September 8, 1999

PHY 337– Problem Set # 2

Continue reading Chapter 6 of **Marion**.

1. Use Euler's equations to find the function $y(x)$ which minimizes the integral:

$$\mathcal{I} \equiv \int_0^1 \sqrt{1 + \left(\frac{dy}{dx}\right)^2}\, dx, \tag{1}$$

Such that $y(x = 0) = 0$ and $y(x = 1) = 1$. Comment on your results in view of the answers in Assignment #1.