Calculus II - Spring 2014

Quiz #3, March 26, 2014

In the following problems you are required to show all your work and provide the necessary explanations everywhere to get full credit.

1. Find the arc length of the graph of $f(x) = \ln(\sin x)$ over $\left[\frac{\pi}{4}, \frac{\pi}{2}\right]$.

2. Solve the differential equation $\frac{dy}{dx} = \frac{y}{x^2}$. Then find the solution of this equation that satisfies the initial condition $y(1) = 3$.