

Quiz 7 Math 301-06172 Name:.....

Exercise: Use separation of variables to solve

$$\begin{cases} \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = 0, & 0 < x < 1, 0 < y < 3 \\ u(0, y) = u(1, y) = 0, & 0 \leq y \leq 3 \\ u(x, 0) = 0, u(x, 3) = 1, & 0 \leq x \leq 1 \end{cases}$$