In[]:=
```
d = m {mx, my, 0}
```

Out[]=
$$\{m\,mx,\ m\,my,\ 0\}$$

In[]:=
```
a = {ax, ay, az}
b = {bx, by, bz}
```

Out[]=
$$\{ax,\ ay,\ az\}$$

Out[]=
$$\{bx,\ by,\ bz\}$$

In[]:=
```
la = d.a
lb = -d.b
l = la + lb
```

Out[]=
$$ax\,m\,mx + ay\,m\,my$$

Out[]=
$$-bx\,m\,mx - by\,m\,my$$

Out[]=
$$ax\,m\,mx - bx\,m\,mx + ay\,m\,my - by\,m\,my$$

In[]:=
```
p = 2 * Pi * l / λ
```
Kreiszahl $\pi$

Out[]=
$$\frac{2\left(ax\,m\,mx - bx\,m\,mx + ay\,m\,my - by\,m\,my\right)\pi}{\lambda}$$

In[]:=
```
F1 = A * Exp[I * p]
```
E··· imaginä

Out[]=
$$e^{\frac{2\,i\left(ax\,m\,mx - bx\,m\,mx + ay\,m\,my - by\,m\,my\right)\pi}{\lambda}}$$

In[]:=
```
A = 1
```

Out[]=
$$1$$

In[]:=
```
F1
```

Out[]=
$$e^{\frac{2\,i\left(ax\,m\,mx - bx\,m\,mx + ay\,m\,my - by\,m\,my\right)\pi}{\lambda}}$$

In[]:=
```
e^(2 i (ax m mx - bx m mx + ay m my - by m my) π) / λ
```

Out[]=
$$e^{\frac{2\,i\left(ax\,m\,mx - bx\,m\,mx + ay\,m\,my - by\,m\,my\right)\pi}{\lambda}}$$

In[]:=
```
F2 = Sum[F1, {mx, 0, MX}, {my, 0, MY}]
```
summiere

Out[]=
$$\left(e^{-\frac{2\,i\,m\left(bx\,MX + by\,MY\right)\pi}{\lambda}}\left(e^{\frac{2\,i\,ax\,m\left(1+MX\right)\pi}{\lambda}} - e^{\frac{2\,i\,bx\,m\left(1+MX\right)\pi}{\lambda}}\right)\left(e^{\frac{2\,i\,ay\,m\left(1+MY\right)\pi}{\lambda}} - e^{\frac{2\,i\,by\,m\left(1+MY\right)\pi}{\lambda}}\right)\right)\Big/$$
$$\left(\left(e^{\frac{2\,i\,ax\,m\,\pi}{\lambda}} - e^{\frac{2\,i\,bx\,m\,\pi}{\lambda}}\right)\left(e^{\frac{2\,i\,ay\,m\,\pi}{\lambda}} - e^{\frac{2\,i\,by\,m\,\pi}{\lambda}}\right)\right)$$

In[]:=
```
LX = Limit[F2, ax → bx]
```
Grenzwert

Out[]=
$$\frac{e^{-\frac{2\,i\,by\,m\,MY\,\pi}{\lambda}}\left(e^{\frac{2\,i\,ay\,m\left(1+MY\right)\pi}{\lambda}} - e^{\frac{2\,i\,by\,m\left(1+MY\right)\pi}{\lambda}}\right)\left(1 + MX\right)}{e^{\frac{2\,i\,ay\,m\,\pi}{\lambda}} - e^{\frac{2\,i\,by\,m\,\pi}{\lambda}}}$$

In[•]:=
```
LY = Limit[F2, ay → by]
```
Grenzwert

Out[•]=
$$\frac{e^{-\frac{2\,i\,bx\,m\,MX\,\pi}{\lambda}}\left(e^{\frac{2\,i\,ax\,m\,(1+MX)\,\pi}{\lambda}}-e^{\frac{2\,i\,bx\,m\,(1+MX)\,\pi}{\lambda}}\right)\,(1+MY)}{e^{\frac{2\,i\,ax\,m\,\pi}{\lambda}}-e^{\frac{2\,i\,bx\,m\,\pi}{\lambda}}}$$

In[•]:=
```
Limit[LX, ay → by]
```
Grenzwert

Out[•]=
$$(1+MX)\,(1+MY)$$

In[•]:=
```
Limit[LY, ax → bx]
```
Grenzwert

Out[•]=
$$(1+MX)\,(1+MY)$$

In[•]:=
```
test = Sum[Exp[k * x + u * y], {x, 0, X - 1}, {y, 0, Y - 1}]
```
s··· Exponentialfunktion

Out[•]=
$$\frac{\left(-1+e^{k\,X}\right)\,\left(-1+e^{u\,Y}\right)}{\left(-1+e^{k}\right)\,\left(-1+e^{u}\right)}$$