Problem O. 4 values whose sum is 0

Time limit	1419 ms
Mem limit	1572864 kB
Code length Limit	50000 B
OS	Linux

The SUM problem can be formulated as follows: given four lists A, B, C, D of integer values, compute how many quadruplet (a, b, c, d) belongs to A x B x C x D are such that a + b + c + d = 0 . In the following, we assume that all lists have the same size n.

Input

The first line of the input file contains the size of the lists n (this value can be as large as 4000).

We then have n lines containing four integer values (with absolute value as large as 2^{28}) that belong respectively to A, B, C and D.

(**Edited:** n <= 2500)

Output

Output should be printed on a single line.

Example

```
Input:
6
-45 22 42 -16
-41 -27 56 30
-36 53 -37 77
-36 30 -75 -46
26 -38 -10 62
-32 -54 -6 45

Output:
5
```