Problem A. Square Graph

Input file:	`standard input`
Output file:	`standard output`
Time limit:	3 seconds
Memory limit:	256 megabytes

Prof. Elephant has a sequence $a_1, a_2, \ldots, a_n$. He has used the sequence to generate an undirected graph G with n vertices labeled by $1, 2, \ldots, n$.

For each even-length contiguous subsequence $a_l, a_{l+1}, \ldots, a_{l+2k-1}$, if $a_{l+i-1} = a_{l+k+i-1}$ always holds for $i = 1, 2, \ldots, k$, Prof. Elephant would add k edges to G, where the endpoints of the i-th edge are vertices labeled by $(l + i - 1)$ and $(l + k + i - 1)$, and its weight is w_k.

Prof. Elephant would like to know the total weight of the minimum spanning forest of G.

Input

There are multiple test cases. The first line of the input contains an integer T ($1 \le T \le 10^4$), indicating the number of test cases. For each test case:

The first line contains an integer n ($2 \le n \le 3 \times 10^5$).

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($1 \le a_i \le n$).

The third line contains $\lfloor \frac{n}{2} \rfloor$ integers $w_1, w_2, \ldots, w_{\lfloor \frac{n}{2} \rfloor}$ ($1 \le w_i \le 10^9$).

It is guaranteed that the sum of n in all test cases will not exceed 3×10^5.

Output

For each test case, output an integer in a single line, denoting the total weight of the minimum spanning forest of G.

Example

standard input	standard output
1 8 2 2 5 6 2 5 6 2 5 1 4 4	21