

Kompleksni brojevi

$$\bar{z} = a + jb = z e^{j\alpha}$$

$$\bar{y} = p + jq = y e^{j\beta}$$

SABIRANJE

$$\bar{z} + \bar{y} = (a + jb) + (p + jq) = (a + p) + j(b + q) \quad \text{OK}$$

$$\bar{z} + \bar{y} = z e^{j\alpha} + y e^{j\beta} \dots \text{NIJE POGODNO} \quad \text{X}$$

MNOŽENJE

$$\bar{z} \cdot \bar{y} = (a + jb) \cdot (p + jq) = ap - bq + j(aq + bp) \quad \text{OK}^-$$

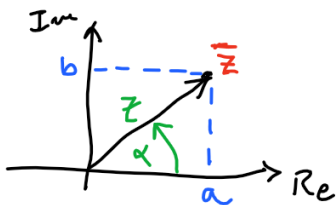
$$\bar{z} \cdot \bar{y} = z e^{j\alpha} \cdot y e^{j\beta} = zy e^{j(\alpha + \beta)} \quad \text{OK}^+$$

DELJENJE

$$\frac{\bar{z}}{\bar{y}} = \frac{a + jb}{p + jq} \cdot \frac{p - jq}{p - jq} = \frac{ap + bq + j(bp - aq)}{p^2 + q^2}$$

UH, ali ako mora...

$$\frac{\bar{z}}{\bar{y}} = \frac{z e^{j\alpha}}{y e^{j\beta}} = \frac{z}{y} e^{j(\alpha - \beta)} \quad \text{OK}$$



$$\bar{z} = a + jb = z e^{j\alpha}$$

$$z = |\bar{z}| = \sqrt{a^2 + b^2}$$

$$\alpha = \arg(\bar{z}) = \arctan \frac{b}{a} \quad \text{PAZI !!!}$$

$$a = z \cos(\alpha)$$

$$b = z \sin(\alpha)$$

