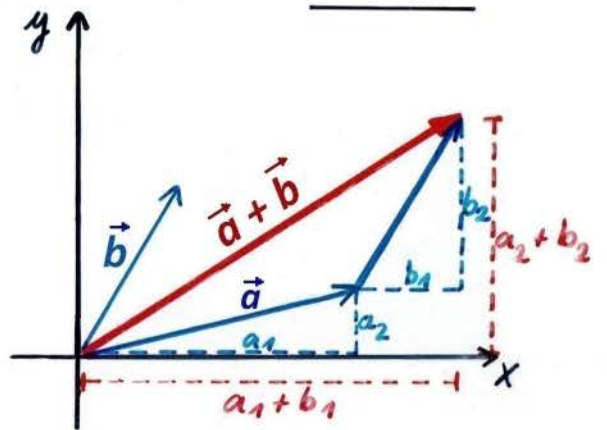
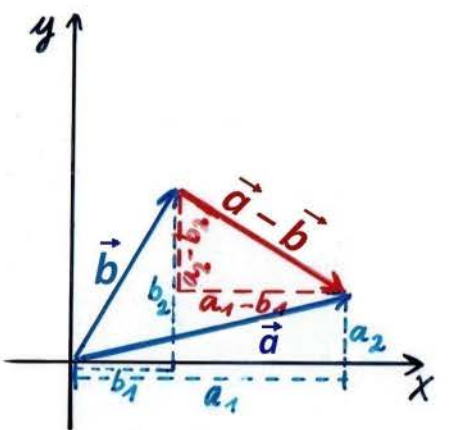


Addition, Subtraktion, S-Multiplikation von Vektoren in Koordinatendarstellung

im \mathbb{R}^2

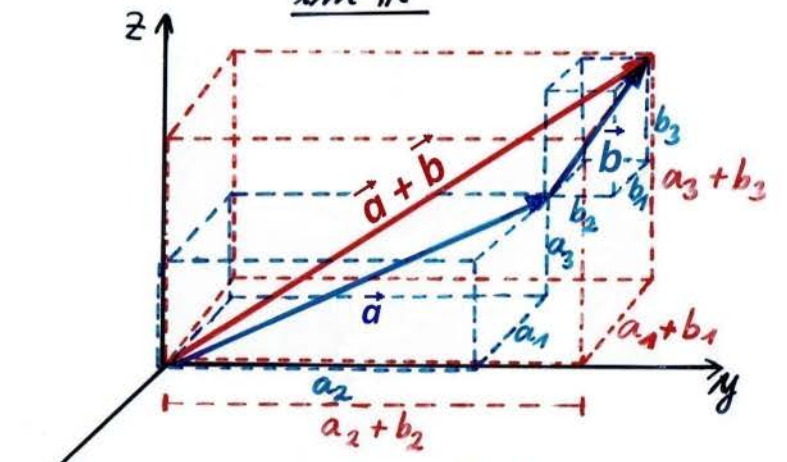


$$\vec{a} = \begin{pmatrix} a_1 \\ a_2 \end{pmatrix}, \vec{b} = \begin{pmatrix} b_1 \\ b_2 \end{pmatrix} :$$

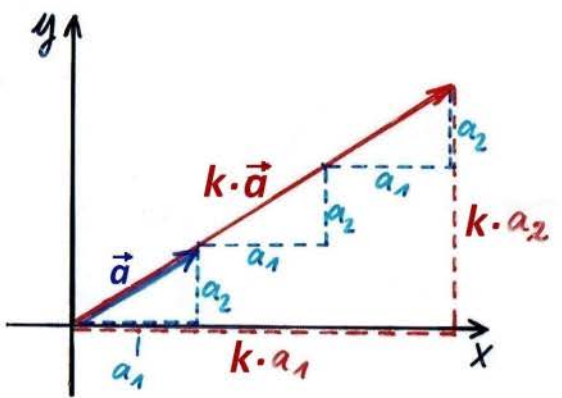


$$\vec{a} \pm \vec{b} = \begin{pmatrix} a_1 \pm b_1 \\ a_2 \pm b_2 \end{pmatrix}$$

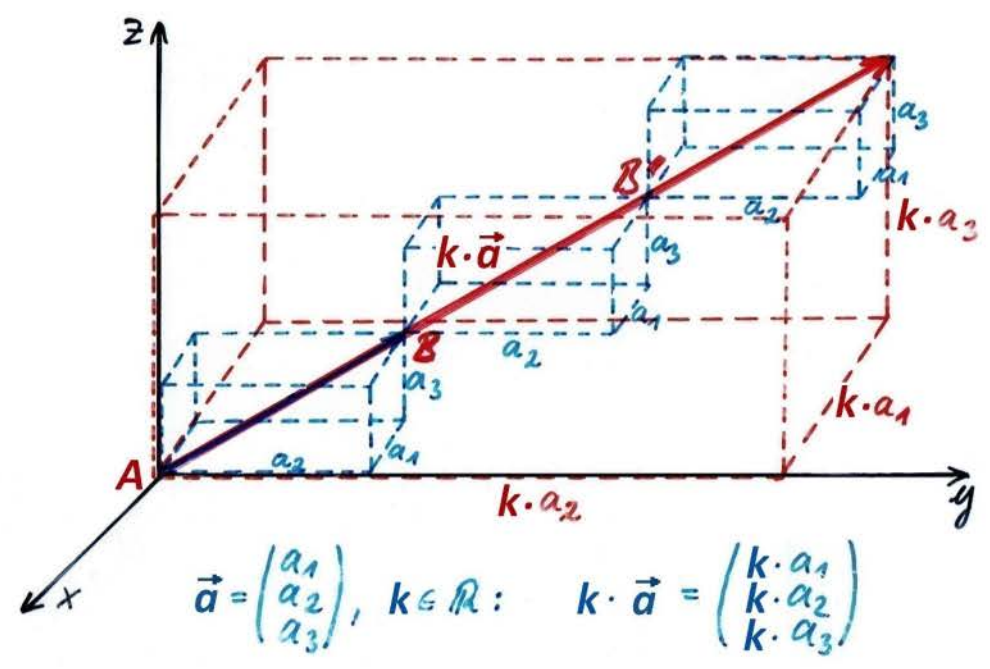
im \mathbb{R}^3



$$\vec{a} \pm \vec{b} = \begin{pmatrix} a_1 \pm b_1 \\ a_2 \pm b_2 \\ a_3 \pm b_3 \end{pmatrix}$$



$$\vec{a} = \begin{pmatrix} a_1 \\ a_2 \end{pmatrix}, k \in \mathbb{R}: k \cdot \vec{a} = \begin{pmatrix} k \cdot a_1 \\ k \cdot a_2 \end{pmatrix}$$



$$\vec{a} = \begin{pmatrix} a_1 \\ a_2 \\ a_3 \end{pmatrix}, k \in \mathbb{R}: k \cdot \vec{a} = \begin{pmatrix} k \cdot a_1 \\ k \cdot a_2 \\ k \cdot a_3 \end{pmatrix}$$