

2. Suppose a thin plate has density $\rho(x, y) = x$ and occupies the region D , bounded by $y = \sqrt{x}$, $y = 0$, and $x = 1$.

(a) Sketch the region D . (This one should be easy to sketch *by hand!*)

(b) Set up the double integrals needed to compute the total mass and the center of mass of the thin plate. Then use Mathematica calculate the integrals.

3. Work Problem Solving Problem 1 on page 140 of your course guide.