Quiz 7

1. Compute

$$\iint_R y^2 \, dA,$$

where R is the region in Quadrant I of the (x, y)-plane bounded by the curves $y = 1/x$, $y = 2/x$, $y = x$, and $y = 4x$ (see figure). You can use the substitution:

$$u = \sqrt{xy}; \quad v = \sqrt{\frac{y}{x}}.$$