Lecture 10 (Week 5) 3:00 PM

Selection algorithm

Problem statement.

points	goal
p_1	q_1
$\vdots$	$\vdots$
p_n	q_n

find first two in order

take a out of p_1 and q_1

$\rightarrow$ $p_1 \rightarrow q_1$

$\rightarrow$ $p_2 \rightarrow q_2$

$\rightarrow$ $p_3 \rightarrow q_3$

$\vdots$

p_1 q_1

p_2 q_2

p_3 q_3

$\vdots$

p_n q_n

Given p_1 and q_1 & both

$\rightarrow$ bless, guess, for every p_i, q_i, throw it

$\leftarrow$ consequently, and chuck (sub)

$\rightarrow$ take the sub L both.

Using a bad q_i: compare sub

Smaller sub	Bigger sub
smaller both	bigger both
Independent	independent

p_1 q_1 p_2 q_2 p_3 q_3 $\vdots$ p_n q_n

smaller sub $\rightarrow$ p_1

smaller both

p_1 q_1 p_2 q_2 p_3 q_3 $\vdots$ p_n q_n