

1145-VS-2310      **Erhan Gürel\*** (egurel@metu.edu.tr), Middle East Technical University, N.C.C., TZ-32,  
Güzelyurt, Mersin 10, Turkey. *Products of values of certain quadratics forms.*

We prove that for a fixed integer  $q$ , there exists an integer  $N$  such that the product  $\Omega_q^2(n, D) = (1^2 + Dq^2)(2^2 + Dq^2) \dots (n^2 + Dq^2)$  is never a square for  $D = 2, 3$  and  $7$  when  $n > N$ .

In particular, we can ask that how often does the product of consecutive values of a polynomial become a power? In 2008, J. Cilleruelo proved that  $\Omega_1^2(n, 1)$  is a square only for  $n = 3$ . After his work, many similar results were given for different polynomials as in [4],[5],[6],[7] and [8]. These type of products are studied for quadratic form  $x^2 + y^2$  in [7] and for the cubic form  $x^3 + y^3$  recently in [8]. In this work, we will study the product of consecutive values of the binary quadratic forms such as  $x^2 + Dy^2$  for  $D = 2$  and  $3$ . (Received September 25, 2018)