Problem 1. (5 pts.) Consider the lamina shown below, contained by the curve $y = \sqrt{x - 1}$, the line $y = 2 - \frac{1}{2}x$, and the line $y = 0$. Set up but do not evaluate the integrals to find the mass and center of mass of this lamina if the density $\rho = xy \text{ g/cm}^2$.

Problem 2. (5 pts.) Consider the integral

$$\int_0^4 \int_0^{2-\frac{1}{2}x} \int_0^{2-y} 5 \, dz \, dy \, dx$$

Rewrite the integral in the order $\int\int_E 5 \, dx \, dy \, dz$ (it may help to sketch the region) and evaluate it.