

CAŁKI NIEOZNACZONE

zadania

(źródło: W. Kryszicki, L. Włodarski, *Analiza matematyczna w zadaniach*, cz. I, PWN, Warszawa)

Obliczyć podane całki.

1. $\int \frac{(x^2 - 1)^3}{x} dx$

2. $\int (x^2 + 4)^5 dx$

3. $\int \frac{x}{(x^2 + 3)^6} dx$

4. $\int \frac{x\sqrt[3]{x} + \sqrt[4]{x}}{x^2} dx$

5. $\int (3 + 2\sqrt[4]{x}) dx$

6. $\int \frac{3 + 5\sqrt[3]{x^2}}{\sqrt{x^3}} dx$

7. $\int x\sqrt{1+x^2} dx$

8. $\int \frac{x-1}{\sqrt[3]{x+1}} dx$

9. $\int x e^{-x^2} dx$

10. $\int x \sin(2x^2 + 1) dx$

11. $\int \sin^5 x \cos x dx$

12. $\int \frac{\cos x}{\sqrt{1+\sin x}} dx$

13. $\int e^{\sin x} \cos x dx$

14. $\int \frac{x^2}{\cos^2(x^3 + 1)} dx$

15. $\int \frac{e^x}{2e^x + 1} dx$

16. $\int \frac{\sqrt{2 + \ln|x|}}{x} dx$

17. $\int \frac{\ln|\operatorname{arctg} x|}{1+x^2} dx$

18. $\int x e^{x^2} (x^2 + 1) dx$

19. $\int \frac{(\pi - \arcsin x)}{\sqrt{1-x^2}} dx$

20. $\int x^2 \sin 5x dx$

21. $\int e^x \cos \frac{2x}{3} dx$

22. $\int \sqrt{x} (\ln|x|)^3 dx$

23. $\int \frac{\ln^2 x}{\sqrt{x}} dx$

24. $\int \frac{3x-4}{x^2-x-6} dx$

25. $\int \frac{dx}{6x^2-13x+6}$

26. $\int \frac{x-1}{4x^2-4x+1} dx$

27. $\int \frac{6x}{x^2+4x+13} dx$

28. $\int \frac{4x-5}{x^2-6x+10} dx$

29. $\int \frac{2x^3-19x^2+58x-42}{x^2-8x+16} dx$

30. $\int \frac{x^2+5x+41}{(x+3)(x-1)(x-\frac{1}{2})} dx$

31. $\int \frac{dx}{(x^2+x+1)^2}$

32. $\int \frac{dx}{x^4+64}$

33. $\int \sqrt{2x+1} dx$

34. $\int \frac{dx}{\sqrt[4]{3x-4}}$

35. $\int \frac{1+\sqrt{x}}{1-\sqrt{x}} dx$

36. $\int \sqrt{1+\sqrt{x}} dx$

37. $\int \frac{dx}{\sqrt{x^2-6x+15}}$

38. $\int \frac{3x+1}{\sqrt{x^2+5x-10}} dx$