



**Problem H**  
 Sly Number

Input File: H.DAT

Program Source File: H.PAS or H.C or H.CPP or H.JAVA

Let's consider so called "sly number" which is given as an array A of N integers from set {0,1,2}. For example A[0]=1, A[1]=1, A[2]=0 and A[3]=2. A sly number is called ONE, if A[0]=1 and A[l]=0 for l=1,2,...,N-1.

Consider following operation with two sly numbers A and B called 'Star Multiplication':

$$C[k] = \sum_{i=0}^k A[i] * B[k-i] + \sum_{i=k+1}^{N-1} A[i] * B[N+k-i].$$

here C – the result of the operation, even also presented in an array - not necessarily sly number. This operation we will denote by <\*> symbol.

Moreover, there is also module operation over the results of 'Star Multiplication':

$$(C \text{ mod } Q) [i] = C[i] \text{ mod } Q,$$

where Q is a positive integer.

We are given a sly number A and a module Q. We need to find such 'inverse sly number' B:

$$(A * B) \text{ mod } Q = \text{ONE}.$$

The input file contains K data sets in text format. The first line of this file contains the number K of test cases. Each test consists of two lines. First line contains two integers separated by spaces: Q (2 <= Q <= 100) and N (5 <= N <= 50). Second line contains N integers from set {0,1,2} separated by spaces, which present sly number A.

The output should be printed on the standard output. It should contain K lines - one line for each test case. If a solution exists, the line should contain the string "A solution can be found". In case there is no solution, the line should consist of string 'No solution'.

An example is given in the following table:

Input	Output
2	A solution can be found
2 5	No solution
1 0 1 0 1	
65 8	
1 2 2 2 1 1 2 2	

In the first sample one possible inverse sly number could be <0 0 1 1 1>.