



1.
$$\int \frac{e^{4x}}{(e^{2x} + 1)^2} dx$$

2.
$$\int \sec^4 x \, dx$$

3.
$$\int_{-5}^5 x^5 \sec x \, dx$$

4.
$$\int_{\frac{\pi}{2}}^{\frac{3\pi}{2}} \frac{\sin(3x)}{\sin(x)} \, dx$$

5.
$$\int \frac{2x^2 - 1}{x^4 - x^2 - 2} \, dx$$

6.
$$\int \frac{x^{11} + x^5}{\sqrt[3]{x^6 + 6}} \, dx$$

7.
$$\int \frac{x^{14}}{x^5 + 1} \, dx$$

8.
$$\int \frac{(x-1)(x^2-1)}{(x^3-1)(x^4-1)} \, dx$$

9.
$$\int_2^3 (5-x)^{2025} (x^2 - 10x + 24) dx$$

10.
$$\int_0^1 \sqrt{x \sqrt[3]{x \sqrt[4]{x \sqrt[5]{x} \dots}}} \, dx$$

11.
$$\int \frac{1}{1 + \sec(x)} \, dx$$

12.
$$\int e^{3x} \left(\frac{\ln^2 x}{x} + \ln^3 x \right) \, dx$$

13.
$$\int_0^\infty x e^x \sin(x) dx$$

14.
$$\int_0^1 \sqrt[\varphi]{\frac{x}{x^\varphi + 1}} dx$$

15.
$$\int_{-\infty}^\infty (-2x^8 + x^5) e^{-x^6 + x^3 + 7} \, dx$$



16.
$$\int_0^\infty \frac{\lfloor x \rfloor}{(x+1)^3} dx$$
17.
$$\int_0^1 x^2 \tan^{-1}(x) dx$$
18.
$$\int_{-\infty}^\infty \sin(e^x) dx$$
19.
$$\int_2^3 \ln \left(\prod_{n=1}^\infty \sum_{k=0}^\infty \frac{n^k}{x^{nk} \cdot k!} \right) dx$$
20.
$$\int (\cos x)^x (x \ln \cos x - x^2 \tan x + 1) dx$$
21.
$$\int \sqrt{\sin^4(x) + 4 \cos^2(x)} - \sqrt{\cos^4(x) + 4 \sin^2(x)} dx$$
22.
$$\int_{-\pi}^\pi \frac{dx}{(1 + e^{\cos(x)})(1 + e^{x \cos(x)})}$$
23.
$$\int x^2 \sin^{-1}(x) dx$$
24.
$$\int_0^{\frac{\pi}{4}} \cos(x) \sqrt{\cos(2x)} + \sin(2x) \sqrt{\sin(4x)} dx$$
25.
$$\int_0^1 \frac{dx}{(1+x^2)(1+\frac{\pi}{2} + \tan^{-1}(x) \cot^{-1}(x))}$$
26.
$$\int_1^\infty \left\lfloor \frac{2}{\{x\}} \right\rfloor^{-\lfloor x \rfloor} dx$$
27.
$$\int_0^{2025} \min \left(\sqrt{\{x\} - \{x\}^2}, \left| \frac{\sqrt{3} \arcsin(\cos(\pi x))}{\pi} \right| \right) dx$$