1023-D1-488 **Ralph P. Grimaldi*** (ralph.grimaldi@rose-hulman.edu), 5500 Wabash Avenue, Terre Haute, IN 47803-3999. *Jacobsthal Compositions.*

For the positive integer n, let a_n count the number of compositions of n where the last summand is odd. Then $a_n = (\frac{1}{3})(-1)^{n-1}+(\frac{2}{3})2^{n-1} = J_{n-1}$, where J_n (for $n \geq 0$) denotes the n-th Jacobsthal number. The results we determine for these compositions include the following, where n, k are positive integers: (1) $a_{n,k}$, the number of times the summand k appears among the a_n compositions of n; (2) $s_{n,k}$, the number of these compositions of n where k is the first summand; (3) the number of plus signs and the number of summands that appear among the a_n compositions; (4) the number of runs that occur among the compositions; and (5) the numbers of levels, rises and descents that occur among the a_n compositions. In addition, comparable results for the palindromes found among the a_n compositions are examined. (Received September 14, 2006)