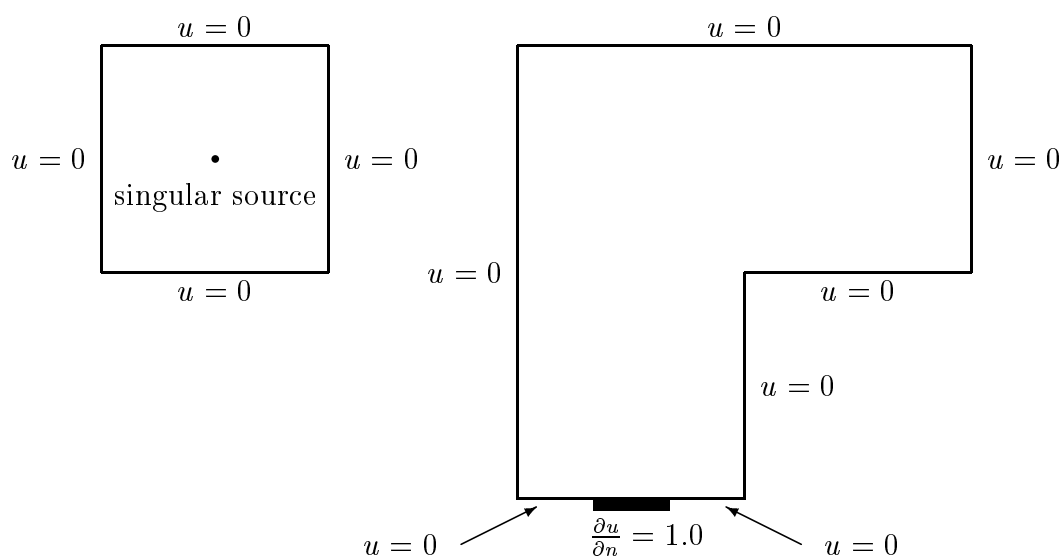


# 程式18 Interior problem



(a). square cavity with singular source

(b). L shape cavity

Governing equation:

For a square problem:

$$(\nabla^2 + k^2)u(x_1, x_2) = 0$$

For a L-shape problem:

$$(\nabla^2 + k^2)u(x_1, x_2) = 0$$

Boundary conditions:

For a square problem:

$$u(x_1, x_2) = 0, \quad \mathbf{x} \text{ on boundary}$$

For a L-shape problem: as shown in the figure

Analytical solution: