Crowded line P68571_en

You are given n points on the plane. You have the guarantee that there exists at least one line that contains at least 20% of the n given points. Find any such line.

Input

Input consists of several cases, with only integer numbers, each one with n, followed by n different pairs (x, y). There is at least one line with at least $\lceil n/5 \rceil$ of the given points. Assume $2 \leq n \leq 10^5$, and that no given coordinate is larger than 10^6 in absolute value.

Output

For every case, print information about the line you found: The number m of all the given points that belong to your line, followed by all those m points in any order. The number m must be at least 2 and also at least $\lceil n/5 \rceil$. If there is more than one possible line, choose any one. Follow strictly the format of the sample output.

Sample input 1

```
4  0 0  0 -1  -1 0  -1 -1
3  999991 999992  999992 999993  999993 999994
11  7 0  7 2  -7 2  6 4  -6 4  5 5  -5 5  3 6  -3 6  0 7  3 3
```

Sample output 1

```
2  0 -1  -1 0
3  999991 999992  999992 999993  999993 999994
3  7 2  -5 5  3 3
```

Problem information

Author: Ivan Geffner

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