

以下の不定積分を計算せよ。

1. $\int x^5 dx$

2. $\int (x^2 + 2x + 3) dx$

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

4. $\int \frac{1}{x} dx$

5. $\int x\sqrt{x} dx$

6. $\int \left(\sqrt{x} + \frac{1}{\sqrt{x}} \right) dx$

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

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

9. $\int \sin(2x-1) dx$

10. $\int (3x^2 - 2x)(x^3 - x^2 + 1)^3 dx$

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

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

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

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

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

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

17. $\int (3x+4)(x+2)^4 dx$

18. $\int \frac{(\log x)^3}{x} dx$

19. $\int xe^{-x^2} dx$

20. $\int \tan x dx$

21. $\int \cos xe^{\sin x} dx$

22. $\int x \sin x dx$

23. $\int xe^{-x} dx$

24. $\int x \log x dx$

25. $\int \frac{1}{x \log x} dx$

26. $\int \log x dx$

27. $\int \sin^{-1} x dx$

28. $\int (\log x)^2 dx$

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

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

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

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

33. $\int \frac{1}{\sin x} dx$