Problem B. PermAB

Input file	`stdin`
Output file	`stdout`

Consider two permutations, A and B, of the set 1, 2, ..., N. An operation consists of selecting two adjacent elements in B and swapping them (i.e., `swap(B[i], B[i + 1])` for $1 \leq i < N$). Determine the minimum number of operations that must be performed to transform permutation B into permutation A.

Input Data

Data is read from standard input. The first line contains the natural number N. The second line contains N natural numbers, separated by spaces, representing permutation A. The third line also contains N natural numbers, separated by spaces, representing permutation B.

Output Data

The result must be written to standard output. Output a single line containing the natural number X, representing the minimum number of operations required to transform B into A.

Restrictions

- $1 \leq N \leq 100\,000$

Examples

Input file	Output file	Explanations
6 2 1 3 4 5 6 1 3 4 5 6 2	5	Explanation: In the first example, 2 is swapped with 6, then 2 with 5, then 2 with 4, then 2 with 3 then 2 with 1.
10 1 5 2 3 4 6 9 10 7 8 3 9 5 1 2 7 8 10 4 6	17	