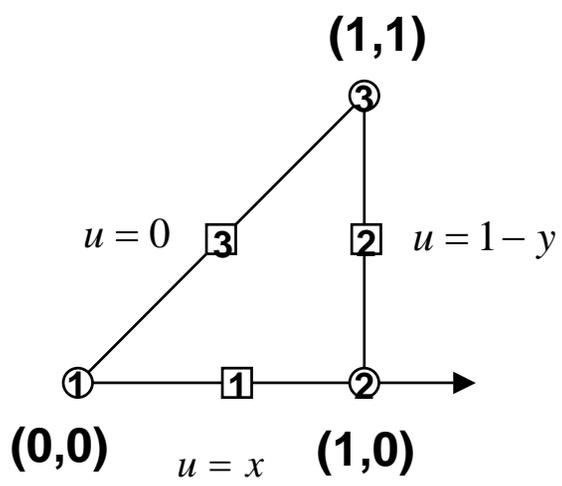**program.ppt**

Program testing option examples:
(1). Regularization methods
(2). Element types
(3). Element number
(4). Boundary effect
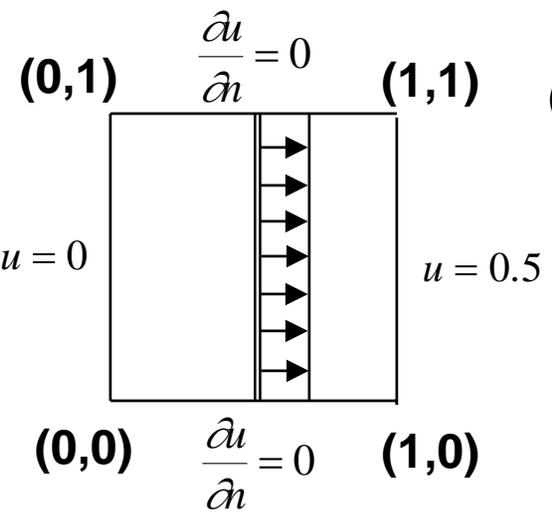**(5). Accuracy**

○ **node**

□ **constant or linear element**

4. Potential discontinuity

$u = 1$ $u(1, y) = \dfrac{4}{\pi}\tan^{-1}(y)$

(1,1)

(0,0) $u = 0$ **(1,0)**

1. Corner with Dirichlet conditions

2. Boundary flux calculation

3. Degenerate boundary

(1,1)

$u = 0$ $u = 1 - y$

(0,0) $u = x$ **(1,0)**

Ref. Shiau, p.69, 1992.

(0,1) $\dfrac{\partial u}{\partial n} = 0$ **(1,1)**

$u = 0$ $u = 0.5$

(0,0) $\dfrac{\partial u}{\partial n} = 0$ **(1,0)**

Ref. Chen and Hong, p.233, 1992.

(-1,0.5) $\dfrac{\partial u}{\partial n} = 0$ **(1,0.5)**

$\dfrac{\partial u}{\partial n} = 0$ $\dfrac{\partial u}{\partial n} = 0$

(0,0)

$u = -1$ $u = 1$

(-1,-0.5) $\dfrac{\partial u}{\partial n} = 0$ **(1,-0.5)**
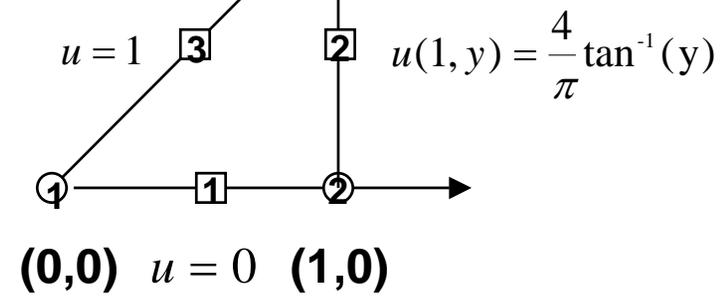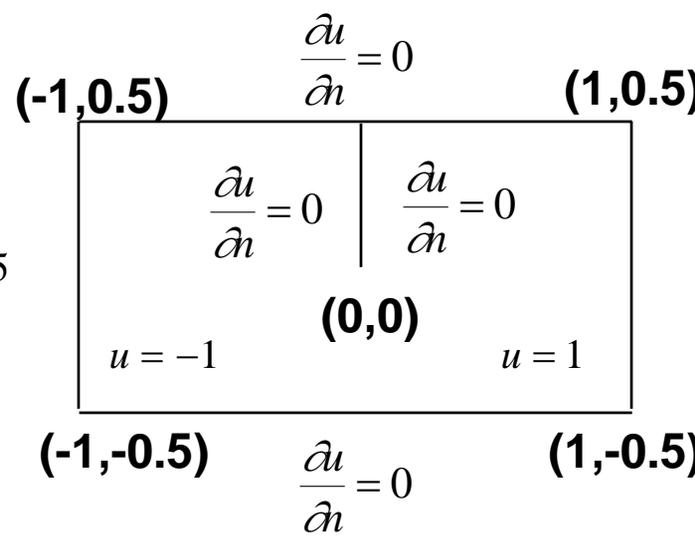
Ref. Chen and Hong, p.229, 1992.