

Doon Public School

A Senior Secondary School
Sector- 21, Panchkula. Ph: 0172- 2590514

Assignment 3

Subject: Mathematics

Class: XII

Date: 7-08-2018

Solve the following integrals:

1. $\int \sin^4 x \, dx$

2. $\int \frac{\sin^3 x + \cos^3 x}{\sin^2 x \cos^2 x} \, dx$

3. $\int \frac{\sec^2 x}{\sqrt{\tan^2 x + 4}} \, dx$

4. $\int \frac{4x+1}{\sqrt{2x^2+x-3}} \, dx$

5. $\int \frac{(3\sin \theta - 2)\cos \theta}{5 - \cos^2 \theta - 4\sin \theta} \, d\theta$

6. $\int \frac{2}{(1-x)(1+x^2)} \, dx$

7. $\int \frac{2x}{(x^2+1)(x^2+3)} \, dx$

8. $\int x(\log x)^2 \, dx.$