

Year: 2011

Vol.: 79

Fasc.: 3-4

**Title:** On the Diophantine equation  $L_n = \binom{x}{5}$

**Author(s):** Szabolcs Tengely

In this paper we determine all integral solutions  $(n, x)$  of the Diophantine equation  $L_n = \binom{x}{5}$ , where  $L_n$  is the  $n$ -th Lucas number which is defined as follows,  $L_0 = 2$ ,  $L_1 = 1$  and  $L_n = L_{n-1} + L_{n-2}$  for  $n > 1$ . We follow ideas described in [?], that is we combine Baker's method and the so-called Mordell–Weil sieve to show that the only positive solution is  $(n, x) = (1, 5)$ .

**Address:**

Szabolcs Tengely  
Mathematical Institute  
University of Debrecen  
4010 Debrecen, P.O. Box 12  
Hungary