Stream Health

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Dr. Xu is measuring the amount of nitrates (NO_3) and phosphates (PO_4) in a nearby stream. Dr. Xu wants to make sure the stream is healthy for drinking, agriculture, recreation, industry, reducing flood damage, and providing habitat for aquatic animals. There are a variety of methods to measure how clean a stream is, such as evaluating the condition of aquatic wildlife and different chemical tests.

Dr. Xu performs t tests on the stream for the NO_3 level as a_i and PO_4 level as b_i. Help him determine the approximate average NO_3 level and PO_4 level of his tests.

Input

The first line contains an integer t $(1 \leq t \leq 1000)$ — the number of tests.

The second line contains t space separated integers $a_1, a_2, ..., a_t$ $(0 \leq a_i \leq 10^6)$ — the amount of nitrates for each test of the stream.

The third line contains t space separated integers $b_1, b_2, ..., b_t$ $(0 \leq b_i \leq 10^6)$ — the amount of phosphates for each test of the stream.

Output

Output two space separated integers — the average NO_3 level and PO_4 level.

To make the answer contain integer values, truncate the decimals. For example, if the true average were 17.8, then the answer would be 17.

Example

standard input	standard output
3 1 2 3 5 1 7	2 4

Note

The average of 1, 2, and 3 is $\frac{1+2+3}{3} = 2$.

The average of 5, 1, and 7 is $\frac{5+1+7}{3} = 4.333...$, which truncates to 4.