

My Chapter 5 Integration Project

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

2. $\int \frac{\ln x^2}{x} dx$

3. $\int \cot x dx$

4. $\int \frac{dx}{x \ln x^2}$

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

6. $\int \frac{e^{3x} + e^x}{e^x} dx$

7. $\int \sqrt{x}(x^4 + x^2) dx$

8. $\int e^{3x} dx$

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

10. $\int x^2 e^{x^3+1} dx$

11. $\int (7x+11)^{24} dx$

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

13. $\int \frac{e^{\tan x}}{\cos^2 x} dx$

14. $\frac{1}{2} \int e^{\frac{t}{2}} dt$

15. Let $F(x) = \int_1^x \ln t dt$. Find $F'(x)$

16. Let $F(x) = \int_{\frac{\pi}{4}}^x \csc t dt$. Find $F'(x)$

17. If $F(x) = \int_3^{e^x} \ln t \, dt$, then $F'(x) =$

18. $\int_0^1 \frac{3}{1+x^2} dx$

19. $\int \frac{dx}{\sqrt{16-x^2}}$

20. $\int \frac{x}{\sqrt{16-x^2}} dx$