

数 III 積分
— 問題編 —

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1. $\int dx$

2. $\int x^n dx$

3. $\int 2^x dx$

4. $\int \log x dx$

5. $\int x \log x dx$

6. $\int \sin 2x \sin 9x dx$

7. $\int \tan x dx$

8. $\int \frac{dx}{\sin x + 1}$

9. $\int \frac{dx}{\cos x}$

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

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

12. $\int_{-2}^{\sqrt{5}-2} \frac{dx}{x^2 + 4x + 9}$

13. $\int \frac{2x^2 + 12x + 7}{x^2 + 5x + 1} dx$

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

15. $\int_{-\frac{1}{2}}^{\frac{1}{2}} \sqrt{\frac{1-x}{1+x}} dx$

16. $\int x^x (1 + \log x) dx$

17. $\int_0^{\frac{\pi}{2}} \frac{\sin x}{\sin x + \cos x} dx$

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

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

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

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

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

* <https://github.com/suzuyut4>

$$23. \int_{-1}^1 \frac{x^2}{1+e^x} dx$$

$$24. \int e^x \sin x dx$$

$$25. \int_{\alpha}^{\beta} (x-\alpha)^n (x-\beta) dx$$

$$26. \int_0^{\pi} \frac{x \sin x}{3 + \sin^2 x} dx$$