Goals:
- Describe the closest points algorithm
- Argue (informally) correctness of this algorithm

Q's: Feedback on rough draft? What can you revise? Points for psets, quizzes, programming assignments? Weekly time?

Lemma: Only need to look at next 7 pts from p.

Pf: Imagine dividing region into $S \times S$ squares, starting at p. Each of these squares can contain at most 1 pt.

For contradiction, suppose 2 pts are in a square

$$d(p, q) \leq \sqrt{\left(\frac{S}{2}\right)^2 + \left(\frac{S}{2}\right)^2} = \frac{S}{\sqrt{2}}$$

Not allowed b/c both pt are in L or both in R, so must have distance at least $\frac{S}{\sqrt{2}}$.

Pts in rows 3, 4 are more than $\frac{S}{\sqrt{2}}$ from p. Only 7 other pts in rows 1, 2. These pts will be subsequent to p in $Y_s$.

Group: Explain in your own words why alg works
- collect questions