①

	1	2	3	4	5
1	0	2.58	0.77	4.20	2.86
2	2.58	0	2.78	2.08	0.74
3	0.77	2.78	0	4.55	3.21
4	4.20	2.08	4.55	0	1.80
5	2.86	0.74	3.21	1.80	0

Iterasi 0

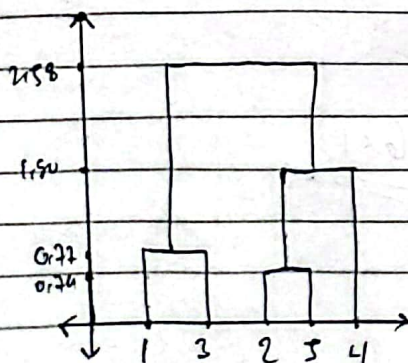|	1	2,5	3	4
1	0	2.58	0.77	4.20
2,5	2.58	0	2.78	1.80
3	0.77	2.78	0	4.55
4	4.20	1.80	4.55	0

Iterasi 1

	1,3	2,5	4
1,3	0	2.58	4.20
2,5	2.58	0	1.80
4	4.20	1.80	0

Iterasi 2

	2,5,4	1,3
2,5,4	0	2.58
1,3	2.58	0

Iterasi 3

Gambar Dendrogram

(2) Diket.

Eigenvalues : $\begin{pmatrix} 9,274 \\ 4,326 \end{pmatrix}$ ... Eigenvectors = $\begin{pmatrix} 0,1222 & -0,9925 \\ 0,9925 & 0,1222 \end{pmatrix}$

Data A = $\begin{array}{|cc|} \hline 8 & 6 \\ 9 & 3 \\ 4 & 7 \\ 5 & 2 \\ 7 & 10 \\ 9 & 8 \\ \hline \end{array}$

mean $x = \dfrac{42}{6} = 7$

mean $y = \dfrac{36}{6} = 6$

Total = 42 36

Data Adjust = Data - mean

Data Adjust = $\begin{array}{|cc|} \hline 1 & 0 \\ 2 & -3 \\ -3 & 1 \\ -2 & -4 \\ 0 & 4 \\ 2 & 2 \\ \hline \end{array}$ $\xrightarrow{\text{Transpose}}$ $\begin{array}{|cccccc|} \hline 1 & 2 & -3 & -2 & 0 & 2 \\ 0 & -3 & 1 & -4 & 4 & 2 \\ \hline \end{array}$

Feature Vector = $\begin{bmatrix} 0,1222 & -0,9925 \\ 0,9925 & 0,1222 \end{bmatrix}$

Transpose

Feature vector^T = $\begin{bmatrix} 0,1222 & 0,9925 \\ -0,9925 & 0,1222 \end{bmatrix}$

Final Data = Row Feature Vector x Row Data Adjust

$\begin{bmatrix} 0,1222 \\ -2,7371 \\ 6,6289 \\ -4,2144 \\ 3,97 \\ 2,2294 \end{bmatrix}$

Matrits = 6×1