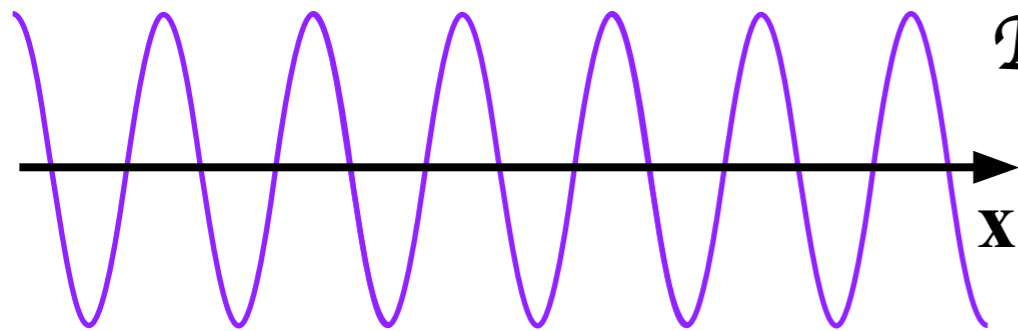


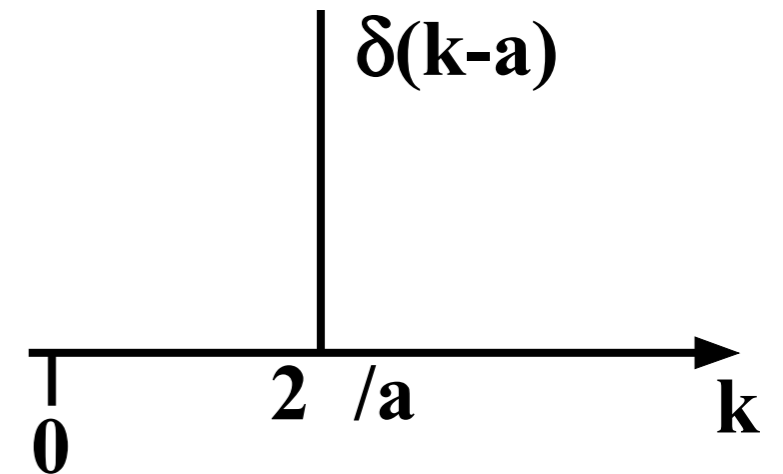
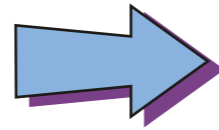
# Fourier Transformation

## Harmonische Funktion

$$f(x) = \cos(x/a)$$

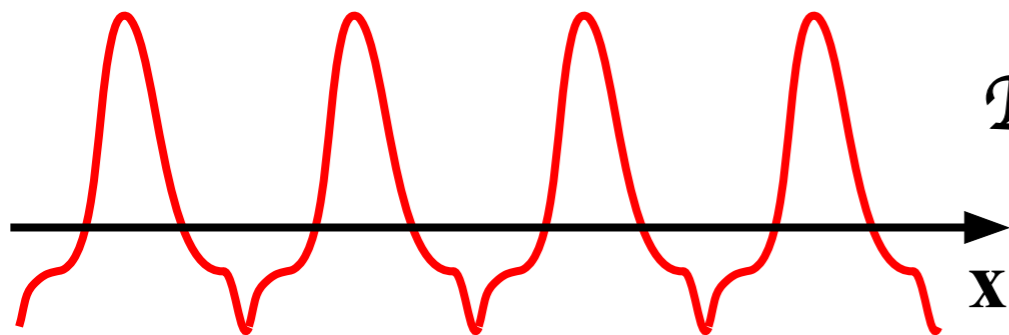


$$\mathcal{F}\{f(x)\} = \int_{-\infty}^{\infty} e^{-ikx} f(x) dx$$

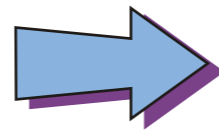


## Periodische Funktion

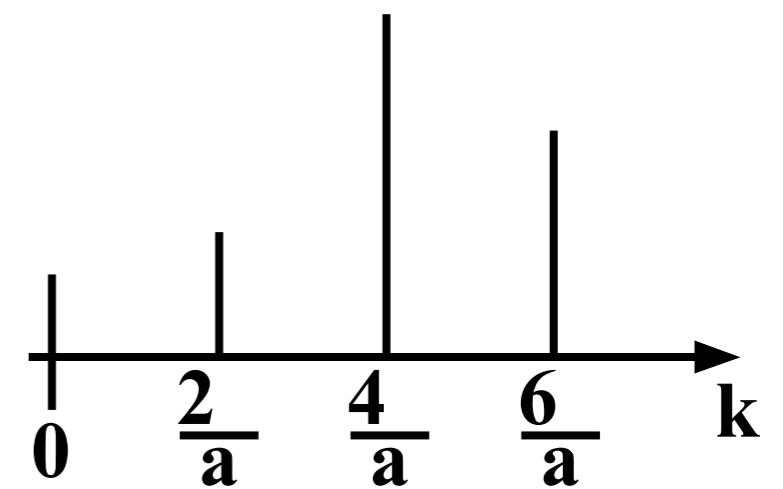
$$g(x)$$



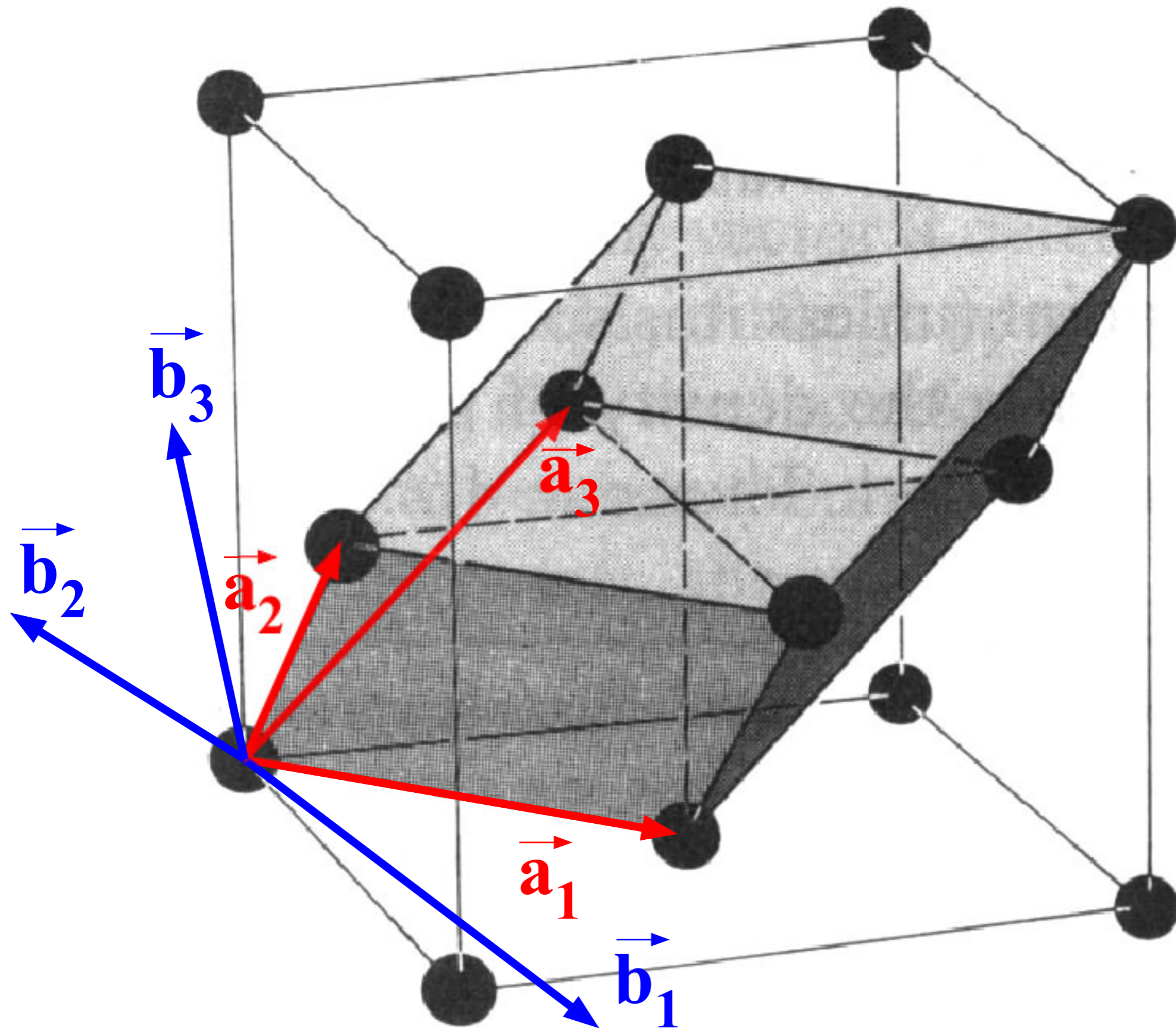
$$\mathcal{F}\{g(x)\} = \int_{-\infty}^{\infty} e^{-ikx} g(x) dx$$



