**Problem H**

**Special Subsequences**

Input File: *ph.in*

Time Limit: 5 *seconds*

Given a sequence of n integers *x1,x2, …, xn*and an integer *k*, *1kn*,we want to know if there exists a consecutive subsequence *xi ,xi+1, …, xj* for some *i* and *j*, 1*ijn*, such that the sum

*Si,j =*

Is divisible by *k* or not.

For example, let *n* = 7 and *k* = 6. In the sequence of 7 integers.

2,5,1,-4,5,9,3

The sum of the following consecutive subsequences can be divisible by *k* = 6.

1. *i* = 2, *j* = 3: 5+1 = 6,
2. *i* = 1, *j* = 6: 2+5+1-4+5+9 = 18,
3. *i* = 6, *j* = 7: 9+3 = 12,

We are going to write a very efficient program to solve the problem with large numver of integers in a short span of time. It is required to print only one particular solution, not all solutions. The solution we want to print is the *first* such subsequence. The *first* solution is the one with the smallest valu of *i* = 1 and *j* = 6. If there are more than one solution with the same value of *i*, we want the one with smallest valu of *j*.

**Input File Format**

An instance of the problem consists of

1. the number of integers *n*,
2. the sequence of integer *xi* , 1*in*, and
3. the divisor *k.*

These data are stored in +2 lines in the input file.

1. The first line is the integer *n*.
2. The following is lines are the n integers *xi* , 1*in*. Each line contains at most 20 integers.
3. The last line is the integer *k*.

In this problem, we assume that 1100000, and -230 230.

Note that the test data file may contain more than one instances. The last instance is followed by a line containing a single 0.

**Output Format**

The outputs for each test case are the two integers *i* and *j* which are the indexes of the consecutive subsequence whose sum is divisible by *k*. Print exactly one space between *i* and *j*. If there are no solution print “no solutions.”

**Sample Input**

7

2 5 1 -4 5 9 3

6

10

11 -3 1 13 -5 6 1 -8 -4 5

10

0

**Output for the Sample Input**

1 6

5 9