

Math 302

Quiz 4

21/11/2011

Name:

ID #

Problem 1 (5 points): Let $f(x, y) = x + \sqrt{y}$. Find $\int_C f ds$ if

$$C = \{(x, y) / y = x^2, 0 \leq x \leq \sqrt{2}\}$$

Problem 2 (5 points): Let

$$F(x, y, z) = yz \vec{i} + xz \vec{j} + yx \vec{k}$$

Show that F is conservative and find a potential ϕ