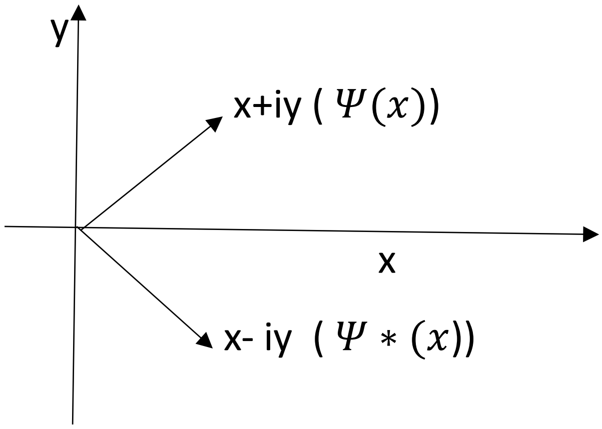
NORMALIZATION FACTORS:

Let's assume : $\Psi = C_{1}.\psi_1 + C_{2}.i.\psi_2$ $\Psi * = C_{1}.\psi^{*}_{1} - C_{2}.i\,\psi^{*}_{2}$

$N_T^2.\Psi.\Psi * = C_1^2.\psi_1.\psi_1 - C_1.C_2.i.\psi_1.\psi_2 + C_2.C_1.i.\psi_2..\psi_1 +$

$+C_2^2.\psi_2\,\psi_2$

Between -∞ and + ∞: $\int_{-\infty}^{+\infty} \Psi(x).\Psi * (x)dx$



obviously , (x+ iy)(x- iy)= $x^2 - ixy + iyx + y^2 = x^2 + y^2$

therefore , analogously : $N_T^2 = C_1^2 + C_2^2 \rightarrow$

$\rightarrow$ $1 = \frac{C_1^2}{N_T^2} + \frac{C_2^2}{N_T^2}$ which are the frequency of percentages .

This indicates that $\int_{-\infty}^{+\infty} \Psi(x).\Psi * (x)dx = 1$, just as

$\int_{-\infty}^{+\infty} \psi_1(x).\psi *_1 (x).dx = \int_{-\infty}^{+\infty} \psi_2(x).\psi *_2 (x).dx = 1$

While : $\int_{-\infty}^{+\infty} \psi_1(x).\psi_2(x).dx = \int_{-\infty}^{+\infty} \psi_2(x).\psi_1(x).dx = 0$