$$U = \{(x, -x, 2x) \in F^3 : x \in F\}$$
$$W = \{(x, x, 2x) \in F^3 : x \in F\}$$

$$U + W = \{(x+y, -x+y, 2(x+y)) \in F^3 : x, y \in F\}$$
$$= \{(a, b, 2a) \in F^3 : a \in F\}$$

The set of all vectors in F^3 whose third coordinate equals twice the first one and the second one is free.