



# Palindromic Squares

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Palindromes are numbers that read the same forwards as backwards. The number 12321 is a typical palindrome.

Given a number base  $B$  ( $2 \leq B \leq 20$  base 10), print all the integers  $N$  ( $1 \leq N \leq 300$  base 10) such that the square of  $N$  is palindromic when expressed in base  $B$ ; also print the value of that palindromic square. Use the letters 'A', 'B', and so on to represent the digits 10, 11, and so on.

Print both the number and its square in base  $B$ .

**PROGRAM NAME:** palsquare

## INPUT FORMAT

A single line with  $B$ , the base (specified in base 10).

**SAMPLE INPUT** (file palsquare.in)

10

## OUTPUT FORMAT

Lines with two integers represented in base  $B$ . The first integer is the number whose square is palindromic; the second integer is the square itself. NOTE WELL THAT BOTH INTEGERS ARE IN BASE  $B$ !

**SAMPLE OUTPUT** (file palsquare.out)

1 1  
2 4  
3 9  
11 121  
22 484  
26 676  
101 10201  
111 12321  
121 14641  
202 40804  
212 44944  
264 69696

**Submission file Name:**  未选择文件