Abbildung des Einheitskreises

Original e_i

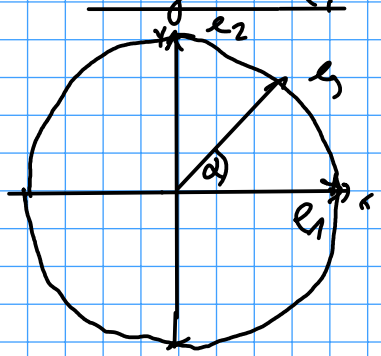
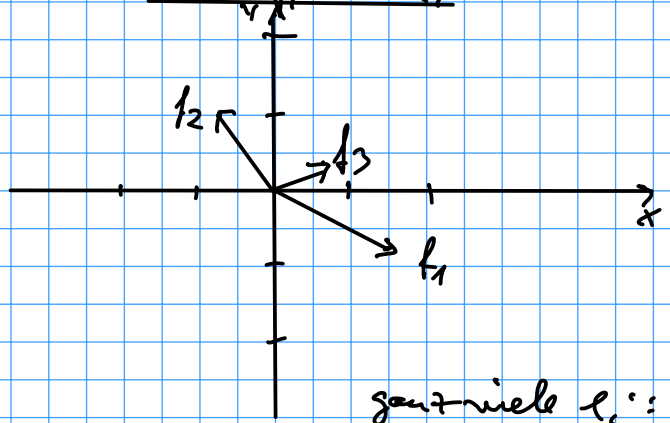


Bild $f_i = A e_i$



$e_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$ $\quad f_1 = A e_1$

$e_2 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$ $\quad f_2 = A e_2$

$e_3 = \begin{pmatrix} \cos\alpha \\ \sin\alpha \end{pmatrix}$

ganzviele e_i: (N Stück)

$\varphi = 0 : \frac{2\pi}{N} : 2\pi$ (na gut: $N+1$)

$e_i = \begin{pmatrix} \cos\varphi \\ \sin\varphi \end{pmatrix} = \begin{pmatrix} \cos 0 & \cos\frac{2\pi}{N} & \cos\frac{4\pi}{N} & \dots \\ \sin 0 & \sin\frac{2\pi}{N} & \sin\frac{4\pi}{N} & \dots \end{pmatrix}$

$Ae_i = \begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} \cos 0 & \cos\varphi_1 & \dots \\ \sin 0 & \sin\varphi_1 & \dots \end{pmatrix} = \begin{pmatrix} Ae_1, Ae_2, \dots \end{pmatrix}$