

University of Illinois  
Department of Mathematics

**PROBLEM OF THE WEEK**  
**October 26, 2005**

**Fibonacci numbers ending in 9's**

Show that, for every  $k$ , there exists a Fibonacci number whose decimal representation ends in  $k$  9's. (The Fibonacci numbers are defined recursively by  $F_0 = F_1 = 1$  and  $F_n = F_{n-1} + F_{n-2}$  for  $n > 1$ .)

**PROBLEM OF THE WEEK ARCHIVE**

<http://www.math.uiuc.edu/~hildebr/pow>