Math 302

Quiz 5

10/ 12/ 2011

Name: **ID #**

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Problem 1. (5 pts) Find $\int \int_S xy dS$, if S is the portion of the paraboloid given by $2z = 4 - x^2 - y^2$ whose projection in the xy-plane is the square

$$D = \{(x,y)/0 \le x \le 1, 0 \le y \le 1\}.$$

Problem 2 (5pts):

Compute $\int \int_S F \cdot ndS$, if S is the closed surface given by the portion of the cone $z = \sqrt{x^2 + y^2}$ and the parts of the planes $z = 2$ and $z = 4$.