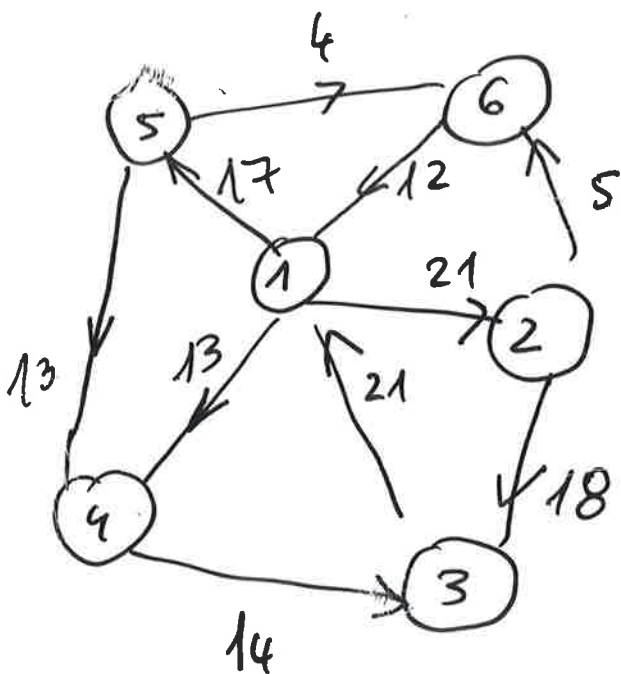


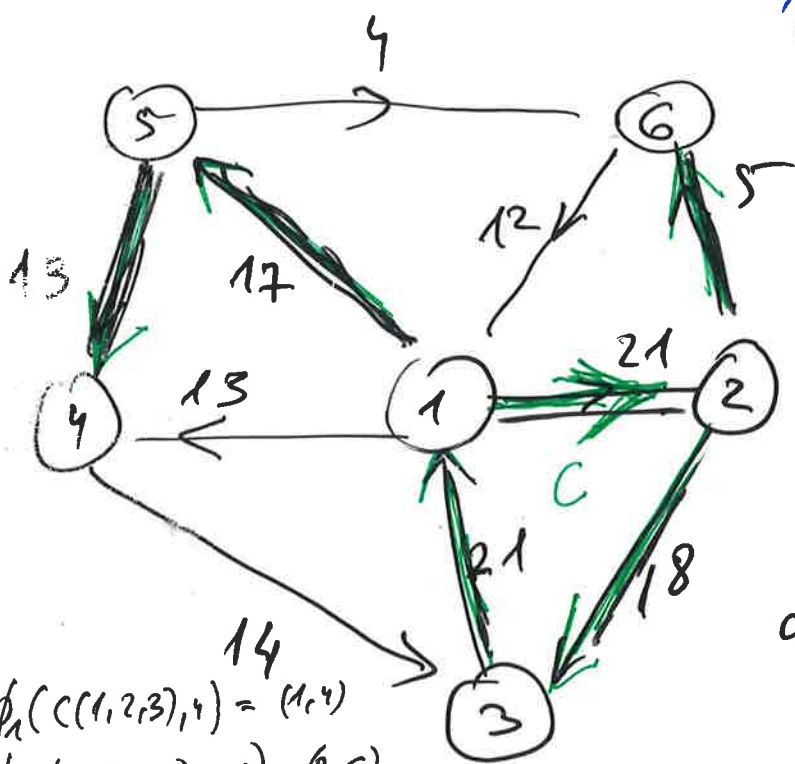
BEISPIEL: EDMONDS BRANCHING ALGORITHMUS ①



G_0

Schritte 2-4.

1. Iteration



$B_0 \quad V_C = \{1, 2, 3\}$
 $e' = (6, \{1, 2, 3\})$

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

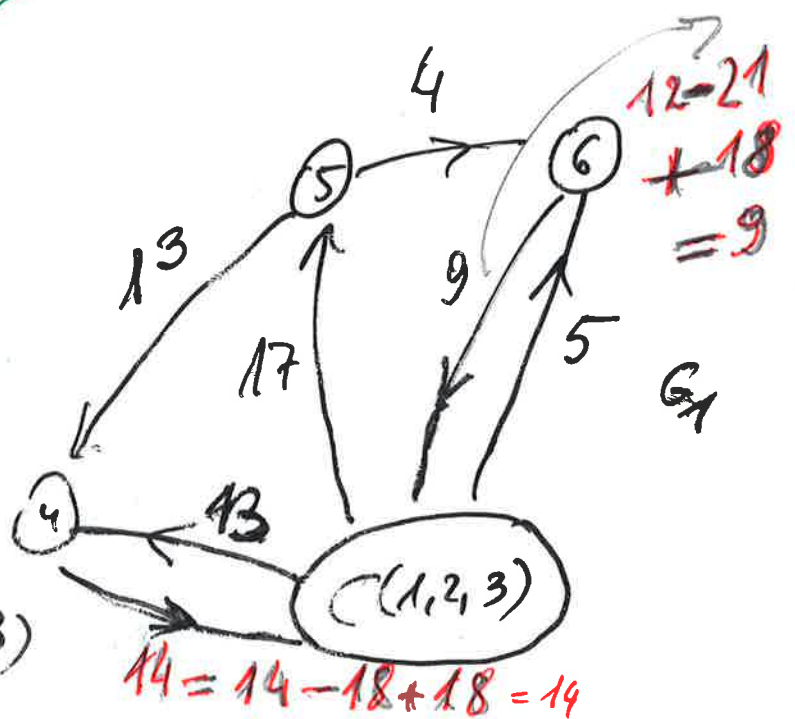
Gewichte
bleiben
unverändert

$\phi_1(C(1,2,3), 4) = (1, 4)$
 $\phi_1(C(1,2,3), 6) = (2, 5)$
 $\phi_1(C(1,2,3), 5) = (1, 5)$
 $\phi_1(4, C(1,2,3)) = (4, 3)$
 $\phi_1(6, C(1,2,3)) = (6, 1)$

