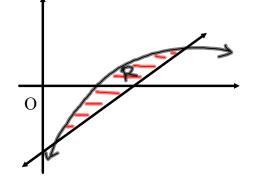AP Test Question
2006
Part A - With Calculator

1) Let R be the shaded region bounded by the graph of $y = \ln x$ and the line $y = x - 2$, as shown.

   a) Find the area of R.

   b) Find the volume of the solid generated when R is rotated about the horizontal line $y = -3$

   c) Write, but do not evaluate, an integral expression that can be used to find the volume of the solid generated when R is rotated about the y-axis.