

For determining whether a number  $n_1$  is a multiplication of the other number  $n_2$ , a simplest way is to use the mod operator. A faster way is to check if there is a constant  $c$  so that  $n_1 = cn_2$  or  $n_1 - cn_2 = 0$ . For every positive integer  $c$ , the number of possible pairs of  $n_1$  and  $n_2$  is infinite. However, if we add some constraints on the two numbers  $n_1$  and  $n_2$ , the number of pairs may be limited or even not exist. Now consider the following two constraints: 1) the two numbers  $n_1$  and  $n_2$  are five-digit numbers (including the prefix 0), and 2) concatenating the two numbers forms a permutation of zero to nine. Write a program to search for all pairs of  $n_1$  and  $n_2$  for an arbitrary constant  $c$ . (Hint:  $n_1$  must in the range [1234,98765].)

**Input**

The input contains several cases and ends with zero. Each case contains one integer value  $c$ .

**Output**

For each case, output all pairs of  $n_1$  and  $n_2$  for such  $c$  with increasing  $n_1$  in the following format:

$$n_1 = c * n_2$$

Each two consecutive cases should be separated by a newline character. If there is no pair for such  $c$ , output “No pair for c = xx.”

**Sample Input**

11  
12  
13  
0

**Sample Output**

No pair for c = 11.

45792 = 12 \* 03816  
73548 = 12 \* 06129  
89532 = 12 \* 07461  
91584 = 12 \* 07632

67392 = 13 \* 05184  
81549 = 13 \* 06273  
94653 = 13 \* 07281