

If \vec{a}_1, \vec{a}_2 & \vec{a}_3 are non-coplanar vectors and $(x + y - 3)\vec{a}_1 + (2x - y + 2)\vec{a}_2 + (2x + y + \lambda)\vec{a}_3 = \vec{0}$

holds for some 'x' and 'y' then 'λ' is

$$(x+y-3)\vec{a}_1 + (2x-y+2)\vec{a}_2 + (2x+y+h)\vec{a}_3 = \vec{0}$$

as $\vec{a}_1, \vec{a}_2, \vec{a}_3$ are non coplanar
So they are linearly independent

$$\Rightarrow \begin{aligned} x+y-3 &= 0, & 2x-y+2 &= 0 \\ 2x+y+h &= 0 \end{aligned}$$

$$\Rightarrow \boxed{h = -\frac{10}{3}}$$