

Let R be the region in the first quadrant enclosed by the graph of  $y = \sqrt{6x + 4}$ , the line  $y = 2x$ , and the y-axis.

a. Find the area of R

b. Find the volume of the solid generated when R is revolved about the x-axis.

c. Set up, but do not integrate, an integral expression in terms of a single variable for the volume of the solid generated when R is revolved about the y-axis.