## Diskrete Funktion

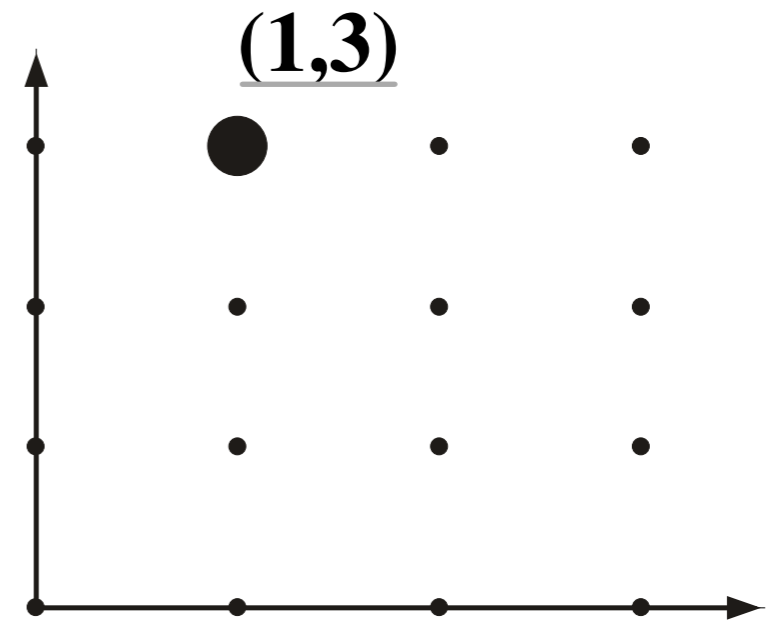
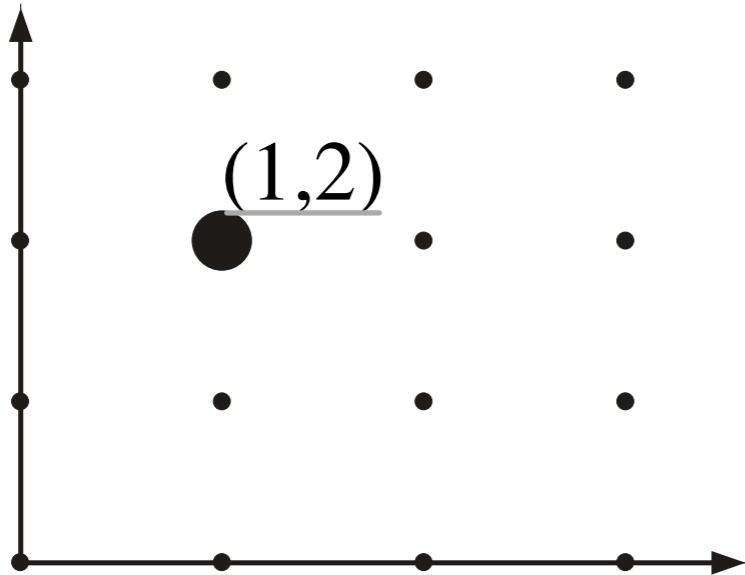


