



INTEGRAL TECHNIQUES

Class 12 - Mathematics

1. Find the value of $\int (e^{x \log_e a} + e^{a \log_e x}) dx$ [1]
2. Write an anti derivative of function $\cos 2x$ using the method of inspection. [1]
3. Evaluate: $\int \sin^{-1}(\cos x) dx$ [1]
4. Find the integral: $\int \sec x(\sec x + \tan x) dx$. [1]
5. Evaluate $\int \frac{(x^2+2)}{x+1} dx$ [1]
6. Evaluate: $\int \left(\frac{x}{m} + \frac{m}{x} + x^m + m^x\right) dx$ [1]
7. Find the integral: $\int \left(x^{\frac{2}{3}} + 1\right) dx$ [1]
8. Evaluate : $\int \left(\sqrt{x} - \frac{1}{\sqrt{x}}\right) dx$. [1]
9. Evaluate: $\int \frac{1}{(1-\cos 2x)}$ [1]
10. Find the integral: $\int x^2 \left(1 - \frac{1}{x^2}\right) dx$ [1]
11. Evaluate: $\int (x^4 + x^2 + 1) d(x^2)$ [1]
12. Evaluate $\int \frac{x^3-1}{x^2} dx$. [1]
13. Evaluate: $\int \frac{1}{\sqrt{x}} \left(1 + \frac{1}{x}\right) dx$ [1]
14. Find the integral: $\int \frac{x^3-1}{x^2} dx$ [1]
15. Find the integral: $\int \frac{\sec^2 x}{\operatorname{cosec}^2 x} dx$ [1]
16. Evaluate : $\int \frac{2}{x^2} dx$. [1]
17. Evaluate : $\int \left\{ \frac{2-3 \sin x}{\cos^2 x} \right\} dx$. [1]
18. Evaluate: $\int \left(\sqrt{x} + \frac{1}{\sqrt{x}}\right) dx$. [1]
19. Evaluate: $\int \frac{1}{x^2} dx$. [1]
20. Find the integral: $\int \operatorname{cosec} x(\operatorname{cosec} x + \cot x) dx$ [1]