$$\begin{bmatrix} 1-\lambda & 0 \\ 1 & -\lambda \end{bmatrix} \begin{bmatrix} p_{11} & p_{12} \\ p_{21} & p_{22} \end{bmatrix} = \begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix} = \emptyset$$

(1) $p_{11}(1-\lambda) = \emptyset$

(2) $p_{11} - \lambda p_{21} = \emptyset$

(3) $p_{12}(1-\lambda) = \emptyset$

(4) $p_{12} - \lambda p_{22} = \emptyset$

$p_{11} = \emptyset$

$p_{11} 1 - p_{11} = 0$

$p_{11} = p_{11} = \emptyset$

$p_{11} = \lambda p_{21}$ PRETTY UNCLR

~~ASSUME ABOVE ZERO~~

$p_{12} = \emptyset$ or

$p_{12} = ?$ & $1 - \lambda = \emptyset$

$\lambda = 1$

IF $\lambda = 1$

IF $\lambda \neq 0$ $p_{12} = \emptyset$ → $p_{12} = \lambda p_{22}$ $= \emptyset$

SO THIS TELLS ONE NOTHING

WELL → $Ap = \lambda p$ ⟷ $(A - \lambda I)p = \emptyset$

OR $\begin{bmatrix} 1 & \\ 1 & 0 \end{bmatrix}$

$$\left(\begin{bmatrix} 1 & \emptyset \\ 1 & \emptyset \end{bmatrix} - \begin{bmatrix} \lambda & 0 \\ 0 & \lambda \end{bmatrix} \right) p = \begin{bmatrix} 1-\lambda & 0 \\ 1 & -\lambda \end{bmatrix} p = \begin{bmatrix} 1-\lambda & 0 \\ 1 & -\lambda \end{bmatrix} \begin{bmatrix} p_{11} & p_{12} \\ p_{21} & p_{22} \end{bmatrix} = \emptyset$$

EA CEL
IMP
REM
M