# Primitive Einheitszelle fcc

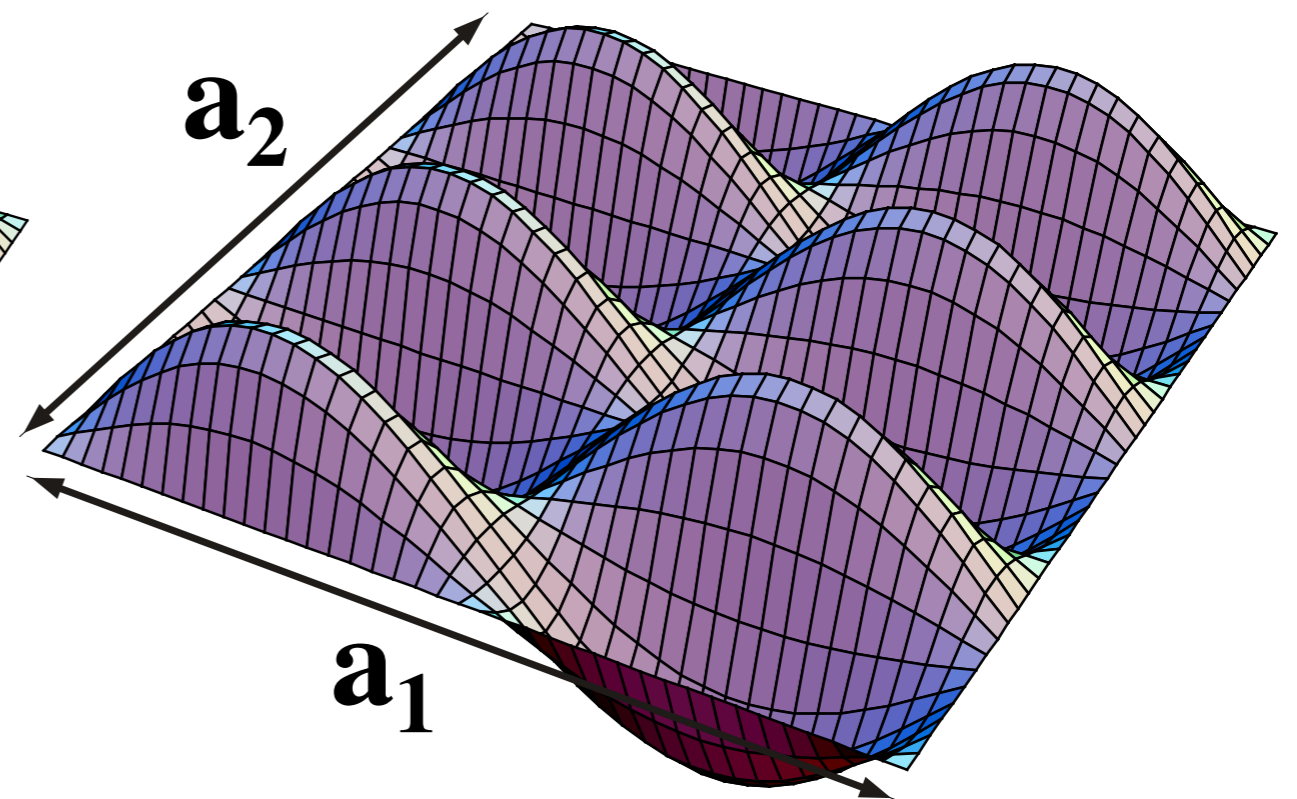
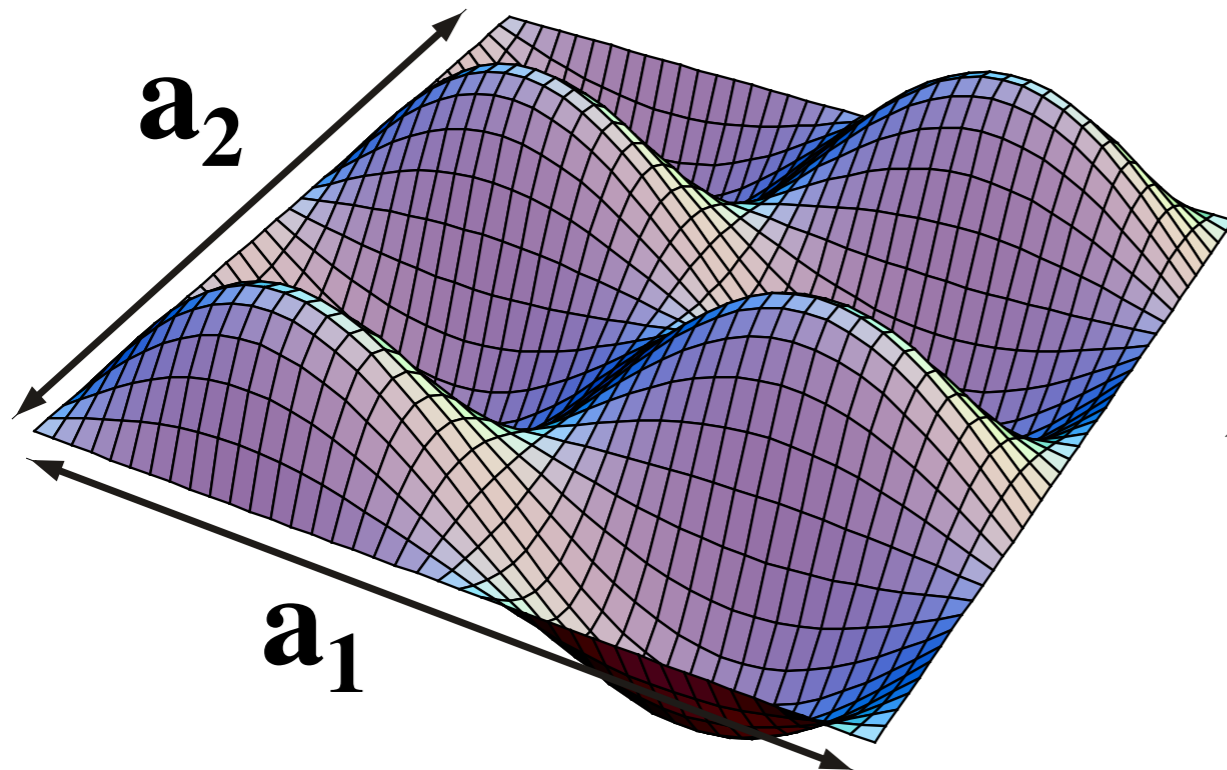


