΄Α 4

$$A = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix},$$

ί ί A^n.

ύ

΄Ε

$$A^2 = A \cdot A = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix} \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix} = \begin{pmatrix} -1 & 0 \\ 0 & -1 \end{pmatrix} = -I_2.$$

$$A^3 = A^2 \cdot A = -I_2 \cdot A = -A, \qquad A^4 = A^2 \cdot A^2 = (-I_2) \cdot (-I_2) = I_2.$$

΄Α

$$A^n = \begin{cases} I_2, & n = 4k, \\ A, & n = 4k+1, \\ -I_2, & n = 4k+2, \\ -A, & n = 4k+3, \end{cases} \quad k \in \mathbb{N}$$