Math 1B Discussion Problems 14 Feb

1. Find the length of the curve $y = \frac{x^{3/2}}{3} - x^{1/2}$ from $x = 1$ to $x = 9$.

2. Find the length of the curve $y = 1 - e^{-x}$ from $x = 0$ to $x = 2$.

3. Consider the curve $y = -\ln x$ from $x = 0$ to $x = 1$.

   (a) Find the area bounded by the curve, the x-axis, and the y-axis.

   (b) Find the length of the curve.