CSE881 HW8

Nan Cao, A52871775
Nov 12th, 2016

Problem 1

(a)

Iter	0.1	0.2	0.8	0.9	1.0	1.3	1.8	1.9	A	B	C
	Cluster assignment of data points								Centroid Locations		
0	-	-	-	-	-	-	-	-	0	0.3	2
1	1	2	2	2	2	3	3	3	0.1	0.725	1.667
2	1	1	2	2	2	3	3	3	0.15	0.9	1.667
3	1	1	2	2	2	3	3	3	0.15	0.9	1.667

Table 1-a

(b)

$$SSE = 0.2317$$

(c)

Iter	0.1	0.2	0.8	0.9	1.0	1.3	1.8	1.9	A	B
	Cluster assignment of data points								Centroid Locations	
0	-	-	-	-	-	-	-	-	0	2
1	1	1	1	1	1	2	2	2	0.6	1.667
2	1	1	1	1	1	2	2	2	0.6	1.667

Table 1-c-1

$$SSE_1 = 0.7, \quad SSE_2 = 0.2067$$

Iter	0.1	0.2	0.8	0.9	1.0	A_1	A_2
	Cluster assignment of data points					Centroid Locations	
0	-	-	-	-	-	0.1	1
1	1	1	2	2	2	0.15	0.9
2	1	1	2	2	2	0.15	0.9

Table 1-c-2

(d)
the 2 methods get the same results.