

Name _____ Student number _____

Assignment 5

The clamping of the plate shown allows displacement in y -direction. At the free edge, the plate is loaded by distributed force p . Determine the critical value p_{cr} of the distributed force making the plate to buckle. Use the approximation $w(x, y) = a_0(x/L)^2$ and assume that $N_{xx} = -p$ and $N_{yy} = N_{xy} = 0$. Material parameters E , ν and thickness of the plate t are constants.