# Reziprokes Gitter

## Reziprokes Gitter

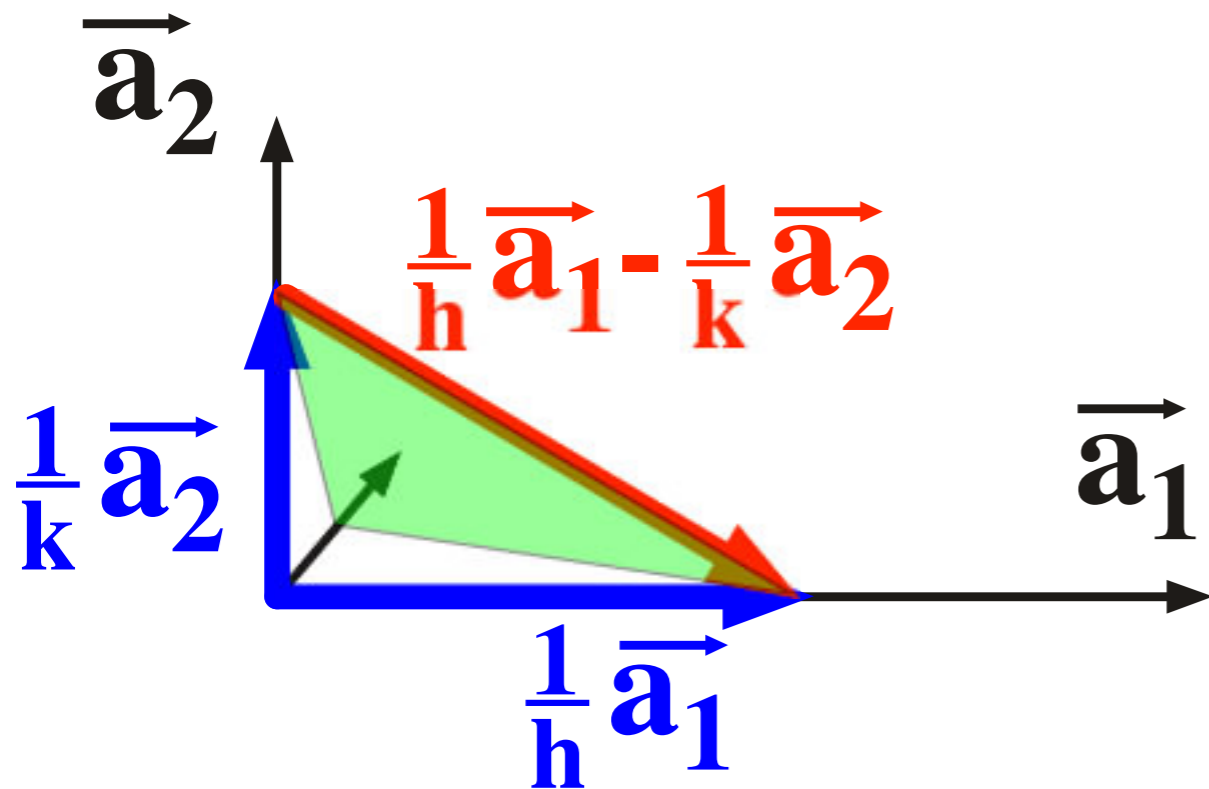


## Direktes Gitter



# Vektoren im reziproken Raum

Orthogonalität



Länge und Abstand

