24 Data Structures You've Ever Heard Of

Input file:	standard input
Output file:	standard output
Time limit:	2 seconds
Memory limit:	64 megabytes

Bobo had a permutation p of $\{1, 2, 3, 4\}$ and a permutation a of $\{1, 2, \ldots, n\}$. He would like to count the number of subsequences of a similar to p.

That is, to count the number of quadrangle (t_1, t_2, t_3, t_4) where:

- $1 \le t_1 < t_2 < t_3 < t_4 \le n$,

- $(p_i - p_j) \cdot (a_{t_i} - a_{t_j}) \ge 0$ for all $1 \le i, j \le 4$.

Input

The first line contains an integer n ($1 \le n \le 2000$).

The second line contains 4 integers p_1, p_2, p_3, p_4 ($1 \le p_i \le 4$).

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

Output

An integer denotes the number of subsequences.

Examples

standard input	standard output
5 1 2 3 4 1 2 3 4 5	5
8 1 3 2 4 1 2 5 6 3 4 7 8	16