

$$1. \int \frac{y^3 - 4y + 7}{y^2 + 2y - 3} dy$$

$$6. \int x \tan^{-1}(x) dx$$

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

$$7. \int x e^{3x+1} dx$$

$$3. \int \sin^2(t) \cos^2(t) dt$$

$$8. \int \frac{x^3 + 2}{x^2 - 1} dx$$

$$4. \int \sin^3(x) \tan^2(x) \cos^2(x) dx$$

$$9. \int \frac{x^3}{x^2 + 1} dx$$

$$5. \int \frac{dx}{\sqrt{4x^2 + 8x - 12}}$$

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

$$11. \int \frac{4}{x^2(x+2)} dx$$

$$16. \int \frac{e^{1/x}}{x^2} dx$$

$$12. \int \frac{x^3}{x^2-4} dx$$

$$17. \int \frac{x}{x^2+2x+5} dx$$

$$13. \int \frac{x^3}{\sqrt{9-x^2}} dx$$

$$18. \int \frac{1}{(9-x^2)^{3/2}} dx$$

$$14. \int \frac{3}{x-2\sqrt{x}} dx$$

$$19. \int \cos^6(3x) \sec^3(3x) dx$$

$$15. \int \frac{\cos(x)}{4-\sin^2(x)} dx$$

$$20. \int x^5 \ln(x) dx$$

$$21. \int \sin^3(x) \cos^6(x) dx$$

$$26. \int \frac{t^3}{\sqrt{t^2+4}} dt$$

$$22. \int \frac{5}{x^3+2x} dx$$

$$27. \int 4y \sec^2(2y) dy$$

$$23. \int \frac{dx}{x^2-8x+18}$$

$$28. \int x\sqrt{1-x} dx$$

$$24. \int \frac{dx}{x^3+3x^2} dx$$

$$29. \int \frac{x+1}{\sqrt{5+4x-x^2}} dx$$

$$25. \int \frac{e^{3x}}{e^{2x}-1} dx$$

$$30. \int \frac{1}{x^3-3x^2+x-3} dx$$