

University of Colorado
Department of Mathematics
Problem of the Month
April 2011

Define a sequence of real numbers by $a_0 = 0, a_1 = 1, a_2 = 1$ and

$$a_{k+3} = 2a_{k+2} + 2a_{k+1} - a_k$$

for all $k \geq 0$. Show that a_n is the square of an integer for all $n \geq 0$.