Name_____ Student number_____

Assignment 5

A Kirchhoff plate of thickness t is loaded by its own weight. The plate is clamped on the edges where $x = 0$ or $y = 0$ and free on the other two edges. Material parameters E, $v = 0$, and ρ are constants. Determine the parameter a_0 of the approximation $w(x, y) = a_0 x^2 y^2$. Use the principle of virtual work in form $\delta W = 0 \ \ \forall \delta a_0 \in \mathbb{R}$.