The Integral Game

Good luck!

1. $\int \left(\frac{x^4 - 2x^7}{x^3} - 4e^x - \sin(x) \right) dx$

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

3. $\int_{-\pi}^{-pi/2} \left(\cos(x) - (\cos(x))^2 \right)^2 \sin(x) \, dx$

4. $\int_0^{\sqrt{\pi}} \frac{x \sin(x^2)}{1 + (\cos(x^2))^2} dx$

5. $\int \left(3x^4 - \frac{1}{x} + 5\cos(x) \right) dx$

6. $\int \sec^2(2x) \tan^5(2x) \, dx$

7. $\int_1^2 x(2 - x)^7 \, dx$

8. $\int_1^{\sqrt{3}} \frac{5}{1 + y^2} \, dy$

9. $\int_0^{\pi/4} \sec^2(\theta) \cos(\tan(\theta)) \, d\theta$

10. $\int \frac{3x^2}{\sqrt{2 - x}} dx$

11. $\int_{-1}^3 \left| 4t - t^3 \right| dt$

12. $\int_1^8 \frac{2x + 5}{\sqrt[3]{x^2}} dx$

13. $\int_0^\pi \frac{\sin(t)}{1 + \cos^2(t)} dt$

14. $\int y^3 \sqrt{y^2 - 7} \, dy$

15. $\int xe^{x^2} \sec^2(e^{x^2}) \, dx$

16. $\int_1^{\sqrt{e}} \frac{\cos(\pi \ln(x))}{x} dx$

17. $\int \frac{5xe^{x^2}}{e^{x^2} - 5} dx$

18. $\int \tan(x) \ln(\cos(x)) \, dx$

19. $\int_{-1}^1 (2 - x)^6 \, dx$

20. $\int_1^2 \frac{1 + x^2}{x^3} dx$

21. $\int \sin(x)^3 \, dx$

22. $\int_0^1 xf(x^2) \, dx$ if $\int_0^1 f(x) \, dx = 7$

23. $\int_2^e \frac{1}{x\sqrt{\ln(x)}} dx$

24. $\int_0^{\pi/3} \frac{\sin(x)}{\cos^4(x)} dx$

25. $\int \frac{(x + 1)^2}{\sqrt{x - 1}} /, dx$

26. $\int \frac{x}{2x + 11} dx$

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