1. Let $f(x,y) = 2xy + 2x$, and R be the region of the xy-plane between the two curves $y = x$ and $y = x^2$.

    a) Sketch the region R

    b) Set up (but don't solve) an integral representing the volume below the surface $f(x,y)$ within the region R...

        (i) by integrating first with respect to x:

        (ii) by integrating first with respect to y:

    c) Find the volume by evaluating one of the integrals in part b.