

從行列式提純量題目: 89 台大資工

$$\det(\alpha A) = \alpha \det(A), \text{ where } \alpha \text{ is a scalar.}$$

Ans.

$$\text{取 } \alpha = 2, A = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

$$\Rightarrow \det \begin{bmatrix} 2 & 0 \\ 0 & 2 \end{bmatrix} = 4$$

$$\Rightarrow 2 \cdot \det \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} = 2 \cdot 1 = 2 \neq 4$$

$$\therefore \det(\alpha A) \neq \alpha \det(A). \quad \#$$