

Kendriya Vidyalaya No. 2, Kribhco, Surat

Class – XII Maths holiday homework(Integral Calculus)

4-mark questions:

1) Evaluate: $\int (3 - 2x)\sqrt{2 + x - x^2} dx$

2) Evaluate: $\int \frac{x^2+x+1}{(x^2+1)(x+2)} dx$

3) Evaluate: $\int_0^{\frac{\pi}{4}} \frac{dx}{\cos^3 x \sqrt{2} \sin 2x}$

4) Find: $\int \frac{\log x}{(x+1)^2} dx$

5) Find: $\int \frac{dx}{\sin x + \sin 2x}$

6) Integrate the following w.r.t. x : $\int \frac{x^2-3x+1}{\sqrt{1+x^2}} dx$

7) Evaluate: $\int_{-\pi}^{\pi} (\cos ax - \sin bx)^2 dx$

8) Evaluate: $\int \frac{x+2}{\sqrt{x^2+5x+6}} dx$

9) Evaluate: $\int_0^{\pi} \frac{4x \sin x}{1+\cos^2 x} dx$

6-marks questions:

10) Evaluate: $\int_1^3 (e^{2-3x} + x^2 + 1) dx$ as a limit of a sum.