

$$\overline{z} = (\bar{z}z)^{1/2}$$

$$\overline{x+iy} = \overline{x+iy} = x - iy$$

$$\overline{z+w} = \overline{z} + \overline{w}$$

$$\overline{z+w} = (z+w)(\bar{z} + \bar{w}) = zz^* + ww^* + 2\Re(zw^*) \leq \overline{z}^2 + \overline{w}^2 + 2\overline{z}\overline{w} = (\overline{z} + \overline{w})^2$$

$$\overline{z+w} = \overline{z} + \overline{w} \Leftrightarrow \frac{z}{w} \in \mathbb{R}_+ = ]0, \infty[$$

$$\overline{z} + \overline{w} = \overline{z-w} + 2\Re(\bar{z}w)$$

$$d(z:w) = \overline{z-w} = \sqrt{(z-w)(\bar{z} + \bar{w})} = \sqrt{(x-u)^2 + (y-v)^2}$$