

Notes on Complex Analysis

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1 Basic Algebraic Properties

1.1 Exercises

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Some interesting properties

$$z + \bar{z} = (a + ib) + (a - ib) = 2a = 2\Re(z)$$

Similarly,

$$z - \bar{z} = (a + ib) - (a - ib) = 2ib = 2\Im(z)$$

Following the same mechanics,

$$\Re(iz) = \Re(i(a + ib)) = \Re(ai - b) = -\Im(z)$$

And

$$\Im(iz) = \Im(ai - b) = \Re(z)$$