

Final Exam – Integration Review

1. $\int 4 \sin 5x \, dx$

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

3. $\int 7 \sec^2(2 - 3x) dx$

4. $\int \csc(\pi x) \cot(\pi x) \, dx$

5. $\int (2x - 5)^4 dx$

6. $\int \frac{e^{-5x}}{2} \, dx$

7. $\int 2\sqrt{9x - 5} \, dx$

8. $\int \tan 7x \, dx$

9. $\int \frac{3}{\sqrt{1-16x^2}} dx$

10. $\int \frac{x dx}{1+25x^4}$

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

12. $\int e^{2x} \cos(e^{2x}) \, dx$

13. $\int (x + 3)\sqrt{5x + 15} dx$

14. $\int 7x^2 e^{x^3} dx$

15. $\int x \cdot 3^{5x^2} dx$

16. $\int \frac{10x}{8-x^2} dx$

17. $\int \frac{\sec^2\left(\frac{\pi}{x}\right)}{x^2} dx$

18. $\int e^{3x} \sec(e^{3x}) \tan(3^{3x}) dx$

19. $\int \frac{\sin(\ln x)}{x} dx$

20. $\int \sin \theta \cos^3 \theta d\theta$

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

22. $\int \tan^4(3x) \sec^2(3x) dx$