#include <stdio.h>

#include <stdlib.h>

int compareAsc(const void\* a, const void\* b) {

return (\*(int\*)a - \*(int\*)b);

}

int compareDesc(const void\* a, const void\* b) {

return (\*(int\*)b - \*(int\*)a);

}

int minimizeSum(int\* array\_One, int\* array\_Two, int n) {

qsort(array\_One, n, sizeof(int), compareAsc);

qsort(array\_Two, n, sizeof(int), compareDesc);

int min\_sum = 0;

for (int i = 0; i < n; i++) {

min\_sum += array\_One[i] \* array\_Two[i];

}

return min\_sum;

}

int main() {

int n;

scanf("%d", &n);

int array\_One[n], array\_Two[n];

for (int i = 0; i < n; i++) {

scanf("%d", &array\_One[i]);

}

for (int i = 0; i < n; i++) {

scanf("%d", &array\_Two[i]);

}

int result = minimizeSum(array\_One, array\_Two, n);

printf("%d\n", result);

return 0;

}

