

Voronoi Diagrams

For the following sets of points find

- The equations of the perpendicular bisectors between AB, BC and AC.
- Sketch the Voronoi diagram.
- Find the coordinates of the 'Toxic Waste Dump'.
- How far is the dump from the points A, B and C.

- $A = (1,5)$, $B = (9,1)$ and $C = (9,7)$
- $A = (7,-3)$, $B = (11,3)$ and $C = (3,7)$

For the Voronoi diagram shown below, where A, B, C and D represent cities, which is the best site for a toxic waste dump, which cities is it nearest to and how far is it from them? You will need to find equations of perpendicular bisectors, intersections of lines and use Pythagoras.

