

I – Sensor Network

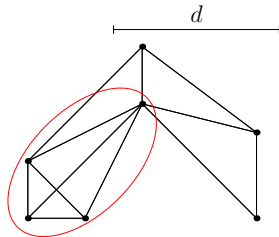
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ACM-ICPC World Finals, Ekaterinburg



Problem Description

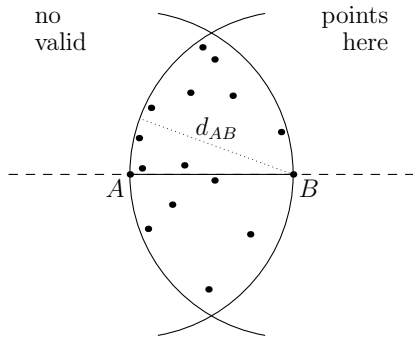
- ▶ You are given $n \leq 100$ points in the plane.



- ▶ Find the *largest* set of points such that *each pair* is within distance d .

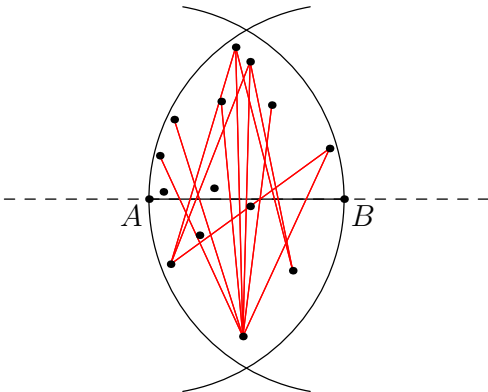
Problem 1

Fix the farthest two points you want in your set.
Eliminate the ones that don't fit.



Problem I

Which pairs of points *don't* go together?



Problem I

Key observation: this graph is bipartite!

Find max matching = max independent set

Theoretically $O(n^5)$ but fast (or use faster matching)

