Lecture 20: A spigot for e

A Spigot Algorithm for e

Initialize Let the first digit be 2 and let $A = (1, 1, ..., 1)$ be an array of length $n + 3$ (0-indexed).

Loop Repeat $n - 1$ times:

1. Multiple each value in A by 10.
2. From the right, reduce the i^{th} entry of A modulo $i + 2$, carrying the quotient one place left.
3. The final quotient is the next digit of e.