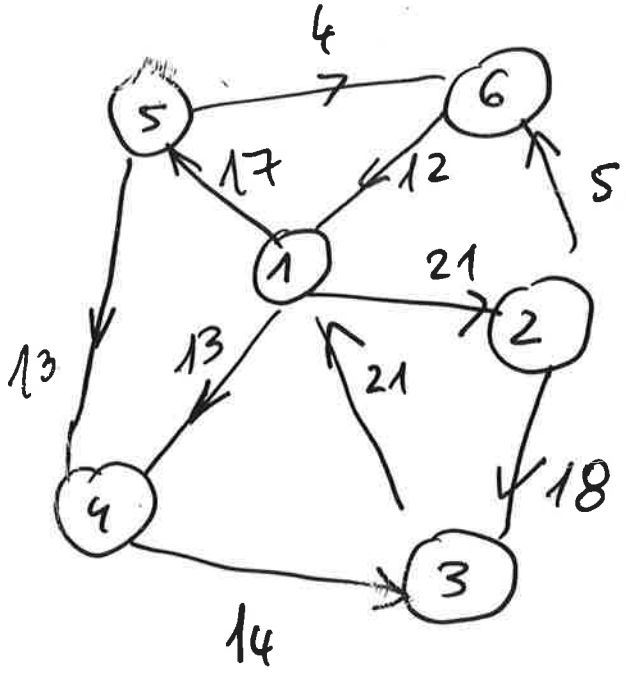
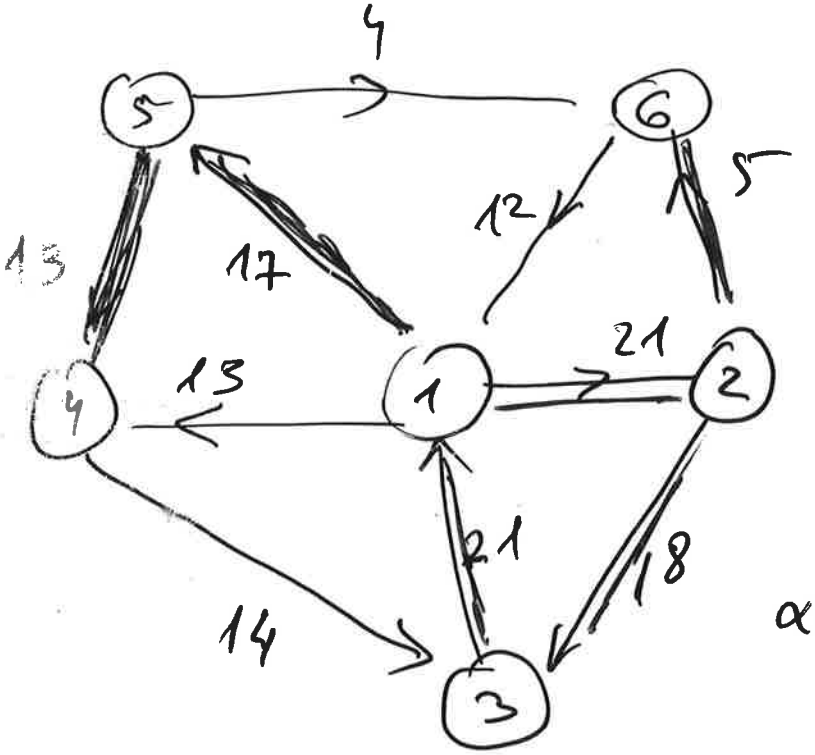
BEISPIEL: EDMONDS BRANCHING ALGORITHMUS



