Chapter 6

Squares & Square Roots

- The 1 1 1 …… 1^2 pattern.

  $1^2 = 1$

  $11^2 = 1\ 2\ 1$

  $111^2 = 1\ 2\ 3\ 2\ 1$

  $1111^2 = 1\ 2\ 3\ 4\ 5\ 4\ 3\ 2\ 1$

  $111111^2 = 1\ 2\ 3\ 4\ 5\ 6\ 5\ 4\ 3\ 2\ 1$

We observe that:

(i) The digits in the squares form an ascending – descending combination.

(ii) There are odd number of digits in the squares.

(iii) The central digit is equal to the number of 1's in the number.

(iv) The first and the last digits are always '1'.

These numbers are called Palindromic numbers or numerical palindrome.