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Appendix A

Notation

$X - Y$	Set difference
$\lvert X\rvert$	The number of elements in a finite set X.
$\iff$	If and only if
$\implies$	Implication
$\mathbb{R}$	The real numbers.
$\mathbb{R}^n$	The vector space of n-tuples of real numbers.
$\lVert \cdot \rVert$	Norm.
$\lVert \cdot \rVert_p$	The L^p norm.
$\lvert x\rvert$	Absolute value if x is a number.
$\text{dist}(p, q)$	The distance between p and q, given by $\lVert p - q\rVert$.
$\langle \cdot , \cdot \rangle$	An inner product.
$\subset$	Subset (not strict, e.g. $A = B \implies A \subset B$).
P	A set of points $\{p_1, p_2, \ldots, p_n\}$ that we want to apply an algorithm to.
p_i	A point in P (see above).
n	If not otherwise specified, n is the number of points in P (see above).
$\text{Vor}(P)$	The Voronoi diagram of P.
$\mathcal{V}(p_i)$	The ith Voronoi cell.
$\text{Vor}_\text{G}(P)$	Refers to $\mathbb{R}^2 - \text{Vor}(P)$.
$\mathcal{O}(f(n))$	Big O-notation.
$\text{bi}(p, q)$	Bisector of p and q.
$h(p, q)$	Open half-plane containing p with $\text{bi}(p, q)$ as boundary.
$\overline{X}$	The closure of a set $X \subset \mathbb{R}^n$, given by the union of X with its limit points.
$^\circ X$	The interior of a set $X \subset \mathbb{R}^n$, given by the union of all interior points of X.
∂X	The boundary of a set $X \subset \mathbb{R}^n$, given by $\overline{X} - {}^\circ X$.
$\overline{B_r(p)}$	$= \{x \in \mathbb{R}^n \mid \text{dist}(x, p) \leq r\}$, the closed ball with center p and radius r.
$B_r(p)$	$= \{x \in \mathbb{R}^n \mid \text{dist}(x, p) < r\}$, the open ball with center p and radius r.
$\partial B_r(p)$	$= \{x \in \mathbb{R}^n \mid \text{dist}(x, p) = r\}$, the circle with center p and radius r.
$V(G)$	The set of vertices for the graph G.
$E(G)$	The set of edges for the graph G.
$\deg(v)$	The degree of a vertex v in a graph, e.g. the number of edges that touch v.