



Fișa de lucru nr. 1 Metoda integrării directe (prin formule)

Să se calculeze integrala

$$I = \int (2x - 3) dx, \quad x \in \mathbb{R}$$

$$I = x^2 - 3x + C$$

$$I = \frac{x^2}{2} - 3x + C$$

$$I = x^2 - 3x$$

$$I = x^2 - 3x + 1$$

Să se calculeze integrala

$$I = \int (x^2 + x - 2) dx, \quad x \in \mathbb{R}$$

$$I = \frac{x^3}{3} + \frac{x^2}{2} - 2x + 2$$

$$I = x^3 + x^2 - 2 + C$$

$$I = \frac{x^3}{3} + \frac{x^2}{2} - 2 + C$$

$$I = \frac{x^3}{3} + \frac{x^2}{2} - 2x + C$$

Să se calculeze integrala

$$I = \int (3x + e^x) dx, \quad x \in \mathbb{R}$$

$$I = \frac{x^2}{2} + e^x + C$$

$$I = \frac{3}{2}x^2 + \frac{e^x}{\ln x} + C$$

$$I = \frac{3}{2}x^2 + e^x + C$$

Să se calculeze integrala

$$I = \int (2^x - 3^x) dx, \quad x \in \mathbb{R}$$

$$I = \frac{2^x}{\ln x} - \frac{3^x}{\ln x} + C$$

$$I = \frac{2^x}{\ln 2} - \frac{3^x}{\ln 3} + C$$

$$I = 2^x \ln x - 3^x \ln x + C$$

$$I = 2^x \ln 2 - 3^x \ln 3 + C$$



Să se calculeze integrala

$$I = \int (2 \sin x + 3^x + 3) dx, \quad x \in \mathbb{R}$$

$$I = -2 \cos x + \frac{3^x}{\ln x} + 3x + \mathcal{C}$$

$$I = 2 \cos x + \frac{3^x}{\ln 3} + 3x + \mathcal{C}$$

$$I = -2 \cos x + \frac{3^x}{\ln 3} + 3x + \mathcal{C}$$

$$I = 2 \cos x + \frac{3^x}{\ln x} + 3x + \mathcal{C}$$

Să se calculeze integrala

$$I = \int (x^5 + 5^x) dx, \quad x \in \mathbb{R}$$

$$I = \frac{x^6}{6} + \frac{5^x}{\ln 5} + \mathcal{C}$$

$$I = 5x^4 + x^5 \ln 5 + \mathcal{C}$$

$$I = \frac{x^6}{6} + \frac{5^x}{\ln x} + \mathcal{C}$$

$$I = 5x^4 + x^5 \ln x + \mathcal{C}$$

Să se calculeze integrala

$$I = \int \frac{1}{x^2} dx, \quad x > 0$$

$$I = -\frac{1}{x} + \frac{1}{2}$$

$$I = -\frac{1}{3x^3} + \mathcal{C}$$

$$I = -\frac{1}{x} + \mathcal{C}$$

$$I = \frac{1}{x} + \mathcal{C}$$

Să se calculeze integrala

$$I = \int \left(x + \frac{1}{x} \right) dx, \quad x > 0$$

$$I = \frac{x^2}{2} + \ln(-x) + \mathcal{C}$$

$$I = \frac{x^2}{2} + \ln x + \mathcal{C}$$

$$I = 1 + \ln x + \mathcal{C}$$

$$I = 1 - \frac{1}{x^2} + \mathcal{C}$$

Să se calculeze integrala

$$I = \int \sqrt{x} dx, \quad x > 0$$

$$I = \frac{2}{3} \sqrt{x} + \mathcal{C}$$

$$I = \frac{2}{3} x \sqrt{x} + \mathcal{C}$$

$$I = \frac{1}{2\sqrt{x}} + \mathcal{C}$$



Să se calculeze integrala

$$I = \int \left(x^2 - \frac{1}{x} \right) dx, \quad x < 0$$

$$I = \frac{x^3}{3} - \ln(-x) + \mathcal{C}$$

$$I = \frac{x^3}{3} + \ln x + \mathcal{C}$$

$$I = \frac{x^3}{3} - \ln x + \mathcal{C}$$

$$I = 2x + \frac{1}{x^2} + \mathcal{C}$$

Să se calculeze integrala

$$I = \int \left(\frac{1}{2}x + \frac{2}{3} \right) dx, \quad x \in \mathbb{R}$$

$$I = \frac{1}{2}x^2 + \frac{2}{3}x + \mathcal{C}$$

$$I = \frac{1}{2}x^2 + x + \mathcal{C}$$

$$I = \frac{1}{4}x^2 + \frac{2}{3}x + \mathcal{C}$$

$$I = \frac{1}{4}x^2 + \frac{2}{3} + \mathcal{C}$$

$$I = \frac{1}{4}x^2 + \frac{2}{3}x + \frac{11}{12}$$

Să se calculeze integrala

$$I = \int \left(1 + \frac{1}{\sqrt{x}} \right) dx, \quad x > 0$$

$$I = x - 2\sqrt{x} + \mathcal{C}$$

$$I = x + 2\sqrt{x} + \mathcal{C}$$

$$I = x + \sqrt{x} + \mathcal{C}$$

$$I = 1 + \sqrt{x} + \mathcal{C}$$