Second Homework, due Wednesday October 10 , 2007

1) Find the Green's function for the Laplace operator on the domain

$$U = \{x \in R^2 : x = (x_1, x_2), x_1 > 0, x_2 > 0\} \ ,$$

and solve the problem

$$-\Delta u = f \text{ in } U \ , \ u = g \text{ on } \partial U \ .$$

2) Do the problems 6 on page 86, problems 9, 12 and 13 on page 87 of LC Evans' book.