

CLASS XII

GUESS PAPER

MATHS

Differential Equation and Area under Curve

Q.1 Find the particular solution of the $e^x \tan y \, dx + (2 - e^x) \sec^2 y \, dy = 0$, given that $y = \pi/4$, $x = 0$.

Q.2 Find the particular solution of the differential equation $\frac{dy}{dx} + 2y \tan x = \sin x$ given that $y = 0$ when $x = \pi/3$

Q.3 Solve the differential equation $2ye^{x/y} + (y - 2xe^{x/y})dy = 0$, given that $x = 0$ when $y = 1$

Q.4 Find the differential equation of system of circle touching X axis.

Q.5 Find the differential equation of system of line passing through point (2, 3) and having slope m.

Q.6 Find the area bounded by curves ($x, y : y^2 \leq 4x, 4x^2 + 4y^2 \leq 9$)

Q.7 Find area enclosed between $y^2 = 4ax$ and $x^2 = 4ay$

Q.8 Find the area enclosed between $y^2 = 4ax$ and line $y = 3x - 2$.

Q.9 Find the area bounded between ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ and line $y = 2x$

Q.10 Find the area between circles $x^2 + y^2 = 1$ and $(x - 2)^2 + y^2 = 2$