Integralni račun - Rješenja

1. $\frac{4\sqrt{x^{3/2}}\,(7+x^2)}{7\,x}+c$

2. $\frac{2}{15}\sqrt{x}\,(-15+25\,x+3\,x^2)+c$

3. x-arctg x+c

4. $-\frac{2^{-x}}{\ln 2}-\frac{5^{-x}}{\ln 5}+c$

5. $\frac{2^{-x}}{5\ln 2}-2\,\frac{5^{-x}}{\ln 5}+c$

6. tg x-ctg x+c

7. -x+tg x+c

8. $-\frac{1}{3}\cos(3\,x)+c$

9. $\frac{\text{arctg}\,(\frac{x}{a})}{a}+c$

10. $\text{arctg}\left(\frac{x}{\sqrt{a^2-x^2}}\right)+c$

11. $-\frac{1}{3}\,e^{3\cos x}+c$

12. $\frac{\ln^5|x|}{5}+c$

13. $\frac{1}{3}\,(1+x^2)^{3/2}+c$

14. ln |-a+x|+c

15. $x-\ln(1+e^x)+c$

16. $\frac{2}{3}\,\text{arctg}\left(\frac{1}{3}\sqrt{-9+2\,x}\right)+c$

17. $\frac{1}{2}(5+x^3)^{2/3}+c$

18. $-\frac{3\,x^{2/3}\cos(x^{1/3})}{(x^2)^{1/3}}+c$

19. $2\sqrt{x}+\frac{\ln^2|x|}{2}+c$

20. $-\frac{1}{6}\ln\left|-1+3\,e^{2x}\right|+c$

21. $\frac{1}{2}\ln\left|1+2\sin x\right|+c$

22. $\ln(\cos x)+\ln(\sin x)+c$

23. $\frac{x}{2}-\frac{1}{4}\sin(2x)+c$

24. $\frac{1}{2}(x+\cos x\sin x)+c$

25. $\frac{2}{3}(\sin x)^{3/2}-\frac{4}{7}(\sin x)^{7/2}-\frac{2}{11}(\sin x)^{11/2}+c$

26. $e^{\text{arctg}\,x}+\text{arctg}\,x+\frac{1}{4}\ln^2(1+x^2)+c$

27. $e^x(-1+x)+c$

28. $e^x(2-2x+x^2)+c$

29. $e^x(3+x^2)+c$

30. $-x+x\ln|x|+c$

31. $\frac{2}{27}x^{3/2}(8-12\ln|x|+9\ln^2|x|)+c$

32. $-\frac{1+2\ln|x|}{4x^2}+c$

33. $\frac{x^2+1}{2}\ln\left|\frac{1+x}{1-x}\right|+x+c$

34. $\frac{1}{3}(-2+x^2)\sqrt{1+x^2}+c$

35. $-\frac{1}{3}\sqrt{1-x^2}\,(2+x^2)+c$

36. $-\frac{1}{9}\sqrt{1-x^2}\,(2+x^2)+\frac{1}{3}x^3\arccos x+c$

37. $\frac{1}{2}e^x(-\cos x+\sin x)+c$

38. $\frac{x}{2a^2(a^2+x^2)}+\frac{\text{arctg}\left(\frac{x}{a}\right)}{2a^3}+c$

39. $\frac{1}{2}x(\cos(\ln|x|)+\sin(\ln|x|))+c$

40. $2\sqrt{x}-2\sqrt{1-x}\arcsin\sqrt{x}+c$

41. $-e^x\cos(e^x)+\sin(e^x)+c$