

Integration Bee Practice

1. $\int \left(\frac{\sqrt{x}}{2} - \frac{\sqrt{2}}{x} \right) dx$

2. $\int 7 \sin \frac{\theta}{3} d\theta$

3. $\int -3 \csc^2 x dx$

4. $\int (1 + \tan^2 \theta) d\theta$

5. $\int \sqrt{4y-1} dy$

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

7. $\int \sin^5 \left(\frac{x}{3} \right) \cos \left(\frac{x}{3} \right) dx$

8. $\int \frac{\cos(\sqrt{x}+3) dx}{\sqrt{x}}$

9. $\int r^2 \left(\frac{r^3}{18} - 1 \right)^5 dr$

10. $\int \frac{7x^9 - 3x^2 + 4}{2x^5} dx$

11. $\int \frac{\sin(2x+1)}{\cos^2(2x+1)} dx$

12. $\int 2 \sin x \cos x dx$

13. $\int \sqrt{\frac{x-1}{x^5}} dx$

14. $\int \frac{dy}{2\sqrt{y}(1+\sqrt{y})^2}$

15. $\int \frac{\sin w}{(3+2\cos w)^2} dw$

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

17. $\int x^3 \cos(x^4-1) \sin^8(x^4-1) dx$

18. $\int \cos^6 x \sin^3 x dx$

$$19. \int \left(e^{3x} - \frac{5}{e^x} \right) dx$$

$$20. \int \frac{\sec y + \tan y}{2 + \sec y} dy$$

$$21. \int \frac{3 dx}{3x-2}$$

$$22. \int \frac{dx}{x(\ln x)^2}$$

$$23. \int \frac{\sec x dx}{\sqrt{\ln(\sec x + \tan x)}}$$

$$24. \int x \cos x dx$$

$$25. \int x^3 e^{7x} dx$$

$$26. \int e^x \sin x dx$$

$$27. \int \ln x dx$$

$$28. \int \frac{x^2 + 2x - 1}{2x^3 + 3x^2 - 2x} dx$$

$$29. \int \frac{4x^2 - 7}{2x + 3} dx$$

$$30. \int \frac{2 dx}{x^2 - 6x + 10}$$

$$31. \int \frac{x}{x-3} dx$$

$$32. \int \cos(\ln x) dx$$

$$33. \int \frac{x+5}{x^2+x-2} dx$$

$$34. \int \frac{\cos x}{\sin x + 1} dx$$

$$35. \int x^3 \sqrt{x^2 + 4} dx$$

$$36. \int \frac{\ln(\cos x)}{\cot x} dx$$