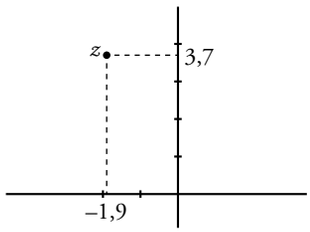
Soluciones a la autoevaluación

Unidad 6

1 El resultado de la operación es $z = -1{,}9 + 3{,}7i$.



2 $z = -2 - 2\sqrt{3}\,i$

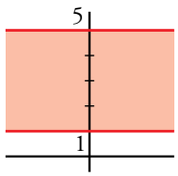
3 $a = -4,\ b = -7$

4 $z_1 = 5 + 2i,\ z_2 = 5 - 2i$

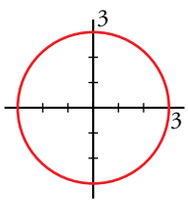
5 $x_1 = 2,\ x_2 = -2$

6 $2\sqrt{3}$ u

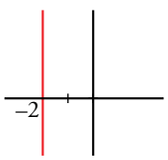
7 a)



b)



c)



8 Los números son $6_{120°}$ y $3_{330°}$.

9 $z = a + bi,\ \bar{z} = a - bi$

$$\left.\begin{array}{l} z \cdot \bar{z} = a^2 + b^2 \\ |z| = \sqrt{a^2 + b^2} \ \rightarrow\ |z|^2 = a^2 + b^2 \end{array}\right\} z \cdot \bar{z} = |z|^2$$

10

$$\left.\begin{array}{l} 1_{90°} \cdot 1_{30°} = 1_{120°} \\ 1_{90°} \cdot 1_{30°} = -\dfrac{1}{2} + \dfrac{\sqrt{3}}{2}i \end{array}\right\} \cos 120° = -\frac{1}{2};\ \operatorname{sen} 120° = \frac{\sqrt{3}}{2}$$

11 $z = \dfrac{2\sqrt{3} - 3}{2} + \dfrac{2 + 3\sqrt{3}}{2}i$