

Exercise 1

Use properties of conjugates and moduli established in Sec. 5 to show that

$$\begin{aligned} (a) \overline{\bar{z} + 3i} &= z - 3i; & (b) \overline{iz} &= -i\bar{z}; \\ (c) \overline{(2+i)^2} &= 3 - 4i; & (d) |(2\bar{z} + 5)(\sqrt{2} - i)| &= \sqrt{3}|2z + 5|. \end{aligned}$$