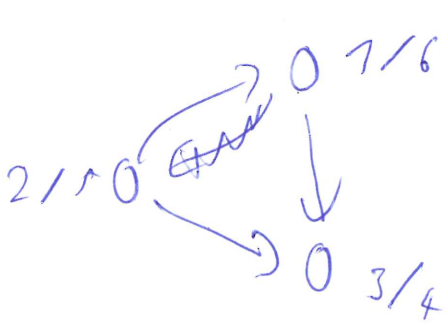
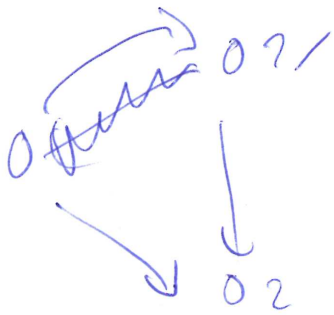
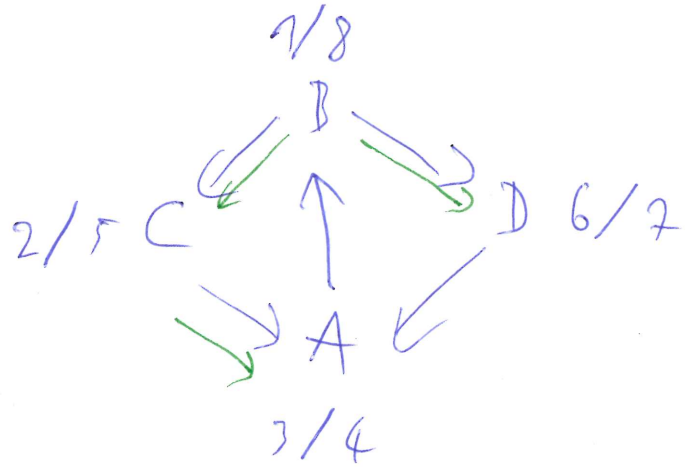
(7)

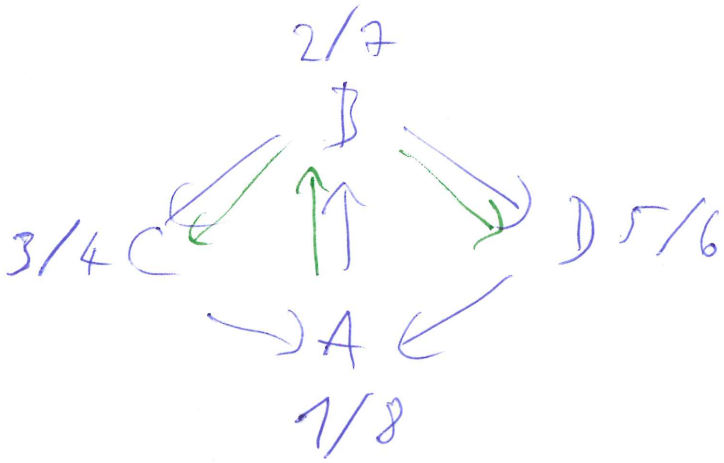




(2)



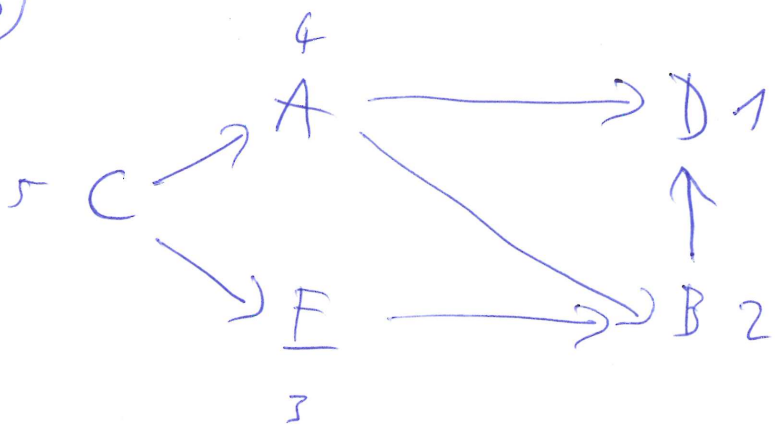
(A, B)

