

# Exercises

11.39 [11P] Show that if  $A \in \mathbb{R}^{m \times n}$  you have

$$\max_{x \in \mathbb{R}^n, |x|_2 \leq 1} |Ax|_2 = \max_{x \in \mathbb{C}^n, |x|_2 \leq 1} |Ax|_2 .$$

**Solution 1.** [11Q]