Name_____ Student number_____

Home assignment 2

Consider vibration of a rectangular membrane of side lengths $2L$ and L, density ρ, thickness t, and tightening S' (force per unit length). If the edges are fixed, find the angular velocity of the free vibrations using the Finite Difference Method on a regular grid of points $(i, j) \in \{0,1,2,3,4\} \times \{0,1,2\}$. Consider the mode, which is reflection symmetric with respect to the lines through the center point (figure).