

Improper Integrals (1)

Additional Techniques of Integration Day 6

Evaluate the integral

1. $\int_e^{\infty} \frac{1}{x(\ln x)^3} dx$

2. $\int_0^1 \frac{3}{x^5} dx$

3. $\int_2^3 \frac{1}{\sqrt{3-x}} dx$

4. $\int_{-2}^{14} \frac{dx}{\sqrt[4]{x+2}}$

5. $\int_6^8 \frac{4}{(x-6)^3} dx$

6. $\int_{-2}^3 \frac{1}{x^4} dx$

Evaluate the integral

7. $\int_0^1 \frac{dx}{\sqrt{1-x^2}}$

8. $\int_0^9 \frac{1}{\sqrt[3]{x-1}} dx$

9. $\int_0^5 \frac{w}{w-2} dw$

10. $\int_0^3 \frac{dx}{x^2-6x+5}$

11. $\int_{\frac{\pi}{2}}^{\pi} \csc x dx$

12. $\int_0^2 z^2 \ln z dz$