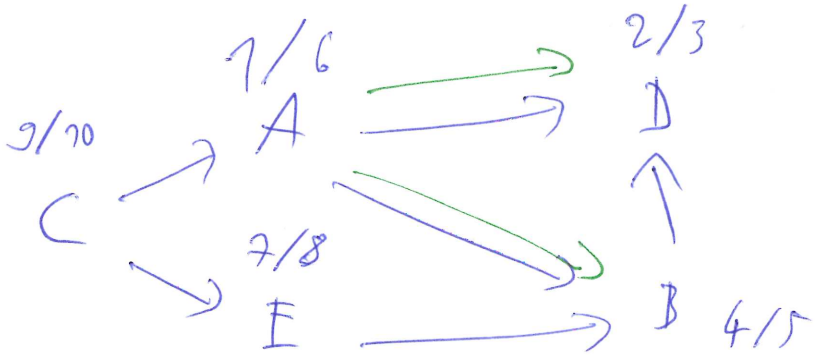


(C, A)

(D, A)

(3)

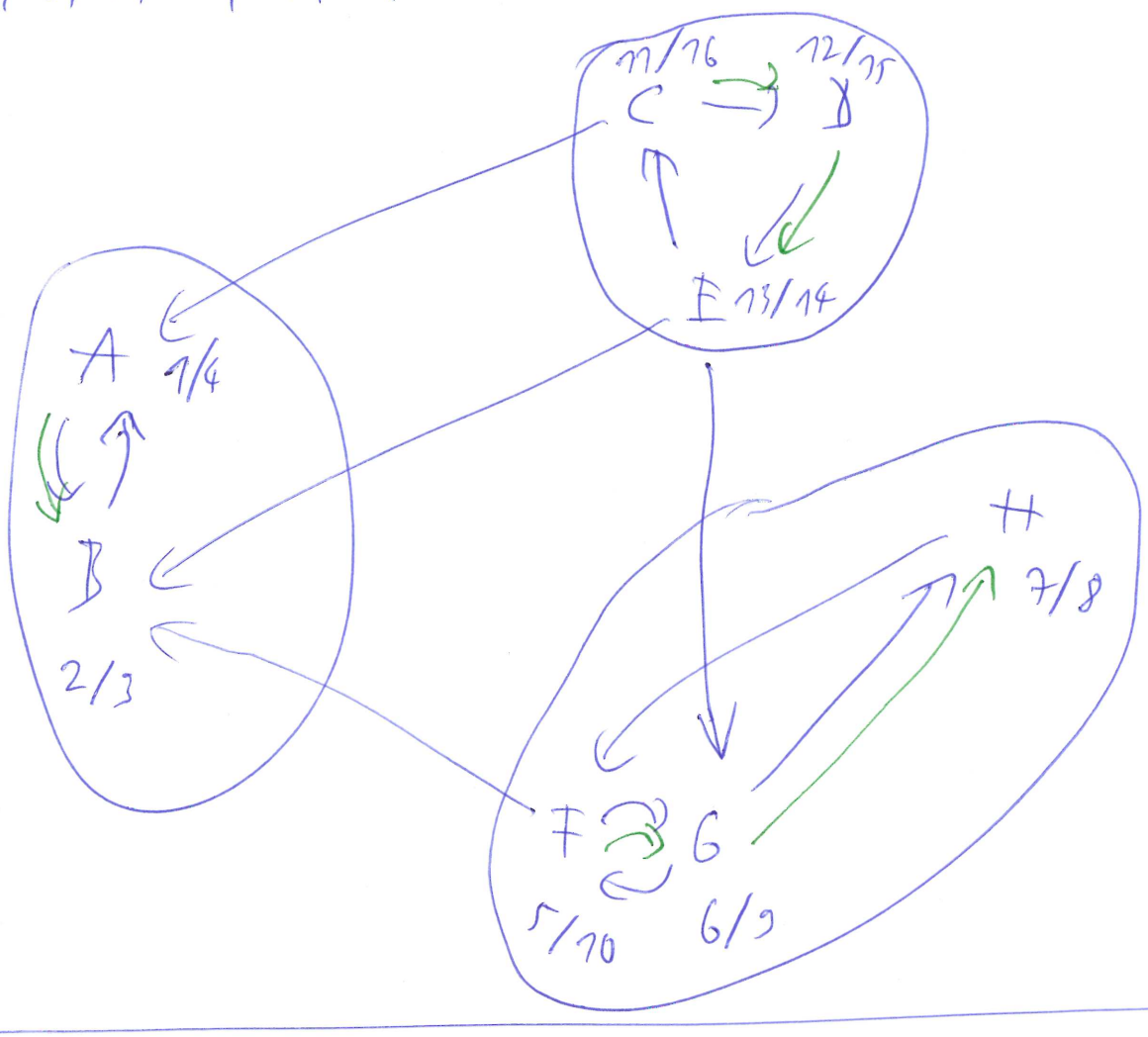


