HW 1

Solve

$$\Delta u = 0 \quad \text{on } \Omega = (0, \pi) \times (0, \pi),$$

- Dirichlet-Neumann:

$$u(0, y) = \partial_x u(\pi, y) = 0$$

- Dirichlet:

$$u(x, 0) = g(x), \qquad u(x, \pi) = 0.$$

Give the solution explicitly using separation of variables. Include appropriate detail for a graduate exam.