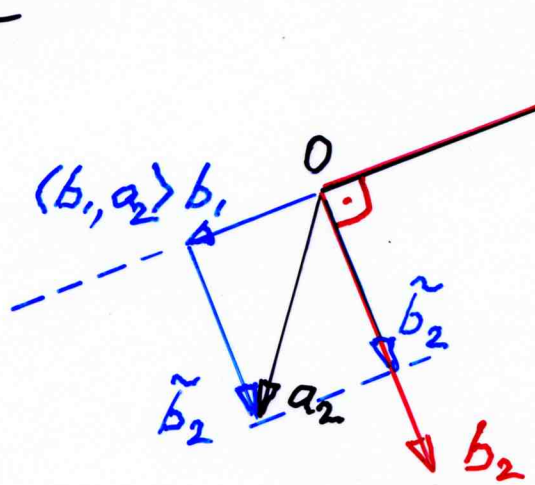
Gram-Schmidt

im $\mathbb{R}^2$:



$$b_1 = \frac{a_1}{\|a_1\|}$$

$$\tilde{b}_2 = a_2 - \langle b_1, a_2\rangle b_1$$

$$\overset{\in V=\mathbb{R}^2}{=} (I - \underbrace{b_1 b_1^T}_{\text{Projektor}})\, a_2$$

$$b_2 = \frac{\tilde{b}_2}{\|\tilde{b}_2\|}$$

im $\mathbb{R}^3$: