

$$\rightarrow V_4 = 0 ; V_2 = 0 ; V_1 = 0 ; V_3 \text{ libre.}$$

$$\vec{V}_p = \begin{pmatrix} 0 \\ 0 \\ V_3 \\ 0 \end{pmatrix} = V_3 \begin{pmatrix} 0 \\ 0 \\ 1 \\ 0 \end{pmatrix} \quad \text{mult geo} = 1.$$

$$\lambda = 2 \quad \begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & -2 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix} \begin{pmatrix} V_1 \\ V_2 \\ V_3 \\ V_4 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \\ 0 \\ 0 \end{pmatrix} \Rightarrow \begin{aligned} V_2 &= 0 \\ 0 &= 0 \\ -2V_3 &= 0 \\ 0 &= 0. \end{aligned}$$

$$\rightarrow V_2 = V_3 = 0 ; V_1, V_4 \text{ libres.}$$

$$\vec{V}_p = \begin{pmatrix} V_1 \\ 0 \\ 0 \\ V_4 \end{pmatrix} = V_1 \begin{pmatrix} 1 \\ 0 \\ 0 \\ 0 \end{pmatrix} + V_4 \begin{pmatrix} 0 \\ 0 \\ 0 \\ 1 \end{pmatrix} \quad \text{mult geo} = 2.$$

En este caso

$\text{mult alg} > \text{mult geo} \rightarrow \text{no es diagonalizable}$