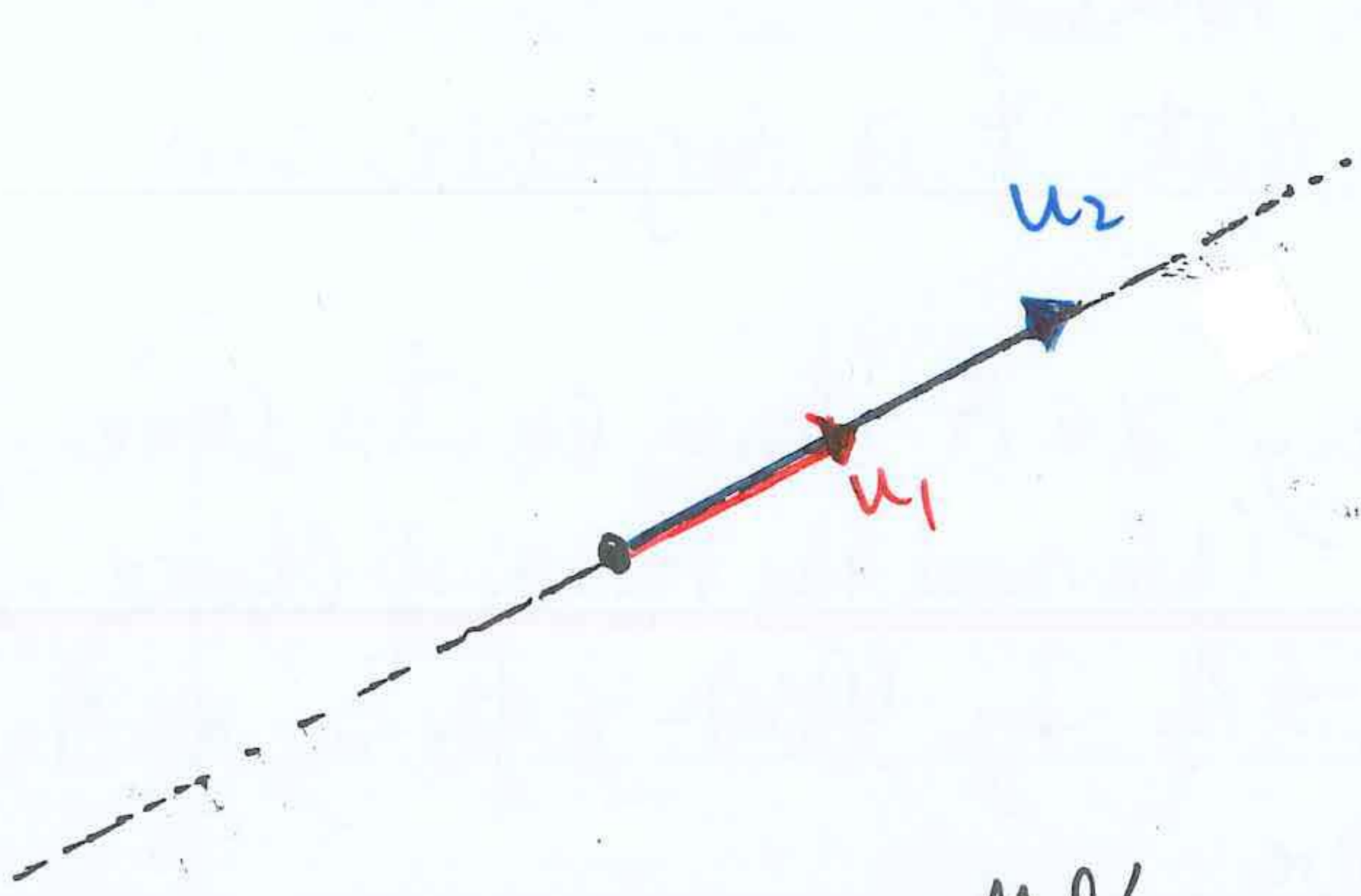
