

Exercise 12

Let $a_0, a_1, a_2, \dots, a_n$ ($n \geq 1$) denote *real* numbers, and let z be any complex number. With the aid of the results in Exercise 11, show that

$$\overline{a_0 + a_1z + a_2z^2 + \cdots + a_nz^n} = a_0 + a_1\bar{z} + a_2\bar{z}^2 + \cdots + a_n\bar{z}^n.$$