

FISA DE LUCRU INTEGRALE NEDEFINITE

Calculati urmatoarele integrale:

1. $\int (x^3 + 3x^2 + x - 5)dx, x \in R;$

2. $\int \left(6x^2 - 8x + \frac{1}{x}\right) dx, x > 0;$

3. $\int \left(x^3 - \frac{5}{x} + \frac{2}{x^3}\right) dx, x < 0;$

4. $\int (2x\sqrt{x} - 5x\sqrt[3]{x^2}) dx, x > 0;$

5. $\int (x^2 - 2e^x) dx, x \in R;$

6. $\int \frac{1}{\sqrt{16-9x^2}} dx, x \in \left(-\frac{4}{3}; \frac{4}{3}\right);$

7. $\int \frac{\sqrt{x^2-4}+2}{\sqrt{x^2-4}} dx, x \in (2; +\infty);$

8. $\int \frac{1}{\sqrt{1-4x^2}} dx, x \in \left(-\frac{1}{2}; \frac{1}{2}\right);$

9. $\int \frac{1}{\sin^2 x \cdot \cos^2 x} dx, x \in \left(0; \frac{\pi}{2}\right);$

10. $\int \frac{\sin^3 x - 1}{\sin^2 x} dx, x \in \left(0; \frac{\pi}{2}\right);$