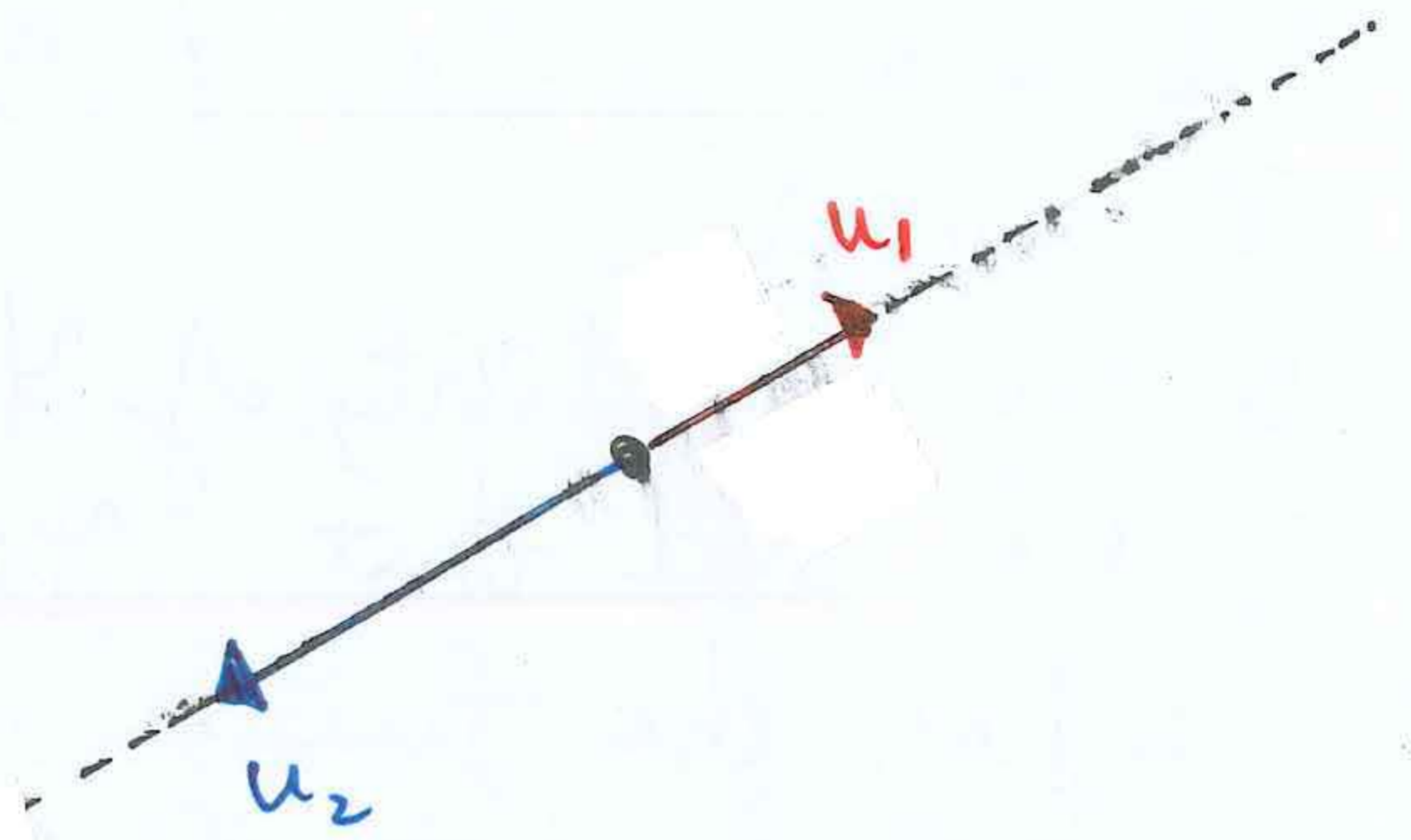


