Taker Name: GTID: 90 Section:

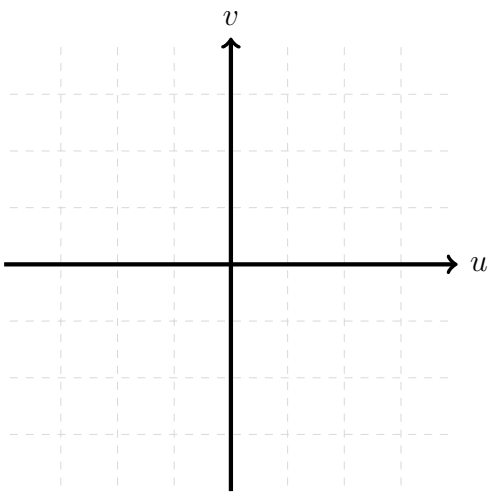
Grader #1: GTID: 90

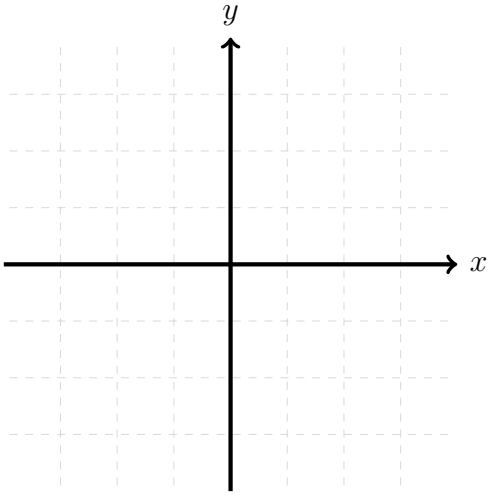
PA#6A - §15.8: Change of variables

Let $u = x$ and $v = \frac{y}{x}$. Set up *but do* NOT *evaluate*

$$M = \iint_R \frac{x}{y}\, dA$$

for the region R bounded by the lines $y = x$, $y = 2x$, $x = 1$, $x = 2$. On the axes below, (a) sketch the new region of integration G after the change of variables and the original region R, (b) find the transformation $T(u, v) = (x, y)$, and (c) compute the Jacobian determinant $|\det DT(u, v)|$. Finally, (d) write the new iterated integral after the change of coordinates $\iint_G f(T(u, v))|\det T(u, v)|du\, dv$.





A	
J	
N	

G2:

A	
J	
N	

G3:

A	
J	
N	