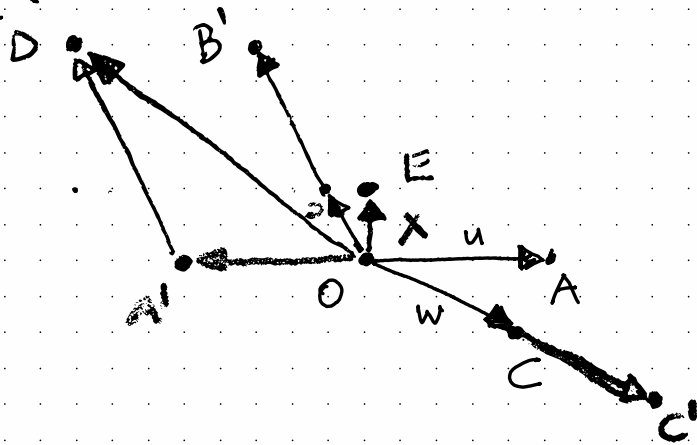


ES:



$$u = \overrightarrow{OA}$$

$$v = \overrightarrow{OB}$$

$$w = \overrightarrow{OC}$$

Determinant

$$X = \underbrace{3v}_{\overrightarrow{OB'} + \overrightarrow{OA'}} - u + \underbrace{2w}_{\overrightarrow{OD} + \overrightarrow{OC'}}$$
$$\overrightarrow{OE}$$

Es: Dire, motivando la risposta, quali di questi sono o meno sottospazi vettoriali (dell'opportuno spazio vettoriale):

$$1) U_1 = \left\{ p \in \mathbb{K}[x]_{\leq 2} \mid p(1) = 1 \right\} \quad X \quad 7) U_7 = \left\{ \begin{pmatrix} x \\ y \end{pmatrix} \in \mathbb{R}^2 \mid x^2 + 2y = 0 \right\} \quad X \quad V$$

$$2) U_2 = \left\{ p \in \mathbb{K}[x]_{\leq 2} \mid p(1) = 0 \right\} \quad V \quad V$$

$$3) U_3 = \left\{ \begin{pmatrix} x \\ y \end{pmatrix} \in \mathbb{R}^2 \mid x^2 = 0 \right\} \quad V \quad V$$

$$4) U_4 = \left\{ \begin{pmatrix} x \\ y \end{pmatrix} \in \mathbb{R}^2 \mid x \geq 0 \right\} \quad V \quad X$$

$$5) U_5 = \left\{ \begin{pmatrix} x \\ y \end{pmatrix} \in \mathbb{R}^2 \mid x + 2y = 1 \right\} \quad X \quad U_6 = \left\{ \begin{pmatrix} -2y \\ y \end{pmatrix} \mid y \in \mathbb{R} \right\}$$

$$6) U_6 = \left\{ \begin{pmatrix} x \\ y \end{pmatrix} \in \mathbb{R}^2 \mid x + 2y = 0 \right\} \quad V \quad V \quad = \text{Span} \begin{pmatrix} -2 \\ 1 \end{pmatrix}$$

$$2y = -x^2 \leq 0$$

$$-\begin{pmatrix} 2 \\ -2 \end{pmatrix} = \begin{pmatrix} -2 \\ 2 \end{pmatrix}$$

$\underbrace{\hspace{1.5cm}}_{U_7} \quad \underbrace{\hspace{1.5cm}}_{U_7}$