Geometric interpretation on linear dependence/independence



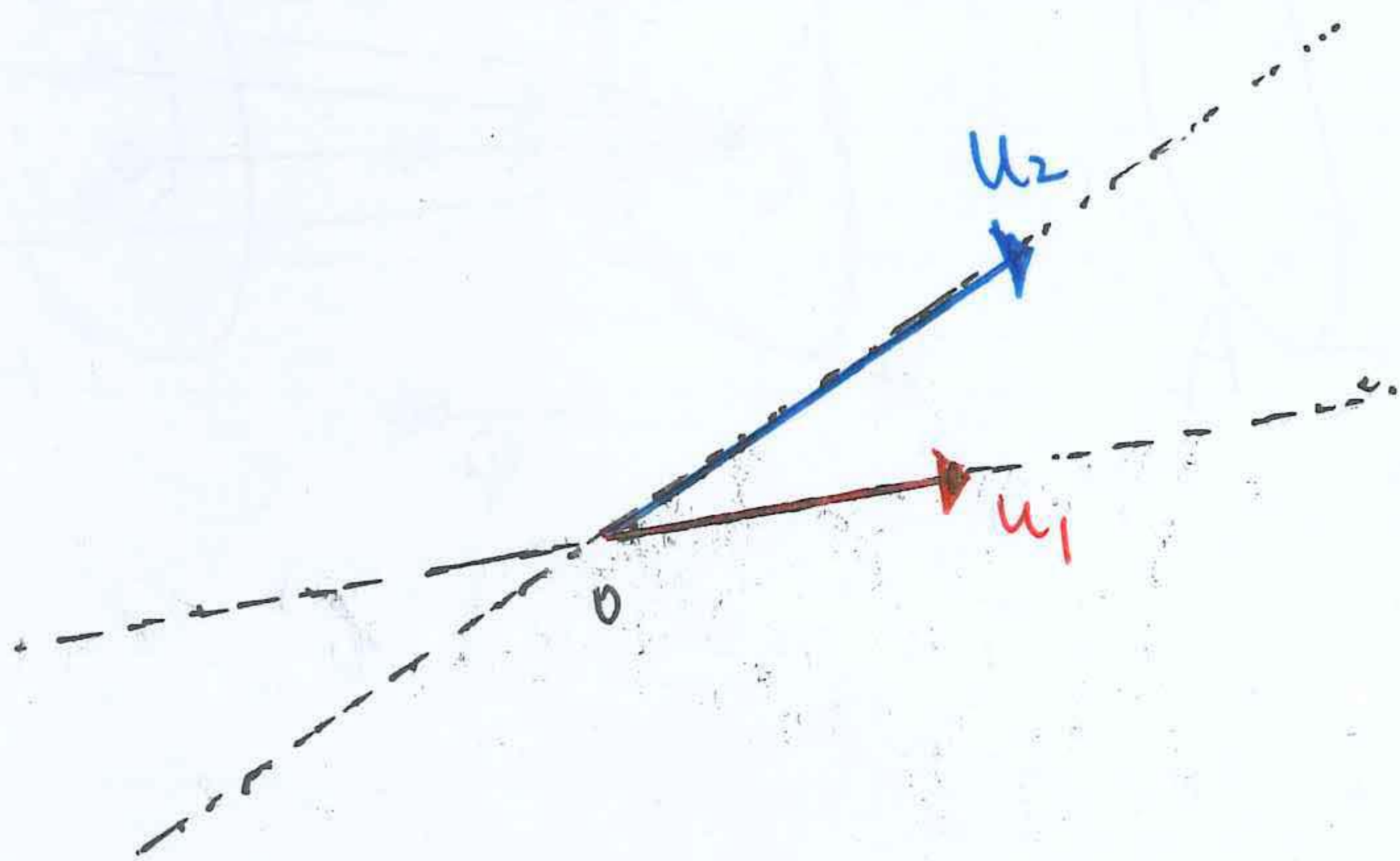
u_1, u_2 are 'parallel'
and 'in the same direction'



u_1, u_2 are 'parallel'
and 'in the opposite direction'

