

Complex numbers in standard form

Recall that the standard form of complex numbers is $a + bi$, where $a, b \in \mathbb{R}$

Exercise 1.3

Show that $\text{card}(\mathbb{C}) = \text{card}(\mathbb{R})$.

Solution Exercise 1.3

The steps of proving this are: $\text{card}([0, 1]) = \text{card}(\mathbb{R})$ then: $\text{card}([0, 1]) = \text{card}([0, 1]^2)$ followed by $\text{card}([0, 1]^2) = \text{card}(\mathbb{R}^2)$ and finally $\text{card}(\mathbb{R}^2) = \text{card}(\mathbb{C})$