

Mixed Integration

$$1. \int \frac{1}{1-x} dx$$

$$2. \int \sin^3 3x \cos 3x dx$$

$$3. \int e^x \sin x dx$$

$$4. \int x \sin x dx$$

$$5. \int \frac{x}{x^2+4} dx$$

$$6. \int \sec^2 x dx$$

$$7. \int \tan x \sec^3 x dx$$

$$8. \int \log_6 x dx$$

$$9. \int_{-1}^0 \frac{x+2}{x^2+4x-1} dx$$

$$10. \int e^{6x} \cos e^{3x} dx$$

$$11. \int_4^1 \frac{\sqrt{1+\sqrt{x}}}{\sqrt{x}} dx$$

$$12. \int \frac{x^3}{1+x^4} dx$$

$$14. \int \frac{x}{1+x^4} dx$$

$$15. \int_0^{\frac{\pi}{3}} \frac{\sin x}{1-3\cos x} dx$$

$$16. \int t 3^{-t} dt$$

$$17. \int_0^1 \ln(x+1) dx$$

$$18. \int \sin^3 x \cos^2 x dx$$

$$19. \int \frac{x^2}{1-x^3} dx$$

$$20. \int \frac{\ln(\ln t)}{t \ln t} dt$$

$$22. \int \sin 3z \sqrt{1-\cos 3z} dz$$

$$23. \int x \sec^2 x dx$$

$$24. \int x e^{-x} dx$$

$$25. \int_0^{\frac{\pi}{2}} (x + x \sin x) dx$$

$$27. \int \frac{\tan \sqrt{t}}{\sqrt{t}} dt$$

$$28. \int \cot x dx$$

$$30. \int t 2^t dt$$

$$31. \int \frac{\ln x}{x} dx$$

$$32. \int \frac{\sin x}{e^x} dx$$

$$33. \int \frac{1}{x^2} \sin^5 \frac{1}{x} \cos^2 \frac{1}{x} dx$$

$$34. \int e^{3x} \cos 3x dx$$

$$35. \int_0^1 x e^{5x} dx$$

$$36. \int x \ln x^2 dx$$