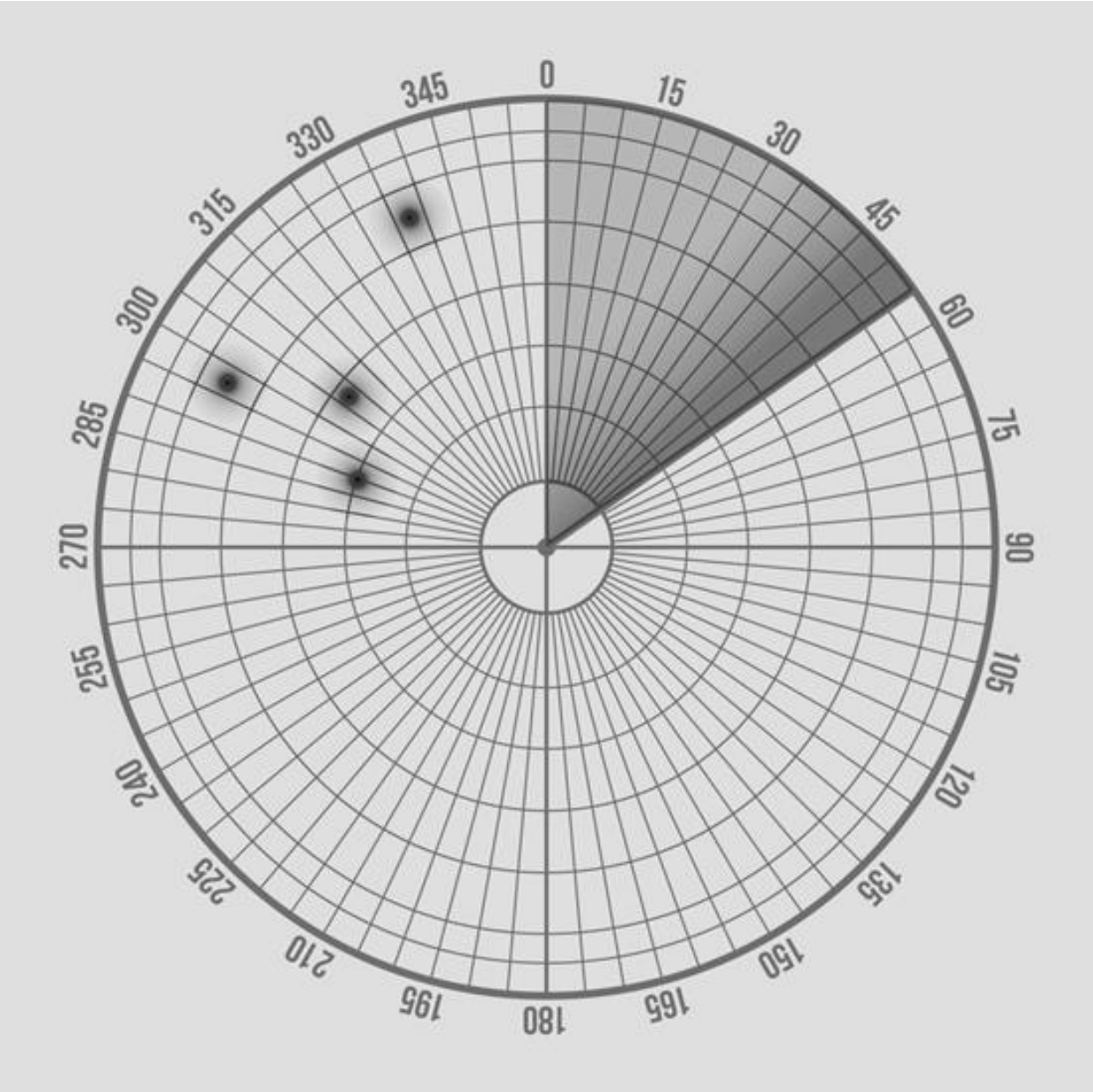
Problem E

Save Our Soul

Time limit: 1 second

Accidentally a plane crashed into the sea. Satellite observation reveal several recognizable objects as parts of the plane. Search And Rescue (SAR) teams has very limited time to save the passengers alive, so they want to start from the center of discovered objects with minimal span of circular area, with all detected objects covered. Please help SAR teams to determine where to start and how far the search radius should be done.



Input

n
m
x1 y1
…
xn yn

where:

- number of case to proceed: 1 <= n <= 1000
- number of objects in this case: 1 <= m <= 1000
- discovered objects locations: 0 <= xi, yi <= 1000
- all data is in integer

Output

Center position of the circle and its radius, rounded to two decimal digit.

Sample input	**Sample Output**
1 5 1 2 3 4 5 2 4 1 3 0	3.00 2.00 2.00