

**The Squares of numbers using Komoziian series**  
**Hillary Ongoyo Omoze, John Wanyonyi Matuya**  
**Ntulele Secondary School, Box 1244-20500 Narok (Kenya)**

**Abstract**

In this paper we have determined the squares of numbers using the Komoziian series. The method has established series which analyses the digits present in a given number and sets priority for every digit depending on its place value. The number of digits present are represented by  $k + 1$ :  $k$  is the number of digits present other than the last digit which is taken to be  $1$  and has a place value of ones while the place values of the other digits is given by  $10^j$  and the total value of the digits is given by  $10^j m$  where  $j = k, k - 1, k - 2, \dots, 3, 2, 1, 0$ . The number  $x$  would be given by  $x = 10^k m + 10^{k-1} m_k + 1 \cdot 10^{k-2} m_k + 2 \cdot \dots + 10^3 m + 10^2 m + 10^1 m + 10^0 m$ . The formula is given in series depending on the value of  $k$ , it is assumed that when square is known and therefore needs not to be calculated.  $k = 0$  the The presentation spans  $k = 1, k = 2, k = 3$  and then generalizes for  $k = nk^2$ .