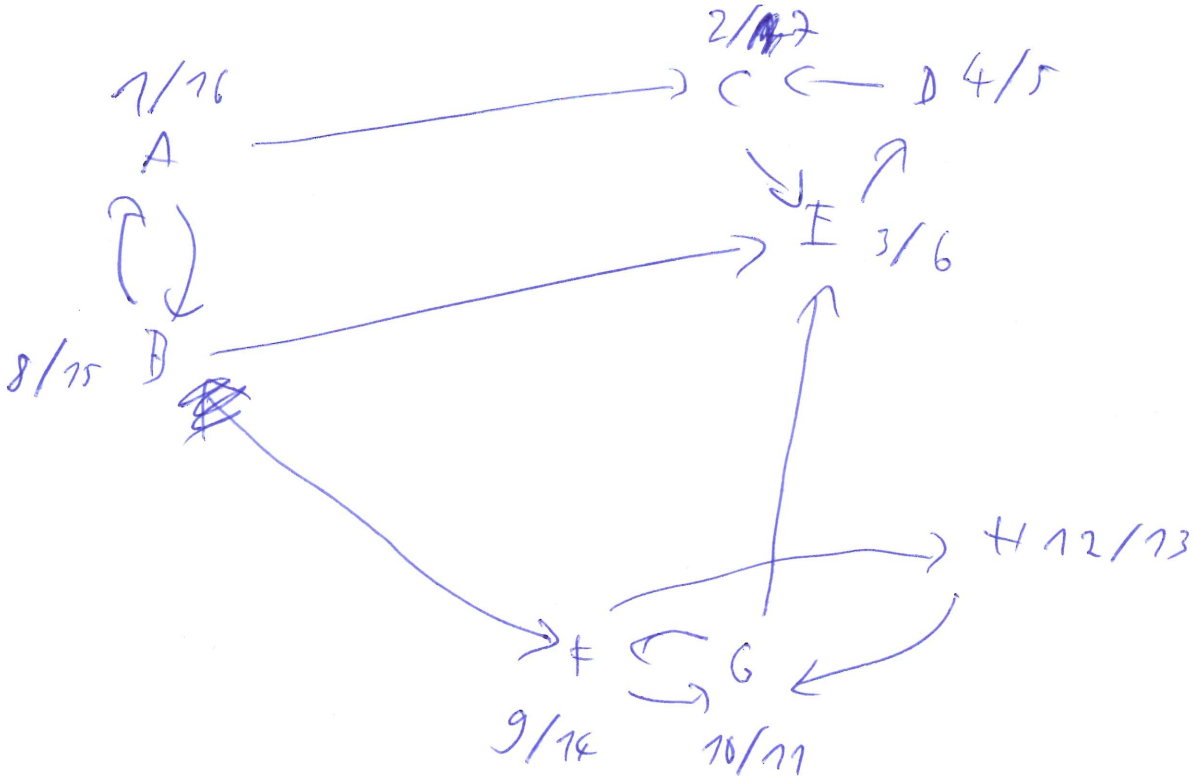


C, F, A, B, D

A, B, F, H, G, C, E D

(4)





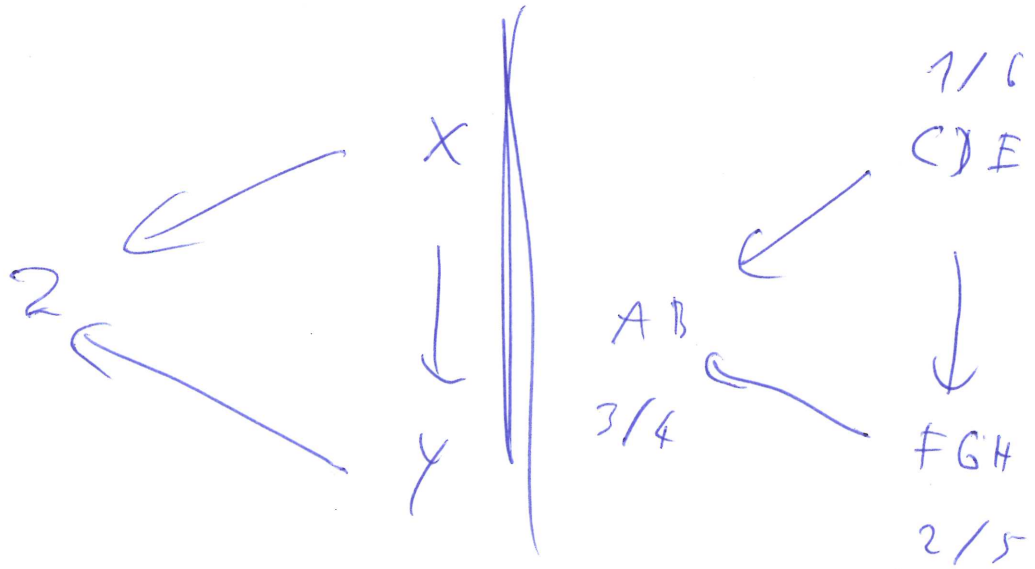
A, B, F, H, G, C, E, D

$G = (V, E)$

(4*)

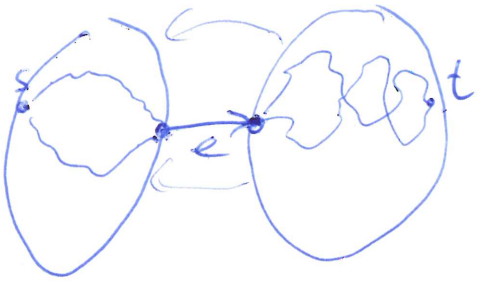
$S \subseteq V$ $\quad \forall a, b \in S : \exists$ pfad von a nach b

(5)



CDE, FGH, AB

3 2 1

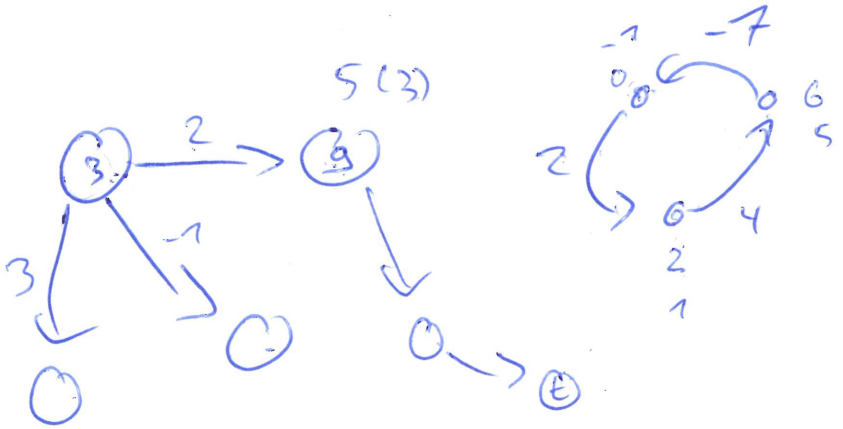


$A \Rightarrow B$

Ein Graph besitzt mind. ~~Die~~ kantendisjunkte Pfade zwischen s und t $\Leftrightarrow \forall e \in E(G)$: Es existiert ein Pfad von s nach t $P_2 \subseteq G = (V, E \setminus \{e\})$.

