Tut 8

November 1, 2023 7:52 PM

1) Let a_n be a sequence defined by

$$a_0 = 0$$
$$a_1 = 1$$
$$a_n = \frac{1}{4}(a_{n-1}^2 + a_{n-2} + 2) \quad \text{For } n \geq 2.$$

Prove that $0 \leq a_n \leq 1$ for all non-negative integers n.

Proof: