



MATHEMATICS
CH-7- INTEGRALS

Name: _____

Date: _____

Class: XII Sec: ____

Evaluate the following integrals:

1. $\frac{1}{x + x \log x}$

2. $\frac{3x - 5}{\sqrt{x^2 - 8x + 7}}$

3. $(x-3) \sqrt{x^2 + 3x - 18}$

4. $\frac{\sin x}{(1 - \cos x)(2 - \cos x)}$

5. $\frac{x^2 + 1}{(x^2 + 4)(x^2 + 25)}$

6. $\frac{\cos 2x - \cos 2\alpha}{\cos x - \cos \alpha}$

Evaluate the definite integral:

7. $\int_0^\pi \frac{4x \sin x}{1 + \cos 2x} dx$

8. $\int_0^{\pi/4} \log(1 + \tan x) dx$

9. $\int_0^\pi \frac{x dx}{1 + \sin x}$

10. $\int_0^\pi \frac{x \tan x dx}{\sec x \cdot \operatorname{cosec} x}$

11. $\int_{-1}^2 (x^3 - x) dx$

12. $\int_0^{\pi/4} \frac{(\sin x + \cos x) dx}{9 + 16 \sin 2x}$