

E. 4 values whose sum is 0

Time limit: 1.419s

Memory limit: 1536 MB

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 $A \times B \times C \times D$ 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: $n \leq 2500$)

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

South western 05-06