Math 301-132 Quiz 5

Name:.....Sec#:.....ID#:.....Ser#:.....

Q.1: Find the temperature $u(x,t)$ in a rod of length L is the initial temperature is $L-x$ and if the ends $x=0$ and $x=L$ are insulated.

Q.2: Solve the wave equation $a^2\dfrac{\partial^2 u}{\partial x^2} = \dfrac{\partial^2 u}{\partial t^2}$ subject to the conditions

$u(x,0) = \sin(2\pi x) + \sin(5\pi x)$, $u(0,t) = 0$ and $u_t(1,t) = 0$