

Integration – More Practice

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

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

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

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

5. $\int \frac{3-8x^3}{x^3} dx$

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

7. $\int \frac{dy}{8y}$

8. $\int 5x \csc(5x^2) \cot(5x^2) dx$

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

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

11. $\int (2\cos x + x^3 + 4) dx$

12. $\int \frac{\cos^3 \theta - 7}{\cos^2 \theta} d\theta$

13. $\int \sin^5 3x \cos 3x dx$

14. $\int \frac{x^4 dx}{\sqrt{17-10x^5}}$

15. $\int (1+4x^2)(3-x) dx$

16. $\int \cot x dx$

17. $\int \cos 4x \sqrt{2-\sin 4x} dx$

18. $\int \frac{\ln x}{x} dx$

19. $\int 9x e^{5-3x^2} dx$

20. $\int \frac{(2-\sqrt{x})^{10}}{\sqrt{x}} dx$

21. $\int \sec^2(2x+3) dx$

22. $\int \left(\sqrt[5]{x^4} + \frac{e^{\sin x}}{\sec x} \right) dx$