

Problem statement The region R in \mathbf{R}^2 is the parallelogram shown to the right which has vertices (corners) at $(1, 2)$, $(0, 3)$, $(-1, 1)$, and $(0, 0)$. Verify that $\iint_R (y + x)^6 \cos(y - 2x) dA_{xy} = \frac{3^6 \sin(3)}{7}$.

