

Input

n
m
 $x_1 y_1$
...
 $x_n y_n$

where:

- number of case to proceed: $1 \leq n \leq 1000$
- number of objects in this case: $2 \leq m \leq 1000$
- discovered objects locations: $0 \leq x_i, y_i \leq 1000$
- all data is in integer

Output

Case number, which start from 1, followed by center position of the circle and its radius, rounded to two decimal digits.

Sample input	Output for sample input
1 5 1 2 3 4 5 2 4 1 3 0	1 3.00 2.00 2.00