

Complicated Pattern Question

Time limit per test: 0.5 seconds

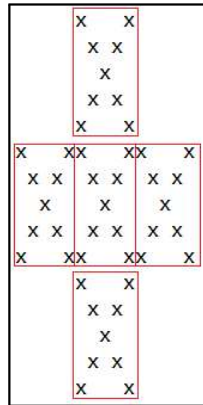
Memory limit per test: 1 gb

Mr. K has recently joined FAST for his Computer Science degree. In his first Programming Fundamentals Lab, he has been assigned a task where he has to print one of 5 different patterns of a given size using a given input character. The following table shows each of the patterns for a certain size (keeping the character used as 'x').

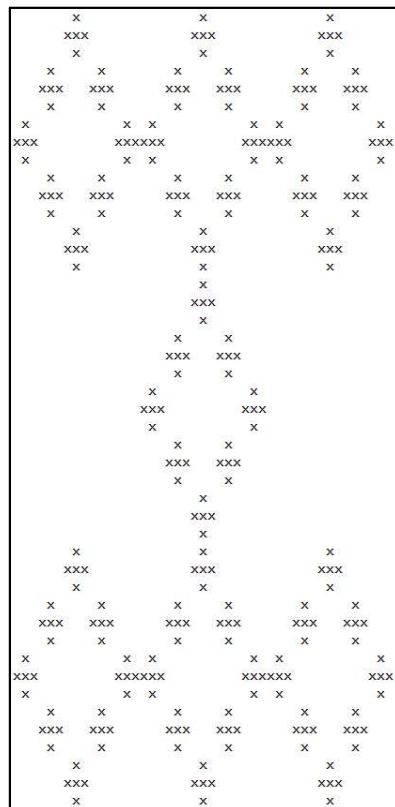
	Pattern: 1	Pattern: 2	Pattern: 3	Pattern: 4	Pattern: 5
Size: 3	<pre> xxx x xxx </pre>	<pre> x x x x x </pre>	<pre> x xxx x </pre>	<pre> xxx x x xxx </pre>	<pre> x x x x </pre>
Size: 5	<pre> xxxxxx x x x xxxxxx </pre>	<pre> x x x x x x x x x </pre>	<pre> x x xxxxxx x x </pre>	<pre> xxxxxx x x x x x x xxxxxx </pre>	<pre> x x x x x x x x </pre>
Size: 7	<pre> xxxxxxxx x x x x x xxxxxxxx </pre>	<pre> x x x x x x x x x x x x x </pre>	<pre> x x x xxxxxxxxxx x x x </pre>	<pre> xxxxxxxxxx x x x x x x x x x x xxxxxxxxxx </pre>	<pre> x x x x x x x x x x </pre>

However, since Mr. K has been a programmer for years now, he finds this task to be too simple and boring. Therefore, he challenges himself to a task more suited to his expertise.

He decides that since changing the character used for building the pattern would be too simple, he could instead build the pattern with another pattern used in place of the single character. See the following example where he built a pattern 3 (of size 3) using a pattern 2 (of size 5) as a single character (the base character is kept as 'x').



But why stop at a single level? He then generates pattern 1 (of size 3) using pattern 5 (of size 5) using pattern 3 (of size 3), as shown in the following example.



You, being his teacher, now have to solve the same task to verify that his solution is correct. Given a hierarchy of pattern numbers P_i and sizes S_i , you have to output the pattern that is formed.

Input:

The first line of input contains a single integer N ($1 \leq N \leq 6$) representing the depth of the pattern to be formed.

The next line contains N integers P_i ($1 \leq P_i \leq 5$) where P_i represents the pattern number at hierarchy level of i .

The next line contains N integers S_i ($3 \leq S_i \leq 11$, $S_i \% 2 == 1$) where S_i represents the size of the pattern at hierarchy level of i .

It is guaranteed that the product of the sizes S_i will not exceed 1×10^3 .

Output:

Output the pattern

Example:

Input
2 3 2 3 5
Output
<pre> x x x x x x x x x x xx xx x x x x x x x x x x x x x x x x x x xx xx x x x x x x x x x x </pre>

The above input specifies a pattern of depth 2. The first line indicates the hierarchy of 1, 2 which means create a pattern 1 using pattern 2. The second line indicates the sizes of each pattern in the hierarchy. Therefore, you need to build a pattern 1 (of size 3) using a pattern 2 (of size 5).

