

## Módulo 13 Cuarto Medio

$$a) \quad \frac{2-2i}{a \quad b} = \left\{ \begin{array}{l} m = \sqrt{(2)^2 + (-2)^2} = \sqrt{4+4} = \sqrt{8} \\ \varphi = \operatorname{arctg} \frac{-2}{2} = \operatorname{arctg} -1 = -\frac{\pi}{4} \end{array} \right\} \sqrt{8} \frac{-\pi}{4}$$

$$b) \quad \frac{2i}{a=0 \quad b=2} = \left\{ \begin{array}{l} m = \sqrt{0^2 + 2^2} = \sqrt{4} = 2 \\ \varphi = \operatorname{arctg} \frac{2}{0} = \frac{\pi}{2} \end{array} \right\} = 2 \frac{\pi}{2}$$

$$c) \quad \frac{-2i}{a=0 \quad b=2} = \left\{ \begin{array}{l} m = \sqrt{0^2 + (-2)^2} = \sqrt{4} = 2 \\ \varphi = \operatorname{arctg} \frac{-2}{0} = \frac{\pi}{2} \end{array} \right\} 2 \frac{\pi}{2}$$

$$d) \quad \frac{-2+2i}{a \quad b} = \left\{ \begin{array}{l} m = \sqrt{(-2)^2 + (2)^2} = \sqrt{4+4} = \sqrt{8} \\ \varphi = \operatorname{arctg} \frac{2}{-2} = \operatorname{arctg} -1 = -\frac{\pi}{4} \end{array} \right\} \sqrt{8} \frac{-\pi}{4}$$

$$e) \quad \frac{2+2i}{a \quad b} = \left\{ \begin{array}{l} m = \sqrt{(2)^2 + (2)^2} = \sqrt{4+4} = \sqrt{8} \\ \varphi = \operatorname{arctg} \frac{2}{2} = \operatorname{arctg} 1 = \frac{\pi}{4} \end{array} \right\}$$

$$f) \quad \frac{2}{a \quad b} = \left\{ \begin{array}{l} m = \sqrt{2^2 + 0^2} = \sqrt{4} = 2 \\ \varphi = \operatorname{arctg} \frac{0}{2} = \operatorname{arctg} 0 \end{array} \right\}$$

$$g) -2 = \begin{cases} m = \sqrt{(-2)^2 + 0^2} = \sqrt{4} = 2 \\ \varphi = \operatorname{arctg} \frac{0}{-2} = \operatorname{arctg} 0 = 0^\circ \end{cases} 2 \cdot 0^\circ$$

$$h) -2 - 2i = \begin{cases} m = \sqrt{(-2)^2 + (-2)^2} = \sqrt{4+4} = \sqrt{8} \\ \varphi = \operatorname{arctg} \frac{-2}{-2} = \operatorname{arctg} 1 = \frac{\pi}{4} \end{cases} \sqrt{8} \frac{\pi}{4}$$