

Operazioni tra due numeri complessi

	Forma algebrica $\bar{z}_1 = a_1 + j b_1$ $\bar{z}_2 = a_2 + j b_2$	Forma trigonometrica $\bar{z} = \rho (\cos \vartheta + j \sin \vartheta)$	Forma polare $z = \rho \angle \vartheta$	Forma esponenziale $z = \rho e^{j\vartheta}$
Somma	$\bar{z}_1 + \bar{z}_2 = (a_1 + j b_1) + (a_2 + j b_2)$ $\bar{z}_1 + \bar{z}_2 = (a_1 + a_2) + j (b_1 + b_2)$	$\rho_{12} = \sqrt{(a_1 + a_2)^2 + (b_1 + b_2)^2}$ $\vartheta_{12} = \arctg \frac{b_1 + b_2}{a_1 + a_2}$ $\bar{z}_1 + \bar{z}_2 = \rho_{12} (\cos \vartheta_{12} + j \sin \vartheta_{12})$	$\bar{z}_1 + \bar{z}_2 = \rho_{12} \angle \vartheta_{12}$	$\bar{z}_1 + \bar{z}_2 = \rho_{12} e^{j\vartheta_{12}}$
Differenza	$\bar{z}_1 - \bar{z}_2 = (a_1 + j b_1) - (a_2 + j b_2)$ $\bar{z}_1 - \bar{z}_2 = (a_1 - a_2) + j (b_1 - b_2)$	$\rho_{12} = \sqrt{(a_1 - a_2)^2 + (b_1 - b_2)^2}$ $\vartheta_{12} = \arctg \frac{b_1 - b_2}{a_1 - a_2}$ $\bar{z}_1 - \bar{z}_2 = \rho_{12} (\cos \vartheta_{12} + j \sin \vartheta_{12})$	$\bar{z}_1 - \bar{z}_2 = \rho_{12} \angle \vartheta_{12}$	$\bar{z}_1 - \bar{z}_2 = \rho_{12} e^{j\vartheta_{12}}$
Prodotto	$\bar{z}_1 \cdot \bar{z}_2 = a_{12} + j b_{12}$ $a_{12} = \rho_1 \rho_2 \cos (\vartheta_1 + \vartheta_2)$ $b_{12} = \rho_1 \rho_2 \sin (\vartheta_1 + \vartheta_2)$	$\bar{z}_1 \cdot \bar{z}_2 =$ $= \rho_1 \rho_2 [\cos (\vartheta_1 + \vartheta_2) + j \sin (\vartheta_1 + \vartheta_2)]$	$\bar{z}_1 \cdot \bar{z}_2 = \rho_1 \rho_2 \angle (\vartheta_1 + \vartheta_2)$	$\bar{z}_1 \cdot \bar{z}_2 = \rho_1 e^{j\vartheta_1} \cdot \rho_2 e^{j\vartheta_2}$ $\bar{z}_1 \cdot \bar{z}_2 = \rho_{12} e^{j\vartheta_{12}}$ $\rho_{12} = \rho_1 \rho_2$ $\vartheta_{12} = \vartheta_1 + \vartheta_2$
Quoziente	$\frac{\bar{z}_1}{\bar{z}_2} = a_{12} + j b_{12}$ $a_{12} = \frac{\rho_1}{\rho_2} \cos (\vartheta_1 - \vartheta_2)$ $b_{12} = \frac{\rho_1}{\rho_2} \sin (\vartheta_1 - \vartheta_2)$	$\frac{\bar{z}_1}{\bar{z}_2} =$ $= \frac{\rho_1}{\rho_2} [\cos (\vartheta_1 - \vartheta_2) + j \sin (\vartheta_1 - \vartheta_2)]$	$\frac{\bar{z}_1}{\bar{z}_2} = \frac{\rho_1}{\rho_2} \angle (\vartheta_1 - \vartheta_2)$	$\frac{\bar{z}_1}{\bar{z}_2} = \frac{\rho_1 e^{j\vartheta_1}}{\rho_2 e^{j\vartheta_2}} = \rho_{12} e^{j\vartheta_{12}}$ $\rho_{12} = \frac{\rho_1}{\rho_2}$ $\vartheta_{12} = \vartheta_1 - \vartheta_2$