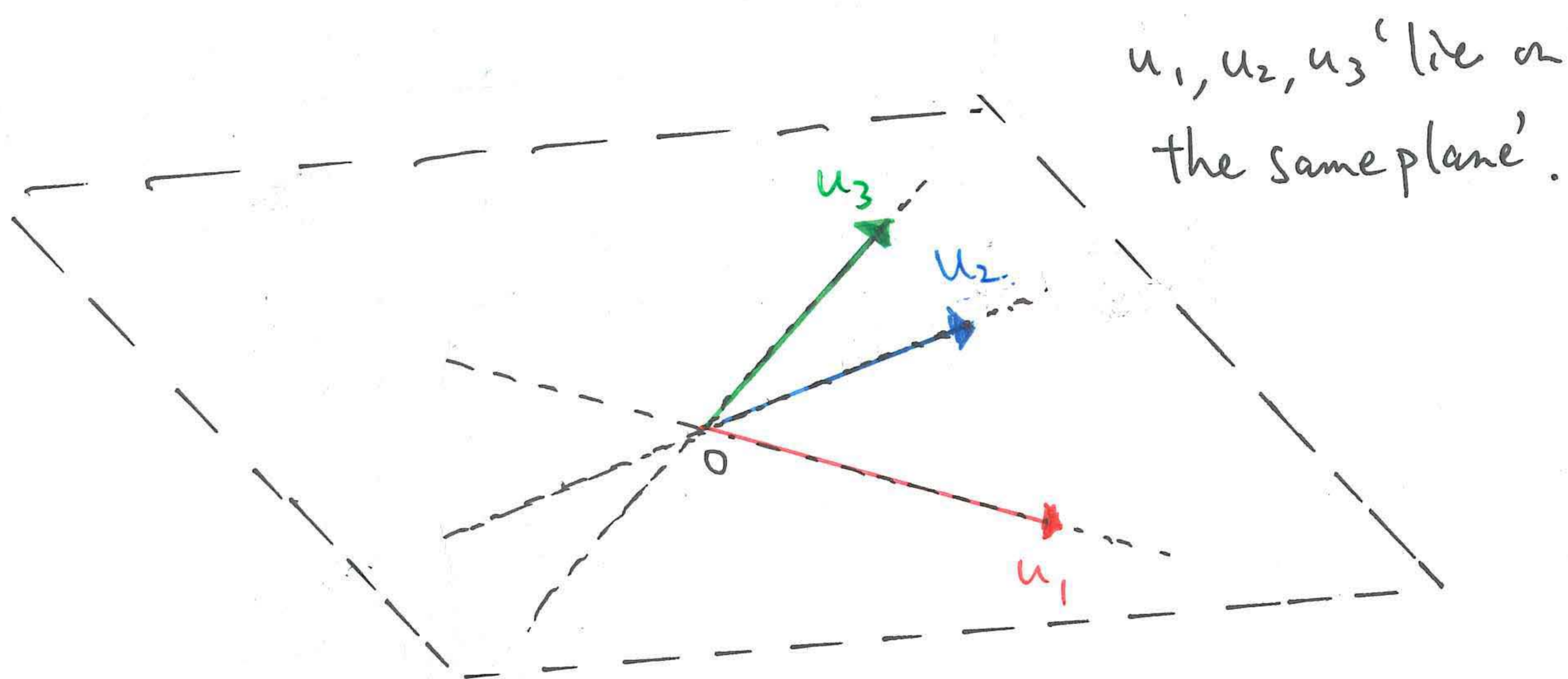
Above are the only possible pictures for a pair of linearly dependent non-zero vectors in \mathbb{R}^m .

Below is the only possible picture for a pair of linearly independent vectors in \mathbb{R}^m .



