|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Iteration # | Clusters | Points joined | # Clusters | Distance | Jump |
| 1 | 1,2,3,4,5,6,7,8 | - | 8 | 0 | - |
| 2 | 48,1,2,3,5,6,7 | 4,8 | 7 | 1.41 | 1.41 |
| 3 | 486,1,2,3,5,7 | 8,6 | 6 | 1.41 | 0 |
| 4 | 4861,2,3,5,7 | 6,1 | 5 | 2 | 0.59 |
| 5 | 4861,37,2,5 | 3,7 | 4 | 2.24 | 0.24 |
| 6 | 4861,372,5 | 7,2 | 3 | 3 | 0.76 |
| 7 | 48615,372 | 4,5 | 2 | 5 | **2** |
| 8 | 48615372 | 8,2 | 1 | 7 | 2 |

#2 sqrt((6-7)^2 + (2-3)^2) = sqrt(1+1) = sqrt(2) = ~1.41

#5 sqrt(2^2 + 1^1) = sqrt(5) = ~2.24

Return 3 clusters: 4861, 372, 5