

Brute force

Input is array of points

Output is array of array of edges (pt a \rightarrow pt b)

for (all points in graph i)

for (all remaining points j)

n^2 complexity
(choose a pair)

found hull = 0

$v_x = \text{graph}[j].\text{first} - \text{graph}[i].\text{first}$

$v_y = \text{graph}[j].\text{second} - \text{graph}[i].\text{second}$

~~int chk = v_x~~

for (all points in graph k) $i \rightarrow n^2 \cdot n = n^3$ complexity

$v_{2x} = \text{graph}[k].\text{first} - \text{graph}[i].\text{first}$

$v_{2y} = \text{graph}[k].\text{second} - \text{graph}[i].\text{second}$

$\text{int chk} = (v_x \cdot v_{2y}) - (v_y \cdot v_{2x})$

if $\text{chk} > 0$

up++

if $\text{chk} < 0$

down++

if (up > 0 && down > 0)

continue

else

ans.push_back (edge between points i to j)

$\therefore \text{ret } (n^3) \text{ T.C}$