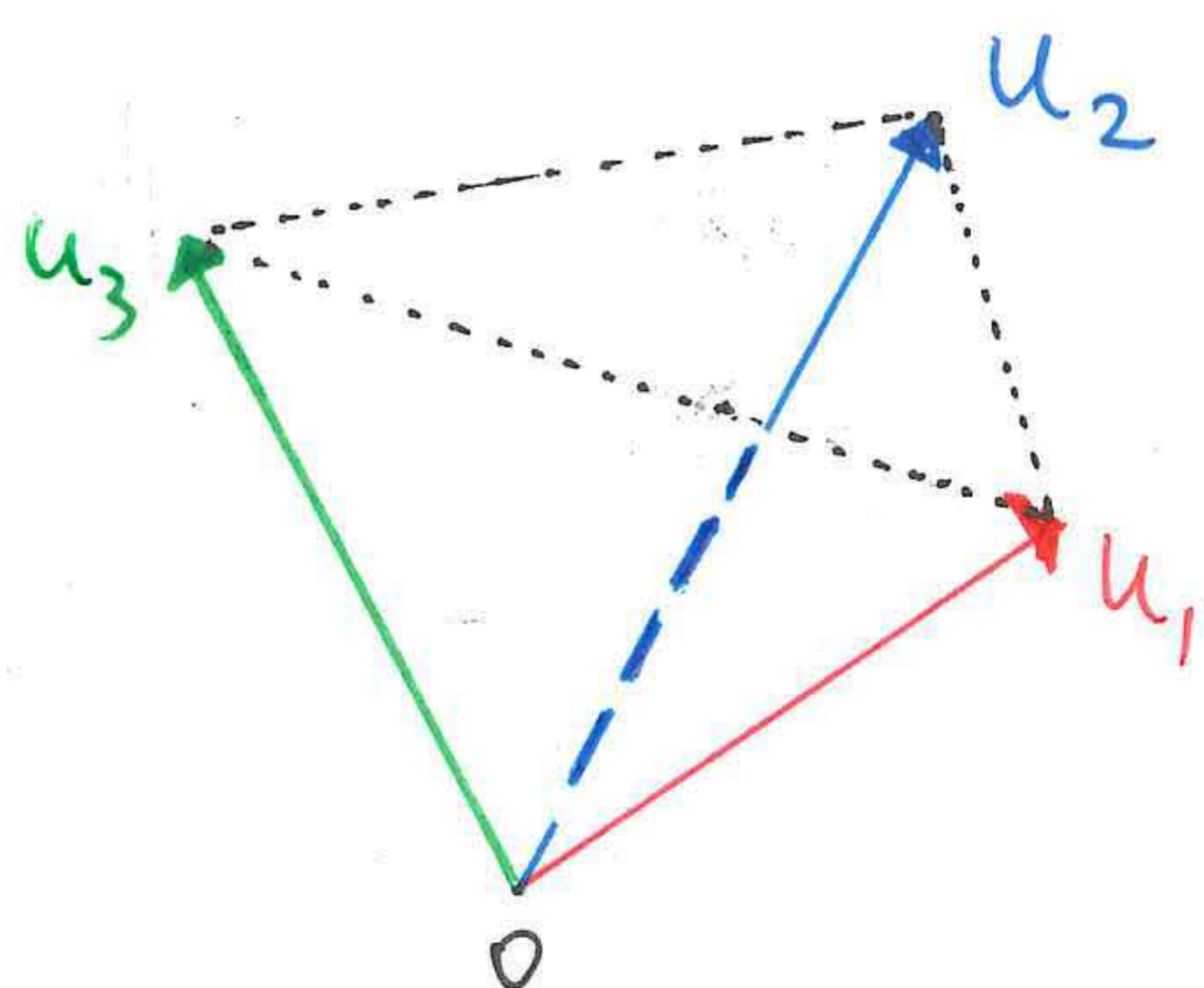
u_1, u_2 are not
'parallel' to each other.

Geometric interpretation on linear dependence/independence



Above is the only possible picture for three linearly dependent non-zero vectors in \mathbb{R}^m .

Below is the only possible picture for three linearly independent vectors in \mathbb{R}^m .



The points corresponding to $0, u_1, u_2, u_3$ are the four vertices of a tetrahedron.