

Name:

[4] 1. Is \mathbb{R}^2 a subspace of \mathbb{C}^2 ? Why or why not?

[6] 2. Given that the set $\{1, x, x^2\}$ spans the vector space $V = P_2(\mathbb{R})$, show that the set

$$\{1 - x, x - x^2, x^2\}$$

also spans V .