

Problem I. Pair of Topics

Time limit 2000 ms
Mem limit 262144 kB

The next lecture in a high school requires two topics to be discussed. The i -th topic is interesting by a_i units for the teacher and by b_i units for the students.

The pair of topics i and j ($i < j$) is called **good** if $a_i + a_j > b_i + b_j$ (i.e. it is more interesting for the teacher).

Your task is to find the number of **good** pairs of topics.

Input

The first line of the input contains one integer n ($2 \leq n \leq 2 \cdot 10^5$) — the number of topics.

The second line of the input contains n integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 10^9$), where a_i is the interestingness of the i -th topic for the teacher.

The third line of the input contains n integers b_1, b_2, \dots, b_n ($1 \leq b_i \leq 10^9$), where b_i is the interestingness of the i -th topic for the students.

Output

Print one integer — the number of **good** pairs of topic.

Examples

Input	Output
5 4 8 2 6 2 4 5 4 1 3	7
Input	Output
4 1 3 2 4 1 3 2 4	0