

Aşağıdaki integralleri hesaplayınız.

1. $\int \sqrt{2x+3} dx$

2. $\int \frac{dx}{3x+5}$

3. $\int \frac{dx}{(2x-7)^2}$

4. $\int \frac{x+1}{x^2+2x+3} dx$

5. $\int \frac{\sin x dx}{2+\cos x}$

6. $\int \operatorname{tg}^3 2x \cdot \sec^2 2x dx$

7. $\int \frac{xdx}{\sqrt{1-4x^2}}$

8. $\int \frac{2dx}{\sqrt{1-4x^2}}$

9. $\int \frac{2xdx}{\sqrt{1-x^4}}$

10. $\int \frac{xdx}{(3x^2+4)^3}$

11. $\int x^2 \cdot \sqrt{x^3+5} dx$

12. $\int \frac{x^2}{\sqrt{x^3+1}} dx$

13. $\int \frac{xdx}{4x^2+1}$

14. $\int \frac{dx}{e^{3x}}$

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

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

17. $\int \frac{dx}{1+9x^2}$

18. $\int \frac{1+\cos x}{\sin^2 x} dx$

19. $\int \frac{\sin^2 2x}{1+\cos 2x} dx$

20. $\int 10^{2x} dx$

21. $\int \sin^3 x \cdot \cos^2 x dx$

22. $\int \frac{\sin^3 x}{\cos^2 x} dx$

23. $\int \cos^n x \cdot \sin x dx$

24. $\int \operatorname{tg}^n x \cdot \sec^2 x dx$

25. $\int \frac{dx}{x \cdot \ln 3x}$

26. $\int 8 \sin^2 x \cdot \cos^2 x dx$

27. $\int \sin^2 2x dx$

$$28. \int \sqrt{1-x^2} dx$$

$$29. \int \frac{dx}{x^2-2x+5}$$

$$30. \int \frac{xdx}{x^2+4x+5}$$

$$31. \int \frac{dx}{1-x^2}$$

$$32. \int \frac{dx}{x^3+x^2-2x}$$

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

$$34. \int \frac{dx}{x(x+1)^2}$$

$$35. \int \frac{dx}{(x+1)(x^2+1)}$$

$$36. \int \frac{\sin x dx}{\cos^2 x + \cos x - 2}$$

$$37. \int x \cdot \ln x dx$$

$$38. \int x \cdot \arctg x dx$$

$$39. \int x^2 \cdot \cos 2x dx$$

$$40. \int \sin(\ln x) dx$$

$$41. \int \cos \sqrt{x} dx$$

$$42. \int \frac{dx}{1+\sqrt{x}}$$

$$43. \int \frac{dx}{\sqrt{e^x+1}}$$

$$44. \int \frac{dx}{\sqrt{2x-x^2}}$$

$$45. \int \frac{dx}{1-\sin x}$$

$$46. \int \sec x dx$$

$$47. \int \sec^3 x dx$$

$$48. \int \frac{x}{(x+1)^3} dx$$

$$49. \int x^3 \sqrt{x^2+1} dx$$

$$50. \int \frac{x^2}{\sqrt{x^2+1}} dx$$

CEVAPLAR

1. $\frac{1}{3}(2x+3) \cdot \sqrt{2x+3} + C$

2. $\frac{1}{3} \ln|3x+5| + C$

3. $\frac{-1}{2(2x-7)} + C$

4. $\frac{1}{2} \ln|x^2+2x+3| + C$

5. $-\ln|2+\cos x| + C$

6. $\frac{1}{8} \operatorname{tg}^4 2x + C$

7. $-\frac{1}{4} \ln\sqrt{1-4x^2} + C$

8. $\arcsin 2x + C$

9. $\arcsin x^2 + C$

10. $\frac{-1}{12(3x^2+4)^2} + C$

11. $\frac{2}{9}(x^2+5) \cdot \sqrt{x^2+5} + C$

12. $\frac{2}{3} \sqrt{x^3+1} + C$

13. $\frac{1}{8} \ln(4x^2+1) + C$

14. $\frac{-1}{3e^{3x}} + C$

15. $e^{\sin x} + C$

16. $\arctg e^x + C$

17. $\frac{1}{3} \arctg 3x + C$

18. $-\cot gx - \operatorname{cosec} x + C$

19. $x - \frac{1}{2} \sin 2x + C$

20. $\frac{10^{2x}}{2 \ln 10} + C$

21. $\frac{1}{5} \cos^5 x - \frac{1}{3} \cos^3 x + C$

22. $\cos x + \sec x + C$

23. $-\frac{\cos^{n+1} x}{n+1} + C$

24. $\frac{\operatorname{tg}^{n+1} x}{n+1} + C$

25. $\ln(\ln 3x) + C$

26. $x - \frac{1}{4} \sin 4x + C$

27. $\frac{1}{2} x - \frac{1}{8} \sin 4x + C$

28. $\frac{1}{2} \arcsin x + \frac{1}{2} x \cdot \sqrt{1-x^2} + C$

$$29. \frac{1}{2} \operatorname{arctg} \frac{x-1}{2} + C$$

$$30. \frac{1}{2} \ln(x^2 + 4x + 5) - 2 \operatorname{arctg}(x + 2) + C$$

$$31. \ln \sqrt{\frac{1+x}{1-x}} + C$$

$$32. -\frac{1}{2} \ln|x| + \frac{1}{6} \ln|x+2| + \frac{1}{3} \ln|x-1| + C$$

$$33. x - 2 \ln|x+1| - \frac{1}{x+1} + C$$

$$34. \ln|x| - \ln|x+1| + \frac{1}{x+1} + C$$

$$35. \frac{1}{2} \ln|x+1| - \frac{1}{4} \ln(x^2 + 1) + \frac{1}{2} \operatorname{arctg} x + C$$

$$36. \frac{1}{3} \ln|\cos x + 2| - \frac{1}{3} \ln|\cos x - 1| + C$$

$$37. \frac{1}{2} x^2 \ln x - \frac{1}{4} x^2 + C$$

$$38. \frac{1}{2} x^2 \operatorname{arctg} x - \frac{1}{2} x + \frac{1}{2} \operatorname{arctg} x + C$$

$$39. \frac{1}{2} x^2 \cdot \sin 2x + \frac{1}{2} x \cdot \cos 2x - \frac{1}{4} \sin 2x + C$$

$$40. \frac{1}{2} x [\sin(\ln x) - \cos(\ln x)] + C$$

$$41. 2\sqrt{x} \cdot \sin \sqrt{x} + 2 \cos \sqrt{x} + C$$

$$42. 2\sqrt{x} - 2 \ln(1 + \sqrt{x}) + C$$

$$43. \frac{1}{2} \ln \left(\frac{e^x + 1}{e^x - 1} \right) + C$$

$$44. \arcsin(x - 1) + C$$

$$45. \operatorname{tg} x + \sec x + C$$

$$46. \ln(\sec x + \operatorname{tg} x) + C$$

$$47. \frac{1}{2} \sec x \cdot \operatorname{tg} x + \frac{1}{2} \ln|\sec x + \operatorname{tg} x| + C$$

$$48. \frac{-2x - 1}{2(x+1)^2} + C$$

$$49. \frac{1}{5} (x^2 + 1)^{5/2} - \frac{1}{3} (x^2 + 1)^{3/2} + C$$

$$50. \frac{1}{2} x \cdot \sqrt{1 + x^2} - \frac{1}{2} \ln(x + \sqrt{1 + x^2}) + C$$