E. Minimal Pairs Product Sum

Write a function that receives 5 number of integers and returns the minimal sum of the array (sum of the products and each two adjacent numbers). The challenge is to find the best possible sort of the array elements, to have the minimal sum result. The maximum iteration of sorting is 100.

For Example

Without sorting the array [40, 25, 10, 5, 1], the sum is:

(40*25) + (25*10) + (10*5) + (5*1) = 1305

After do some sorting, the expected output for the array is 225 with sorted array: [40, 1, 10, 5, 25]

Input

First line of input will be 'n' number of test cases, followed by 5 different integers (separated by space) in each line for 'n' lines. Integer input will be in range of 0 <= x <= 50

Output

The output should be the minimal sum result. As shown in the Sample Input / Output table below.

Sample Input / Output

Input	Output
3	
6 4 36 29 42	674
8 3 0 22 38	90
12 31 3 4 21	261