

5.6

$$A = \begin{bmatrix} a_{11} & a_{12} \\ 0 & a_{22} \end{bmatrix}, \quad \|A\|_{\infty} = 1$$

SAY $A = \begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}$ THEN $\det(A - \lambda I) = 0$

$$\det \begin{bmatrix} 1-\lambda & 0 \\ 0 & 0 \end{bmatrix} = 0$$

$$0 = 0$$

$$\text{so, } \rho(A) = \{\max |\lambda|\} = 0$$