

Final Project YourName0729

Ting-Yo Kuo

1 Outline

1.1 Difinition of Problem

Consider a problem:

Definition

For $n \in \mathbb{N}$, define

$$A_n = \frac{1}{3^n 10^{3^k}}$$

and

$$A = \sum_{n=1}^{\infty} A_n$$

Definition

Given a real number $a = 0.a_0a_1a_2 \dots \in [0, 1)$ which does not end with repeating 9 and $n \in \mathbb{N} \cup \{0\}$, **the n -th term of a is a_n .**

Problem

Given $n \in \mathbb{N} \cup \{0\}$, find the $(n - 1)$ -th to $(n + 8)$ -th terms of A ?

1.2 Outline of Solution