$\Rightarrow$

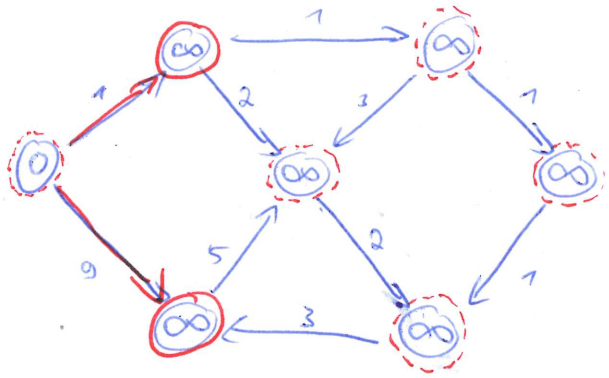
$\Leftarrow$

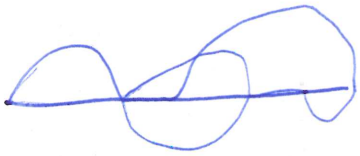


1. Bellman-Ford n-mal durchlaufen
2. Wenn es im n-ten Schritt keine Veränderung gab: Fertig
3. Von jedem Knoten aus die Vorgängerknoten zurückverfolgen und sehen, ob wir wieder den Ursprungsknoten erreicht haben.

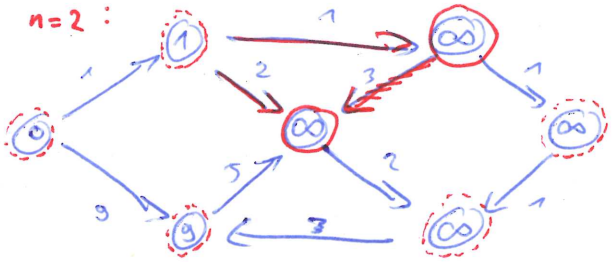
Updated n-1 iterations

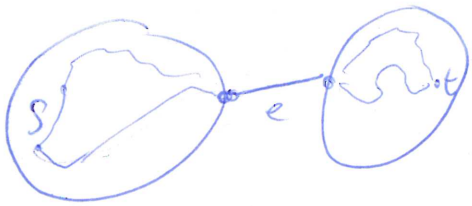
n=0 -> n=1 :



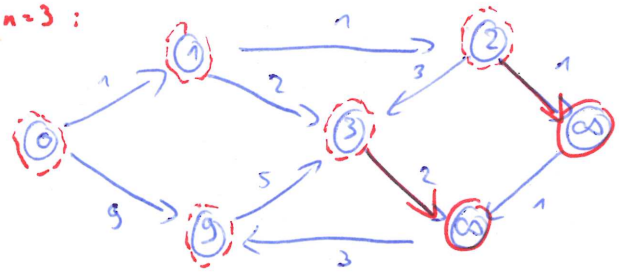


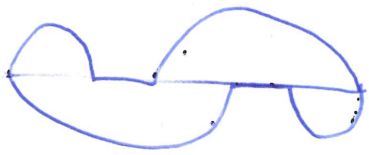
n=1 -> n=2 :



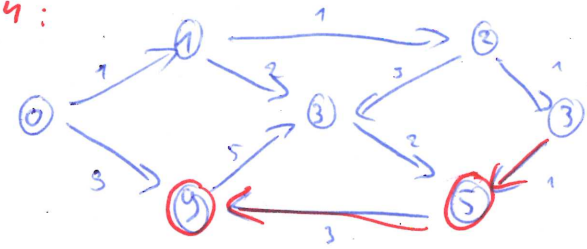


n=2 -> n=3 :

