

Mathematics II

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Exam 1

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1. Evaluate the integral.

$$\int \sin^3 x \cos^6 x \, dx$$

2. Evaluate the integral.

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

3. Evaluate the integral.

$$\int \ln x \, x^{-5} \, dx$$

4. Sketch the ellipse and find its foci for the equation $9x^2 + 4y^2 + 36x - 8y + 4 = 0$