K-Means Cluster

Dataset = { 1, 2, 5, 7, 11, 15, 18, 21, 31, 33, 38, 39, 40, 50,52, 55 }
Given, K = 3

Algorithm:

Step 1: Take Mean Value
Step 2: Find Nearest Number from Mean
Step 3: All Values Put in The Cluster
Step 4: Repeat all Steps Until get Same Values

K-Means Cluster

Dataset = { 1, 2, 5, 7, 11, 15, 18, 21, 31, 33, 38, 39, 40, 50, 52, 55 }
Given, K = 3

MC1 = 5 MC2 = 31 MC3 = 50 (MC1 = Mean of the cluster 1)

Cluster1 = { 1, 2, 5, 7, 11, 15 }
Cluster2 = { 18, 21, 31, 33, 38, 39, 40 }
Cluster3 = { 50, 52, 55 }

Now Update Your Mean for all Clusters:
MC1 = (1+2+5+7+11+15) / 6 = 6.83
MC2 = (18+21+31+33+38+39+40) / 7 = 31.42
MC3 = (50+52+55) / 3 = 52.33

K-Means Cluster

Dataset = { 1, 2, 5, 7, 11, 15, 18, 21, 31, 33, 38, 39, 40, 50,52, 55 }
Given, K = 3

MC1 = 6.83 MC2 = 31.42 MC3 = 52.33

Cluster1 = {1,2,5,7,11,15,18}
Cluster2 = {21,31,33,38,39,40}
Cluster3 = {50,52,55}

Now Update Your Mean for all Clusters:
MC1 = (1+2+5+7+11+15+18) / 7 = 8.42
MC2 = (21+31+33+38+39+40) / 6 = 33.67
MC3 = (50+52+55) / 3 = 52.33

K-Means Cluster

Dataset = { 1, 2, 5, 7, 11, 15, 18, 21, 31, 33, 38, 39, 40, 50,52, 55 }
Given, K = 3

MC1 = 8.42 MC2 = 33.67 MC3 = 52.33

Cluster1 = {1,2,5,7,11,15,18,21}
Cluster2 = {31,33,38,39,40}
Cluster3 = {50,52,55}

Now Update Your Mean for all Clusters:
MC1 = (1+2+5+7+11+15+18+21) / 8 = 10
MC2 = (31+33+38+39+40) / 5 = 36.2
MC3 = (50+52+55) / 3 = 52.33

Note:
CL1 = 21- 8.42 = 12.58
CL2 = 33.67 - 21 = 12.67

K-Means Cluster

Dataset = { 1, 2, 5, 7, 11, 15, 18, 21, 31, 33, 38, 39, 40, 50,52, 55 }
Given, K = 3

MC1 = 10 MC2 = 36.20 MC3 = 52.33

Cluster1 = {1,2,5,7,11,15,18,21}
Cluster2 = {31,33,38,39,40}
Cluster3 = {50,52,55}

Note:
CL1 = 21- 10= 11
CL2 = 36.20 - 21 = 15.20

Now we get same values