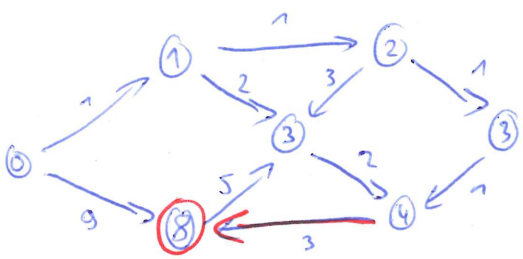




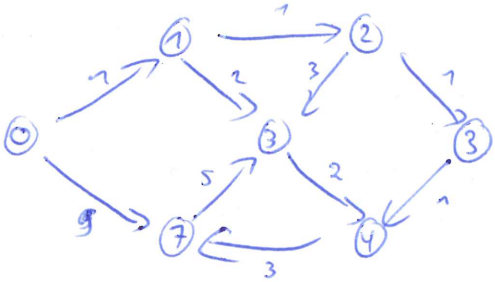
n=3 -> n=4 :

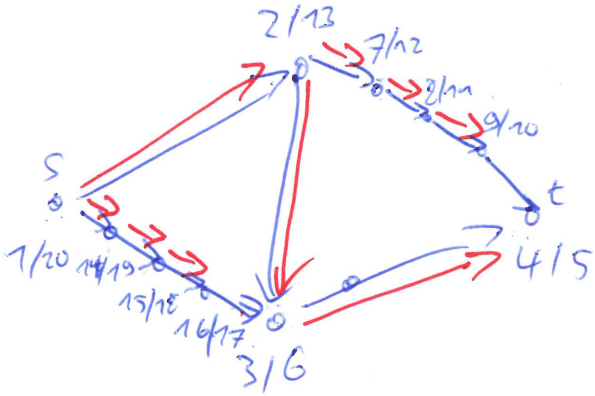


n=4 -> n=5 :



n=5 -> n=6

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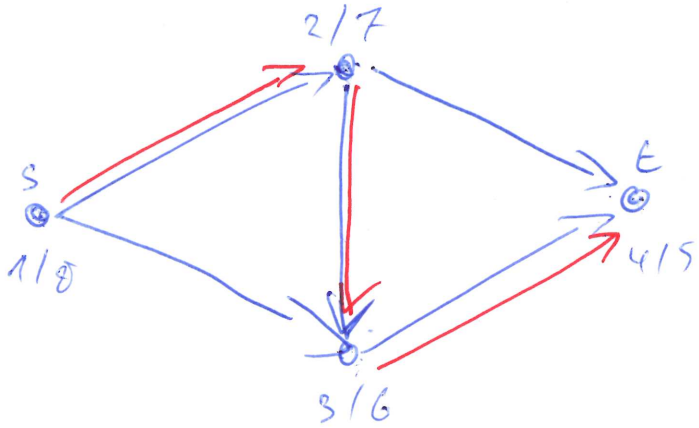
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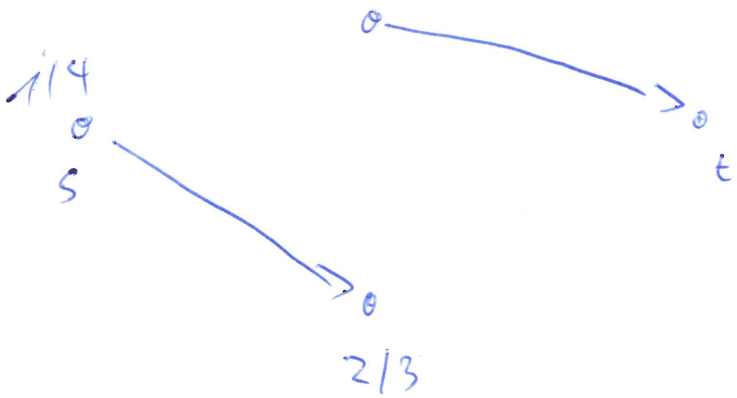
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