

Math 1B
Integral Warmup

Evaluate the following integrals, show all work. No CAS.

1. $\int \frac{3x}{\sqrt{8x^2 + 5}} dx$

2. $\int \frac{\cos^3 x - \sin^2 x}{\cos^2 x} dx$

3. $\int x\sqrt{1-x} dx$

4. $\int \frac{dx}{x(\ln(3x))}$

5. $\int x(5^{x^2}) dx$

6. $\int \frac{x}{(x+2)^{2/3}} dx$

7. $\int_1^{e^4} \frac{(\ln x)^2}{x} dx$

8. $\int_{-1}^1 5x^2\sqrt{x^3+1} dx$

9. $\int_0^{\ln 2} \frac{7e^x}{e^x+5} dx$

10. $\int_1^e \frac{1}{x}(1+7\ln x)^{-1/3} dx$