k-means Homework

- For the data below, show the centroid values and which instances are closest to each centroid *after* centroid calculation for two iterations of *k*-means using Manhattan distance
- By 2 iterations I mean 2 centroid changes after the initial centroids
- Assume $k = 2$ and that the first two instances are the initial centroids

Pattern	*x*	*y*
a	.9	.8
b	.2	.2
c	.7	.6
d	-.1	-.6
e	.5	.5

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Pattern	*x*	*y*
a	.9	.8
b	.2	.2
c	.7	.6
d	-.1	-.6
e	.5	.5

Iteration	*Centroid 1 and instances*	*Centroid 2 and instances*
0	.9, .8 {*a*, *c*}	.2, .2 {*b*, *d*, *e*}
1	.8, .7 {*a*, *c*, *e*}	.2, .033 {*b*, *d*}
2	.7, .633 {*a*, *c*, *e*}	.05, -.2 {*b*, *d*}
3	.7, .633 {*a*, *c*, *e*}	.05, -.2 {*b*, *d*}