

$$2) \begin{bmatrix} 1 & -2 & -1 & 3 \\ 2 & 3 & 0 & 1 \\ 1 & 0 & -4 & -2 \\ 0 & -1 & 3 & 1 \end{bmatrix}$$

$$* A = [1, -2, -1, -3; 2, 3, 0, 1; 1, 0, -4, -2; 0, -1, 3, 1]$$

* Eig (A)

$$= 2.4523 + 2.2437i$$

$$2.4523 - 2.2437i$$

$$-1.9323 + 1.7651i$$

$$-1.9323 - 1.7651i$$

* The system is unstable because eigen values are a combination of both positive and negative values