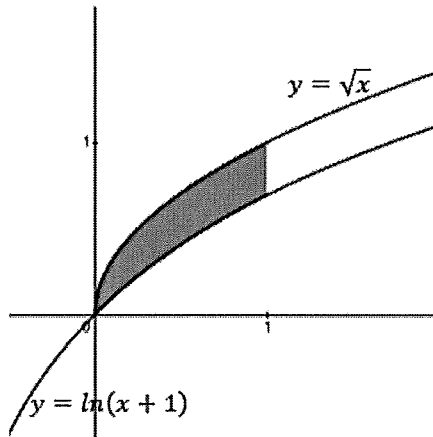**LT3:** I can compute the area of a region bounded by two curves, including determining whether to integrate with respect to x or y.

1. Consider the region bounded by the curves $y = \ln(x+1)$, $y = \sqrt{x}$, the y-axis, and the line $x = 1$ that is shaded in the figure below.

Write the definite integral that gives the area between the curves. **You do not need to solve the integral.**

$$\int_0^1 \left[\sqrt{x} - \ln(x+1) \right] \, dx$$