Clusterization

Cost: 20 | Solved: 35

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

You are given *n* points.

You have to separate them into *k* groups (clusters).

Input:

The first line contains two numbers: *n* – the number of points and *k* – the number of groups.

The next *n* lines contain two numbers *x* and *y* – the coordinates of a point.

Output:

The first line should contain the sum of distances between each point to the center of its cluster.

Each of the next *k* lines should contain the coordinates of center of the current cluster, the number of points of the cluster and the indices of the points belonging to the cluster *(all values should be separated with a whitespace).*

Example:

Input	Output

6 3	
1 2	10.8982
5 5	1.5 3 2 1 4
7 3	3 6 1 6
2 4	7 5.66667 3 2 3 5
9 9	
3 6	