Sample	A	B	Cluster
P1	1	1.5	
P2	1.5	2	
P3	3	4	
P4	5	7	
P5	3.5	5	
P6	4.5	5	
P7	3.5	4.5	

K = 2, Max = 3, C1 = (3, 4), C2 = (3, 5)

1st:

Sample	A	B	Distance of C1	Distance of C2	Cluster
P1	1	1.5	3.2016	4.0311	C1
P2	1.5	2	2.5000	3.3541	C1
P3	3	4	0	0	C1
P4	5	7	3.6056	2.8284	C2
P5	3.5	5	1.1180	0.5000	C2
P6	4.5	5	1.8028	1.5000	C2
P7	3.5	4.5	0.7071	0.7071	C1

New C1 = ((1 + 1.5 + 3 + 3.5) / 4, (1.5 + 2 + 4 + 4.5) / 4) = (2.25, 3.00)
New C2 = ((5.0 + 3.5 + 4.5) / 3), (7.0 + 5.0 + 5.0) / 3) = (4.333, 5.667)

2nd:

Sample	A	B	Distance of C1	Distance of C2	Cluster
P1	1	1.5	1.9526	5.3359	C1
P2	1.5	2	1.2500	4.6338	C1
P3	3	4	1.2500	2.1344	C1
P4	5	7	4.8541	1.4907	C2
P5	3.5	5	2.3585	1.0672	C2
P6	4.5	5	3.0104	0.6872	C2
P7	3.5	4.5	1.9526	1.4337	C2

New C1 = ((1 + 1.5 + 3) / 3, (1.5 + 2 + 4) / 3) = (1.833, 2.50)
New C2 = ((5.0 + 3.5 + 4.5 + 3.5) / 4, (7.0 + 5.0 + 5.0 + 4.5) / 4) = (4.125, 5.375)

3rd:

Sample	A	B	Distance of C1	Distance of C2	Cluster
P1	1	1.5	1.3017	4.9781	C1
P2	1.5	2	0.6009	4.2757	C1
P3	3	4	1.9003	1.7766	C2
P4	5	7	5.5025	1.8456	C2
P5	3.5	5	3.0046	0.7289	C2
P6	4.5	5	3.6553	0.5303	C2
P7	3.5	4.5	2.6034	1.0753	C2