

12237. Proposed by Donald E. Knuth, Stanford University, Stanford, CA. Let  $x_0 = 1$  and  $x_{n+1} = x_n + \lfloor x_n^{3/10} \rfloor$  for  $n \geq 0$ . What are the first 40 decimal digits of  $x_n$  when  $n = 10^{100}$ ?