

Doon Public School

Sector-21, Panchkula

Assignment – 4

Subject: Maths

Class: XII

Date: 21-08-2018

Solve the following integrals:

1.
$$\int_0^{\frac{\pi}{2}} \sqrt{\sin \phi} \cos^5 \phi d\phi$$

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

3.
$$\int_0^{\frac{\pi}{2}} \frac{\sin^4 x}{\sin^4 x + \cos^4 x} dx$$

4.
$$\int_0^a \frac{\sqrt{x}}{\sqrt{x} + \sqrt{a-x}} dx$$

5.
$$\int_{-1}^1 \frac{1}{x^2 + 2x + 5} dx$$

6.
$$\int_{-1}^1 \sin^5 x \cos^4 x dx$$

7.
$$\int_{-5}^5 |x+2| dx$$

8.
$$\int_0^2 x\sqrt{x+2} dx$$