G_0



B_0

$V_C = \{1,2,3\}$

$e' = (6, \{1,2,3\})$

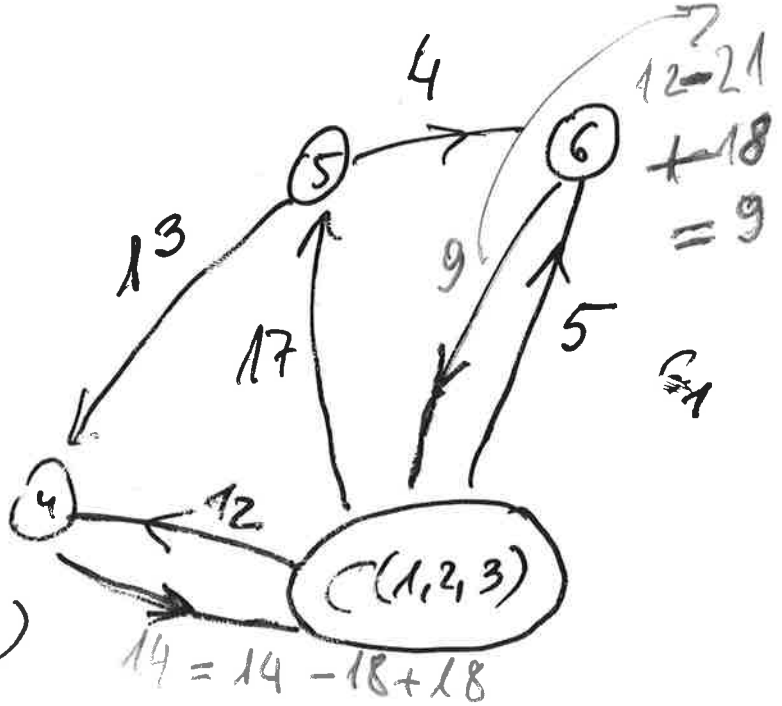
$\alpha((6, c(1,2,3)) = (3,1)$

$\phi((4, c(1,2,3)) = (4,3)$

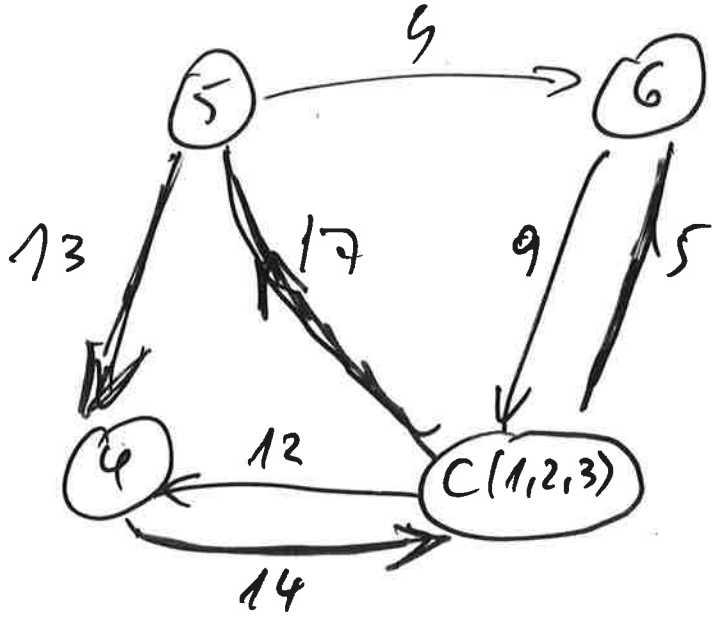
$\phi((6, c(1,2,3)) = (6,1)$

$e_C = (2,3)$

$\alpha(4, c(1,4,3)) = (2,4)$

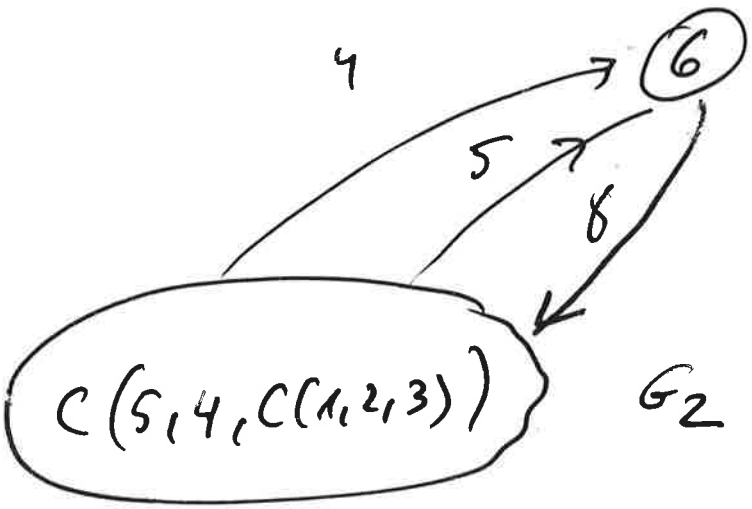


G_1



B_1

$\alpha((6, C(1,2,3)), C(5,4,C(1,2,3)))$
$= (4, C(1,2,3))$

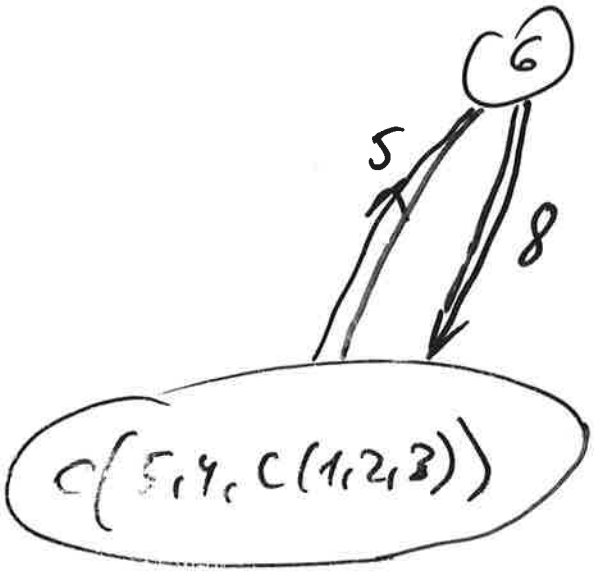


