Program-23

A Circular Prime is a prime number that remains prime under cyclic shifts of its digits. When the leftmost digit is removed and replaced at the end of the remaining string of digits, the generated number is still prime. The process is repeated until the original number is reached again.  
  
A number is said to be prime if it has only two factors 1 and itself.  
  
Example:  
131  
311  
113  
Hence, 131 is a circular prime.  
  
Accept a positive number N and check whether it is a circular prime or not. The new numbers formed after the shifting of the digits should also be displayed.  
  
Test your program with the following data and some random data:  
  
Example 1  
  
INPUT:  
N = 197  
  
OUTPUT:  
197  
971  
719  
197 IS A CIRCULAR PRIME.  
  
Example 2  
  
INPUT:  
N = 1193  
  
OUTPUT:  
1193  
1931  
9311  
3119  
1193 IS A CIRCULAR PRIME.  
  
Example 3  
  
INPUT:  
N = 29  
  
OUTPUT:  
29  
92  
29 IS NOT A CIRCULAR PRIME.