

V_1, V_2, U subspaces of V

$$V_1 + U = V_2 + U \Rightarrow V_1 = V_2$$

Let $V_1 = \{(x, 0) \in \mathbb{F}^2 : x \in \mathbb{F}\}$

$$V_2 = \{(0, y) \in \mathbb{F}^2 : y \in \mathbb{F}\}$$

$$U = \{(a, a) \in \mathbb{F}^2 : a \in \mathbb{F}\}$$

$$V_1 + U = \{(x+a, a) \in \mathbb{F}^2 : x, a \in \mathbb{F}\} = \mathbb{F}^2$$

$$V_2 + U = \{(a, y+a) \in \mathbb{F}^2 : y, a \in \mathbb{F}\} = \mathbb{F}^2$$

$$\left. \begin{array}{l} V_1 + U = V_2 + U \\ V_1 \neq V_2 \end{array} \right\} \Rightarrow \text{statement is false.}$$