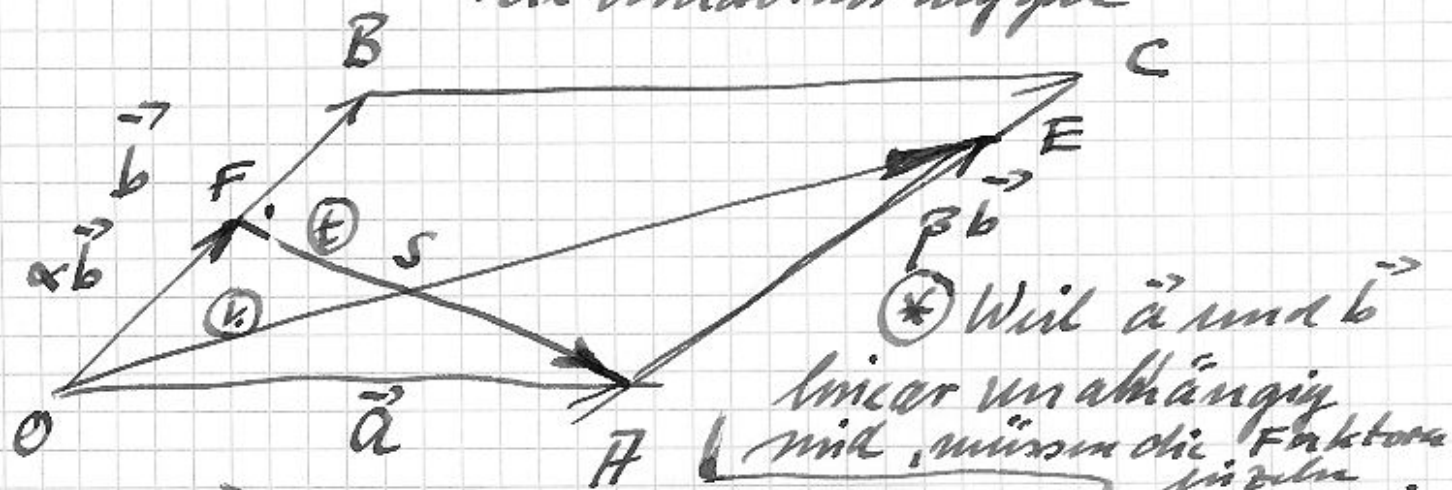


Teilverhältnis aufgabe



$$\vec{OS} = k \vec{OE} = k(\vec{a} + \beta \vec{b})$$

$$\vec{OS} = \alpha \vec{b} + t \cdot \vec{FA} = \alpha \vec{b} + t(\vec{a} - \alpha \vec{b})$$

$$\text{Also } k(\vec{a} + \beta \vec{b}) = \alpha \vec{b} + t(\vec{a} - \alpha \vec{b})$$

$$k\vec{a} + k\beta\vec{b} = \alpha \vec{b} + t\vec{a} - t\alpha \vec{b}$$

$$(k - t)\vec{a} = (\alpha - t\alpha - k\beta)\vec{b}$$

$$k - t = 0 \quad \alpha - t\alpha - k\beta = 0$$

$$k = t \quad \alpha - t\alpha - k\beta = 0$$

$$\alpha - k\alpha - k\beta = 0$$

$$k\alpha + k\beta = \alpha$$

$$k(\alpha + \beta) = \alpha$$

Steilt OE im Verh. $k:(k-t)$

$$\frac{k}{1-k} = \frac{\alpha}{\alpha + \beta - \alpha}$$

$$= \frac{\alpha}{\alpha + \beta - \alpha} = \frac{\alpha}{\beta} = \alpha : \beta$$

$$\alpha = \frac{1}{2} \quad \beta = \frac{3}{4} \Rightarrow \frac{\alpha}{\beta} = \frac{\frac{1}{2}}{\frac{3}{4}} = \frac{2}{3} = 2:3$$

$$t = \frac{\frac{1}{2}}{\frac{1}{2} + \frac{3}{4}} = \frac{1}{2+3} = \frac{2}{5} \quad t \text{ teilt } \vec{OE} \text{ im Verh. } 2:3$$

$$t = k$$

$$k \text{ u u u } 2:3$$