MATH 221

Name:		

For full credit please explain all of your answers. No calculators are allowed.

Problem 1. Compute:

$$\int_0^1 \frac{x}{x+1} \, dx$$

Problem 2. Find $x \ge 0$ so that the function F(x) is maximized:

$$F(x) = \int_0^x -t^2 + 2t + 8 dt$$