G_2

$\phi((6, C(5,4,C(1,2,3))))$
$= (6, C(1,2,3))$

$c_{C(5,4,C(1,2,3))} = (5,4)$

$c_2(6, C(C(1,2,3),(5,4))) =$
$9 \cdot 14 + 13 = 8$

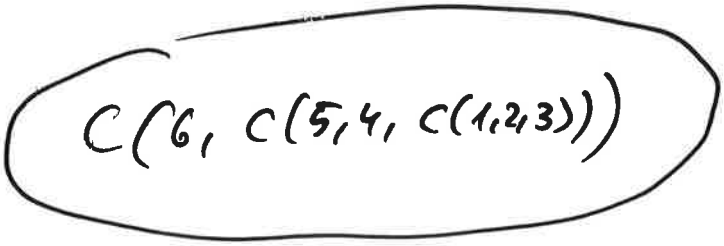


B_2

G_3 , B_3

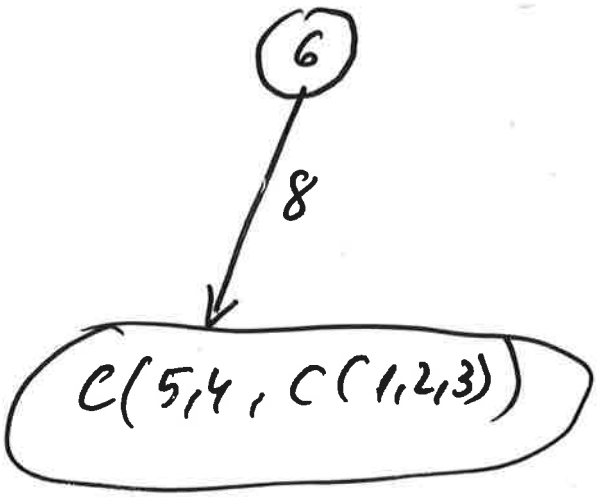
$i = 3$

$B_3 = \emptyset$ (kreisfrei) cycle free

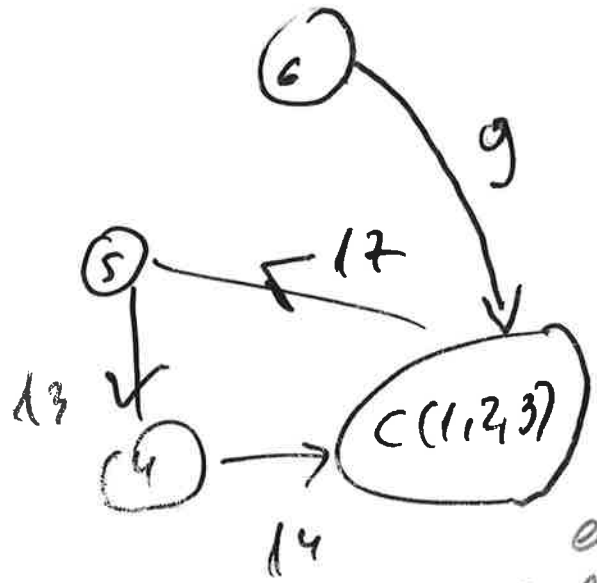


Expanding: Suche kreise in B_2 (search for cycles in B_2)

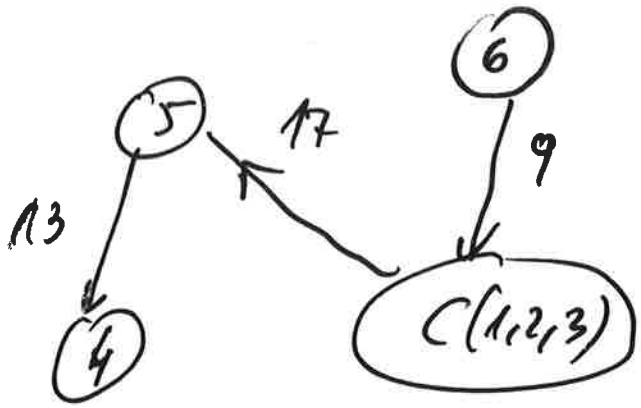
