

Centum Preparation 100 Days plan class 12 Maths

Q.No.	DAY - 63
392	Example 9.42 Evaluate $\int_0^1 x^3 (1-x)^4 dx$.
393	Example 9.43 Prove that $\int_0^\infty e^{-x} x^n dx = n!$, where n is a positive integer.
394	Example 9.45 Show that $\Gamma(n) = 2 \int_0^\infty e^{-x^2} x^{2n-1} dx$.
395	Example 9.46 Evaluate $\int_0^\infty \frac{x^n}{n^x} dx$, where n is a positive integer ≥ 2 .
396	Example 9.49 Find the area of the region bounded by the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$
397	Example 9.50 Find the area of the region bounded between the parabola $y^2 = 4ax$ and its latus rectum.
398	Example 9.51 Find the area of the region bounded by the y -axis and the parabola $x = 5 - 4y - y^2$.
399	Example 9.52 Find the area of the region bounded by x -axis, the sine curve $y = \sin x$, the lines $x = 0$ and $x = 2\pi$.