AP Calculus – Integral Practice (LIPET, Inv. Trig, u-sub)

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

2. $\int \sec^2 3x \tan 3x dx$

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

4. $\int \frac{\tan e^{-3x}}{e^{3x}} dx$

5. $\int \frac{1}{\cos 2x} dx$

6. $\int \frac{1}{4+9x^2} dx$

7. $\int \frac{x}{4+9x^2} dx$

8. $\int \frac{1}{x\sqrt{x^4-1}} dx$

9. $\int \frac{\cos x}{\sqrt{9-\sin^2 x}} dx$

10. $\int \frac{1}{e^x\sqrt{1-e^{-2x}}} dx$

11. $\int \frac{\tan^2 2x}{\sec 2x} dx$

12. $\int x^3 e^{-x^2} dx$

13. $\int x^3 \cos(x^2) dx$

14. $\int x(2^x) dx$

15. $\int (\cos^{-1} x) dx$

16. $\int (\ln x)^2 dx$

17. $\int \frac{1}{x^2-6x+25} dx$

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

19. $\int x \ln x dx$

20. $\int \frac{x+2}{\sqrt{-x^2-4x}} dx$

21. $\int \frac{2x}{x-4} dx$

22. $\int \frac{x+1}{\sqrt{x^2+2x-4}} dx$

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