

Present neatly on separate paper. Justify for full credit. No Calculators.  
Name \_\_\_\_\_ Score \_\_\_\_\_ 8 minutes **Weight: x2**

Find the volume of the solid that results when the region enclosed by the given curves is revolved about the  $y$ -axis. In each case, sketch the region neatly.

1)

$$y = \ln x, \quad x = 0, \quad y = 0, \quad y = 1$$

2)

$$x = \csc y, \quad y = \pi/4, \quad y = 3\pi/4, \quad x = 0$$