Home work

How K-means Work?

New $M_1 = (0.167, 2.33)$ & $M_2 = (1.75, 3.0)$

$$d(p,q) = \sqrt{\sum_{i=1}^{n} (q_i - p_i)^2}$$

New centroids / Distance	(0.5, 1.0)	(0.0, 4.0)	(3.5, 2.0)	(0.5, -4.5)	(-0.5, -3.5)
$M_1 = (0.167, -2.33)$	3.35	6.33	5.46	2.20	1.35
$M_2 = (1.75, 3.0)$	2.36	2.02	2.02	7.60	6.88
clusters	M_2	M_2	M_2	M_1	M_1

New, C_1 = Mean $(M_1) = (0.5 - 0.5)/2 = 0, -(4.5 - 3.5)/2 = -0.5 = (0, -0.5$

New, C_2 = Mean $(M_2) = (0.5 + 0.0 + 3.5)/3, (1.0 + 4.0 + 2.0)/3 = 2.33 = (1.83, 2.33)$

$= 1.83$