MathFLIX CHALLENGE

Palindrome Tricks

Part I: What do you notice about the set of numbers and words below? Can you make your own?

WOW	NOON	121	MOM
1331	475574	RACECAR	28882

Part II: You can turn almost any number into a palindrome. Try this exercise and learn how.

Begin with any number.....................	28	
Reverse the digits............................	82	
Add the two numbers.......................	110	*Is this a palindrome? No. Try again.*
Reverse the digits............................	011	
Add this to the previous sum...........	121	*Is this a palindrome? Yes!*

It took 2 steps to convert 28 into a palindrome. See if you can complete this table.

Original #	# of steps	Palindrome
55555	0	55555
14	1	
28	2	121
449		
918		
364		
97		

Does the size of the original number have any relationship to the number of steps required to turn it into a palindrome?

For a real challenge, change 89 into a palindrome!

(Hint: the number of steps needed to make this palindrome nearly equals the original number).