Entferne Billigste kante (remove the cheapest edge)



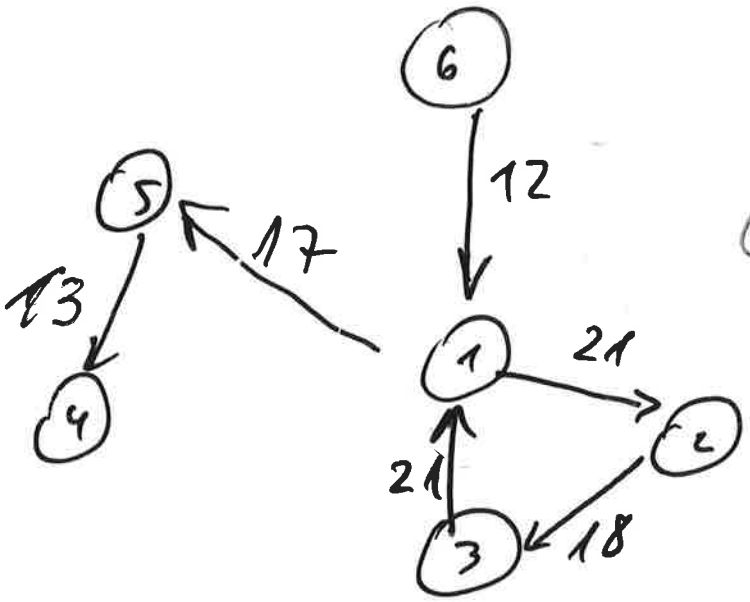
Suche kreise in B_1: (search for cycles in B_1)



remove edge (4, C(1,2,3)) (because there is another edge going into the cycle in vertex C(1,2,3))



Suche Kreise in B_0 (search for cycles in B_0)



Remove edge (3,1)
(because there is another edge going into the cycle at 1)

Optimales Branching
optimal branching!