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*On Some Arithmetic Properties of a Sequence Related to the Quotient  
of Fibonacci Numbers,*  
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**Abstract**

We examine the sequence  $(T_n)_{n \geq 1}$  of numbers: 1, 11, 61, 451, 3001, 20801, 141961,  $\dots$  given by  $T_n = F_{5n}/(5F_n)$ , where  $F_n$  is the Fibonacci number. Curious divisibility properties are obtained including related conditions resembling a strong divisibility sequence. In particular, we prove that all prime divisors of the numbers in this sequence end in one. Another result asserts that each integral power of a number in the sequence is a divisor of some other number in the sequence. Specifically, we prove that for any positive integers  $n$  and  $k$ , the term

$$T(nT(nT(\dots nT(n)\dots)))$$

with  $k$  occurrences of the number  $n$  is exactly divisible by  $T_n^k$ .