GENERALIZED SMARANDACHE PALINDROME
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A Generalized Smarandache Palindrome is a number of the form: \( a_1a_2...a_na_n...a_2a_1 \) or \( a_1a_2...a_{n-1}a_na_{n-1}...a_2a_1 \), where all \( a_1, a_2, \ldots, a_n \) are positive integers of various number of digits.

Examples:

a) 1235656312 is a GSP because we can group it as \((12)(3)(56)(56)(3)(12)\), i.e. ABCCBA.
b) Of course, any integer can be consider a GSP because we may consider the entire number as equal to \( a_1 \), which is smarandachely palindromic; say \( N = 176293 \) is GSP because we may take \( a_1 = 176293 \) and thus \( N = a_1 \). But one disregards this trivial case.

Very interesting GSP are formed from smarandacheian sequences.

Let us consider this one:

\[
11, 1221, 123321, \ldots, 123456789987654321, \\
1234567891010987654321, 12345678910111110987654321, \ldots
\]

all of them are GSP.

It has been proven that 1234567891010987654321 is a prime (see

http://www.kottke.org/notes/0103.html,

and the Prime Curios site).

**A question:** How many other GSP are in the above sequence?