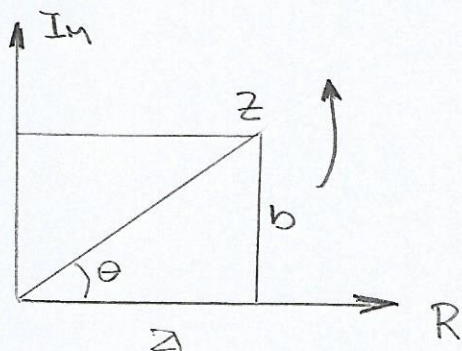


AULA 4

REVISÃO DE NÚMEROS COMPLEXOS

FORMA POLAR

$$\underline{\dot{z}} = z \angle \theta = z \cos \theta + j \cdot z \sin \theta$$



FORMA CARTESIANA

$$z = a + jb = z \angle \theta$$

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

$$\theta = \arctg \frac{b}{a}$$

SOMA E SUBTRAÇÃO

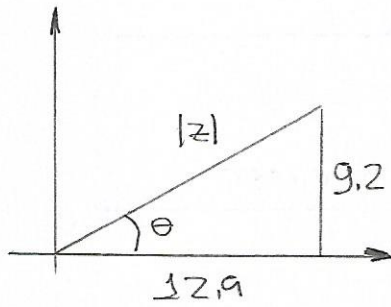
$$z = 10 \angle 30 + 6 \angle 45$$

TRANSFORMANDO TUDO EM CARTESIANA
É SOMAR

$$z = 10 \cos 30 + j 10 \sin 30 + 6 \cos 45 + j 6 \sin 45$$

$$z = 8,7 + j5 + 4,2 + j4,2$$

$$z = 12,9 + j9,2$$



$$|z| = \sqrt{(12.9)^2 + (9.2)^2} =$$

$$\theta = \arctg \frac{9.2}{12.9}$$

MULTIPLICACIÓN / DIVISIÓN

FORMA POLAR

$$z = \frac{10 \angle 30}{6 \angle 45} = \frac{10}{6} \angle -15$$

$$z = 10 \angle 30 \cdot 6 \angle 45 = 60 \angle 75$$