



BHASKAR CLASSES PVT LTD

Integration- SET2

1. Integrate the function:

a. $\int \frac{10x^9 + 10^x \log_e 10 dx}{x^{10} + 10^x}$

b. $\frac{x^3 \sin(\tan^{-1} x^4)}{1+x^8}$

2. Find the integrals of the functions:

a. $\cos 2x \cos 4x \cos 6x$

b. $\frac{\cos 2x - \cos 2a}{\cos x - \cos a}$

c. $\cos^4 2x$

d. $\frac{\sin^2 x + \cos^3 x}{\sin^2 x \cos^2 x}$

e. $\frac{1}{\cos(x-a)\cos(x-b)}$

3. Find the following integrals: $\int \frac{x+2}{2x^2+6x+5} dx$.

4. Integrate the functions:

a. $\frac{3x^2}{x^6+1}$

b. $\frac{\sec^2 x}{\sqrt{\tan^2 x + 4}}$

c. $\frac{x^2}{\sqrt{x^6+a^6}}$

d. $\frac{1}{\sqrt{(x-a)(x-b)}}$

e. $\frac{x+2}{\sqrt{4x-x^2}}$

f. $\frac{x+2}{\sqrt{x^2+2x+3}}$

5. Integrate the rational function: $\frac{3x-1}{(x-1)(x-2)(x-3)}$.