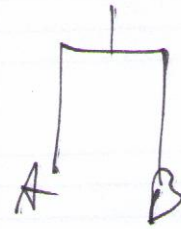


① Für alle 3 Clusterings!

Schritt 1: Min. Paar mit min. Distanz finden (wobei $A \neq B$)

$\Rightarrow A, B \Rightarrow A, B$ zusammenführen.

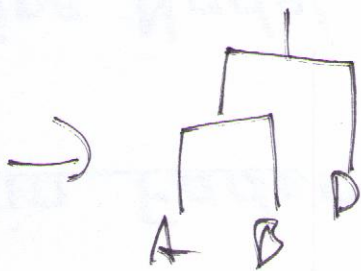
Single Linkage Clustering:



\rightarrow Neue Matrix

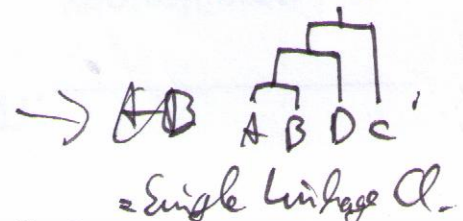
	A \cup B	C	D
A \cup B	0	3	2
C	3	0	6
D	2	6	0

~~Schritt 2~~ Hier \uparrow wieder minimales Paar finden $\rightarrow (A \cup B) \cup D$
bgl. Distanz



	A \cup B \cup D	C
A \cup B \cup D	0	3
C	3	0

\rightarrow $A \cup B \cup D \cup C$

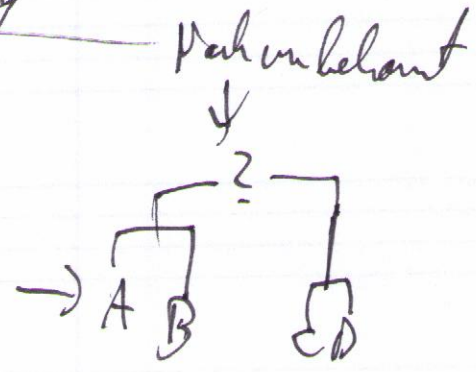


Q2

Complete linkage Clustering

1. Schritt \rightarrow

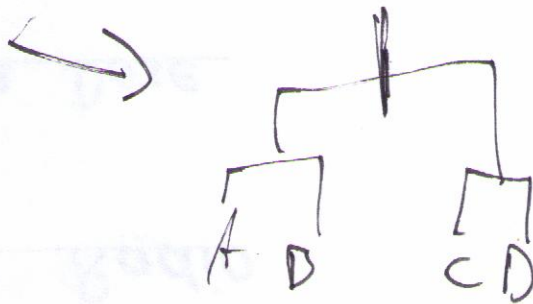
	AuB	C	D
AuB	0	7	9
C	7	0	6
D	9	6	0



\rightarrow

	AuB	CuD
AuB	0	9
CuD	9	0

(trial)



③

Aug. Link. Clust.

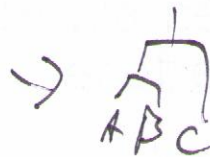
$$d(X, Y) := \frac{|A| \cdot d(A, Y) + |B| \cdot d(B, Y)}{|A| + |B|}$$

Nach 1. Schritt

	A ∪ B	C	D
A ∪ B	0	5	5, 5
C	5	0	6
D	5, 5	6	0



$d(A \cup B, C)$ minimal



Fast Trivial, da man noch D übrig ist.

