Name_____ Student number_____

Home assignment 3

Determine the critical value of the in-plane loading p_{cr} making the plate of the figure to buckle. The loaded edges are simply supported and the unloaded free. Use the approximation $w(x,y) = a_0(1-x/L)(x/L)$ and assume that $N_{xx} = -p$ and $N_{yy} = N_{xy} = 0$. Problem parameters E, ν, ρ and t are constants.