

Math 53 Discussion

[# 2, §15.10] Find the Jacobian of the transformation $x = uv, y = u/v$.

[# 9, §15.10] Find the image of the set

$S =$ triangular region with vertices $(0, 0), (1, 1), (0, 1)$ in the uv -plane
under the transformation $x = u^2, y = v$.

[# 26, §15.10] Evaluate $\int \int_R \sin(9x^2 + 4y^2) dA$ where R is the region in the first quadrant bounded by the ellipse $9x^2 + 4y^2 = 1$.