葉均承
Jean Yeh

Homework 9-1

應數一線性代數

Section 9-1

課本第 5 題

Show that z is a real number if and only if $z = \overline{z}$.

解答：

1. If z is a real number of course $z = \overline{z}$.

2. Let $z = a + bi$, where $a, b \in \mathbb{R}$. If $z = \overline{z}$, we have $a + bi = z = \overline{z} = \overline{a + bi} = a - bi$. That is $b = -b$, we have $b = 0$. Therefore, $z = a \in \mathbb{R}$.