For $n \geq 1$ let $a_n$ count the number of ternary strings $s_1s_2s_3\ldots s_n$ where (i) $s_1 = 0$; (ii) $s_i \in \{0, 1, 2\}$, for $2 \leq i \leq n$; and, (iii) $|s_i - s_{i-1}| \leq 1$, for $2 \leq i \leq n$. Then $a_1 = 1$, $a_2 = 2$, $a_3 = 5$, $a_4 = 12$, and $a_5 = 29$. In general, for $n \geq 3$, $a_n = 2a_{n-1} + a_{n-2}$, and $a_n$ equals $P_n$, the $n$th Pell number.

For these $P_n$ strings of length $n$, now let $\text{pal}_n$ count the number of palindromes of length $n$ that appear among the $P_n$ strings. We find that $\text{pal}_n = P_{n\frac{1}{2}}$ for $n$ even, while $\text{pal}_n = P_{n\frac{1}{2}+1}$ for $n$ odd.

Then, for the $\text{pal}_n$ palindromic strings of length $n$, we determine (i) the number of occurrences of each of the symbols 0, 1, 2; (ii) the sum of all the entries in the $\text{pal}_n$ palindromes; (iii) the number of levels, rises and descents that occur within the strings; (iv) the number of runs that occur within the strings; (v) the number of inversions and coinversions for the strings; and, (vi) the sum of all the strings considered as base 3 integers.
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