1)(x+2)} dx \quad (1.7)$$

$$\int \frac{x^3-5x^2-x+1}{x^2-x+2} dx \quad (1.8)$$

$$\int \frac{1}{1+\sqrt[4]{x}} dx \quad (1.9)$$

$$\int \frac{x e^{\arctan x}}{(\sqrt{1+x^2})^3} dx \quad (1.10)$$

$$\int e^{2x} \ln(e^x-1) dx \quad (1.11)$$

$$\int \frac{x \sin(\sqrt{x+1})}{\sqrt{x+1}} dx \quad (1.12)$$

## 2 Integrali impropri

$$\int_1^2 \frac{1}{(\sqrt{2-x})} dx \quad (2.1)$$

$$\int_{-\infty}^{+\infty} \frac{dx}{1+x^2} \quad (2.2)$$

$$\int_0^{1/3} \frac{dx}{x \ln^2 x} \quad (2.3)$$

$$\int_0^1 \frac{dx}{(1+x^2)\sqrt{\arctan x}} \quad (2.4)$$

$$\int_0^2 \frac{dx}{\sqrt{4-x^2}} \quad (2.5)$$

$$\int_0^{+\infty} \frac{(x+5)dx}{x^3-x^2+5x-5} \quad (2.6)$$

$$\int_0^1 \frac{dx}{\sqrt{x}(3+\sqrt{x})^3} \quad (2.7)$$