

INTEGRATION

Exercise 3.3 for Class XII

Question # 1 $\int \frac{-2x}{\sqrt{4-x^2}} dx$

Question # 2 $\int \frac{dx}{x^2+4x+13}$

Question # 3 $\int \frac{x^2}{4+x^2} dx$

Question # 4 $\int \frac{1}{x \ln x} dx$

Question # 5 $\int \frac{e^x}{e^x+3} dx$

Question # 6 $\int \frac{x+b}{(x^2+2bx+c)^{\frac{1}{2}}} dx$

Question # 7 $\int \frac{\sec^2 x}{\sqrt{\tan x}} dx$

Question # 8 (a) $\int \frac{dx}{\sqrt{x^2-a^2}}$ **Question # 8(b)** $\int \sqrt{a^2-x^2} dx$

Question # 9 $\int \frac{dx}{(1+x^2)^{\frac{3}{2}}}$

Question # 10 $\int \frac{1}{(1+x^2) \tan^{-1} x} dx$

Question # 11 $\int \sqrt{\frac{1+x}{1-x}} dx$

Question # 12 $\int \frac{\sin \theta}{1+\cos^2 \theta} d\theta$

Question # 13 $\int \frac{ax}{\sqrt{a^2-x^4}} dx$

Question # 14 $\int \frac{dx}{\sqrt{7-6x-x^2}}$

Question # 15 $\int \frac{\cos x}{\sin x \cdot \ln \sin x} dx$

Question # 16 $\int \cos x \left(\frac{\ln \sin x}{\sin x} \right) dx$

Question # 17 $\int \frac{x dx}{4+2x+x^2}$

Question # 18 $\int \frac{x}{x^4+2x^2+5} dx$

Question # 19 $\int \left[\cos \left(\sqrt{x} - \frac{x}{2} \right) \right] \times \left(\frac{1}{\sqrt{x}} - 1 \right) dx$

Question # 20 $\int \frac{x+2}{\sqrt{x+3}} dx$

Question # 21 $\int \frac{\sqrt{2}}{\sin x + \cos x} dx$

Question # 22 $\int \frac{dx}{\frac{1}{2} \sin x + \frac{\sqrt{3}}{2} \cos x}$