Example: *K-Means* Clustering

Initial Cluster Centers Selected
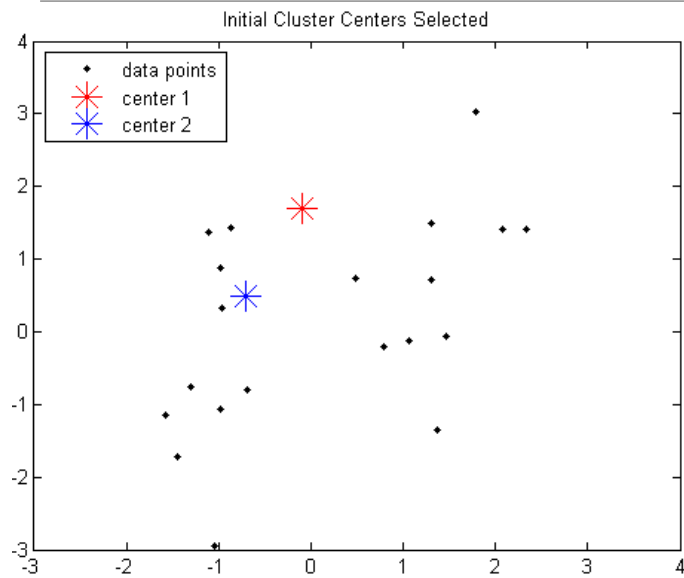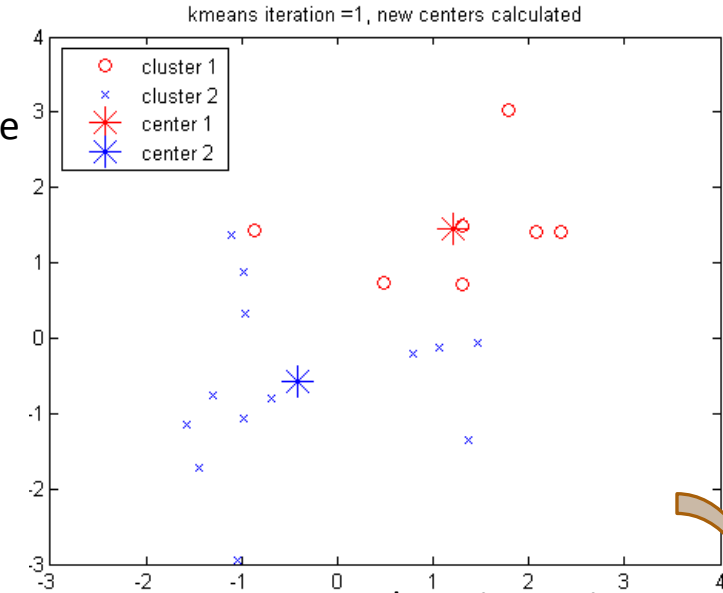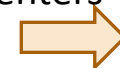
The original data points & randomly select *K* = 2 centroids

Assign points to clusters

kmeans iteration =1, total distance =34.296
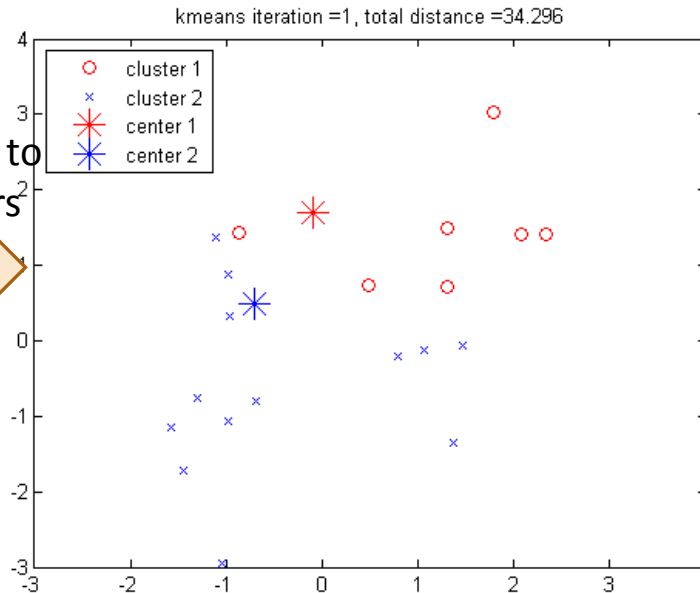
Recompute cluster centers

kmeans iteration =1, new centers calculated

Redo point assignment

kmeans iteration =6, total distance =23.1876
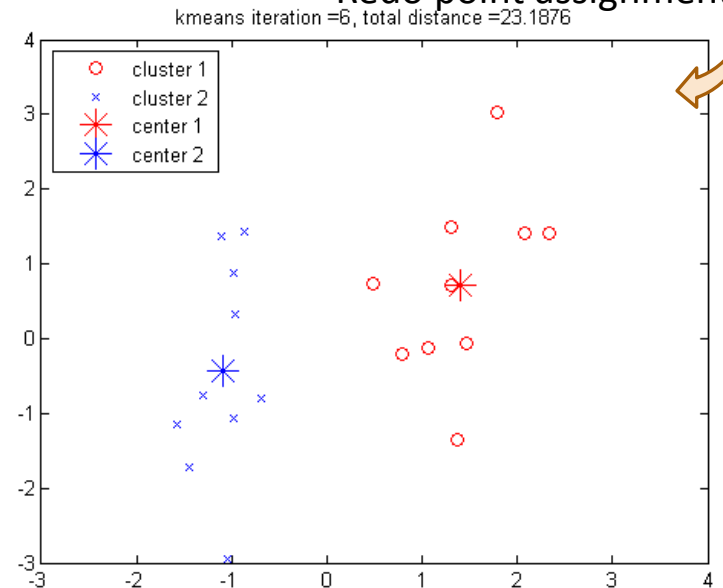
Execution of the K-Means Clustering Algorithm

Select *K* points as initial centroids

Repeat

- Form *K* clusters by assigning each point to its closest centroid
- Re-compute the centroids (i.e., *mean point*) of each cluster

Until convergence criterion is satisfied