Example

$\mathbb{R}^4$

→ $\vec{u} = (1, 0, 2, -3)$

→ $\vec{v} = (2, 1, 0, 0)$

→ $\vec{w} = (0, 0, 1, 0)$

$\alpha = 2$, $\beta = 3$, $\gamma = -1$

$$\alpha\vec{u} + \beta\vec{v} + \gamma\vec{w} = 2(1, 0, 2, -3) + 3(2, 1, 0, 0) - (0, 0, 1, 0) =$$

$$= (2, 0, 4, -6) + (6, 3, 0, 0) + (0, 0, -1, 0) =$$

$$= (8, 3, 3, -6)$$