1. (2 pt) February 6, 2020

Let \( p_n(z) = a_0 + a_1 z + \cdots + a_n z^n \) be a polynomial of degree \( n > 1 \).

(a) There is \( w \in \mathbb{C} \) such that \( p_n(w) = 0 \).

(b) If \( p_n(w) = 0 \), then \( p_n(z) = (z - w)q_{n-1}(z) \).

Solved by: on: