

Student ID: _____ Time Left: _____

1. $\int (23x + 1)(2x + 3)^6 dx$

2. $\int \tan x \ln(\cos^2 x) dx$

3. $\int (x + e^{x+e^{x+e}}) dx$

4. $\int_0^1 \frac{x}{x^4 + x^2 + 1} dx$

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

6. $\int_0^1 (2566)^{\arcsin x} dx$

7. $\int_0^{\frac{\pi}{2}} [\sin^2 x + \sin 2x] dx$

8. $\int_0^1 \frac{\ln(x+1)}{x^2+1} dx$

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

10. $\int_{-\pi/2}^{\pi/2} \frac{x^2 \cos x}{1+2023^x} dx$

11. $\int \frac{e^{x/12}}{e^{x/3} + e^{x/2}} dx$

12. $\int_0^{\pi/2} \frac{\tan x}{\ln^2(\tan x) + 1} dx$

13. $\int \frac{x^{1282}}{1-x^{2566}} dx$

14. $\int_0^1 (1 \cdot 2 - 2 \cdot 3x + 3 \cdot 4x^2 - 4 \cdot 5x^3 + \cdots) dx$

15. $\int \frac{\sqrt{\cot x}}{1 + \sin 2x} dx$