AME 500B
Homework Set 5
Spring 2008

Question 1

Solve the wave equation $u_{tt} = \nabla^2 u + h(x, y, t)$ with initial condition at $t = 0$ given by $u = u_t = 0$. The domain is the half-plane $x > 0, -\infty < y < \infty$. The (Neumann) boundary condition on $x = 0$ is $\partial u / \partial n = 0$. It is assumed that $h = h(x, y, t)$ is a given function.