Gewichte
in dem
Sich

$e_C = (2, 3)$

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

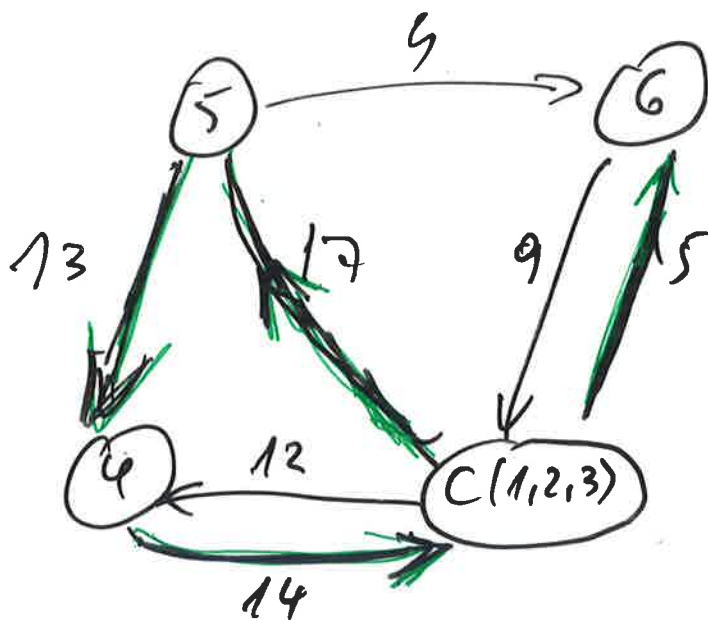


G_1

$14 = 14 - 18 + 18 = 14$

2. Iteration

(2)

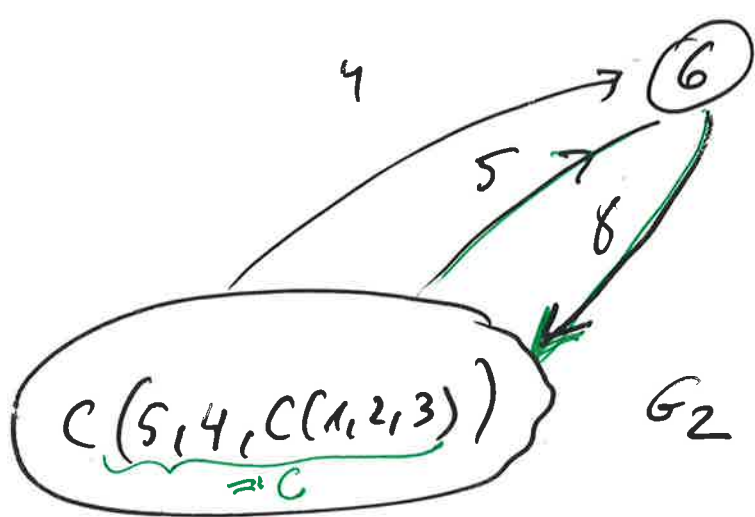


Gewicht verändert nicht
 $\phi_2(6, C) = (6, C(1,2,3))$

Gewicht unverändert
 $\phi_2(5, 6) = (5, 6)$

 B_1

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

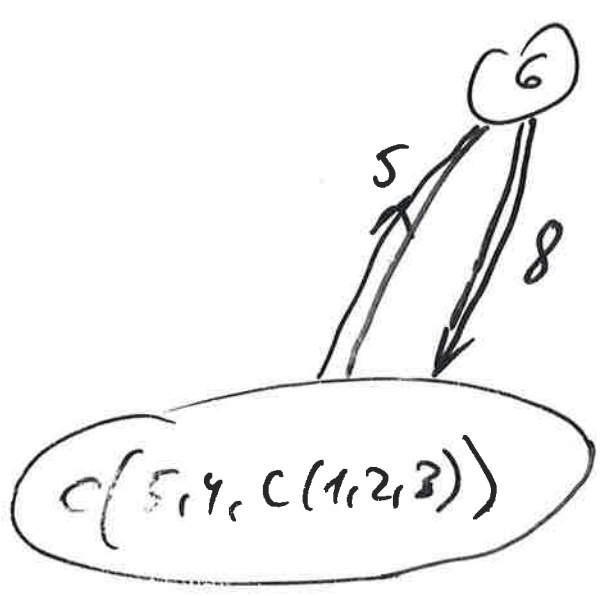


$$\phi((6, C(5,4, C(1,2,3)))) = (6, C(1,2,3))$$

$$C(5,4, C(1,2,3)) = (5,4)$$

$$f_2(6, C(C(1,2,3), 5,4)) = 9 - 14 + 13 = 8$$

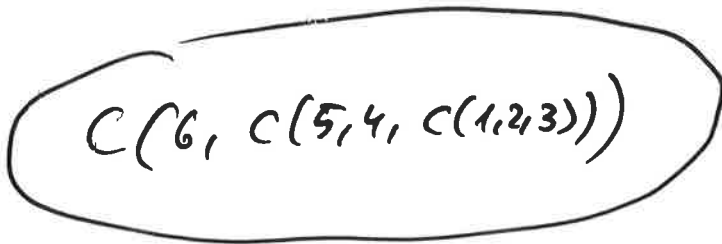
3. Iteration



B_2

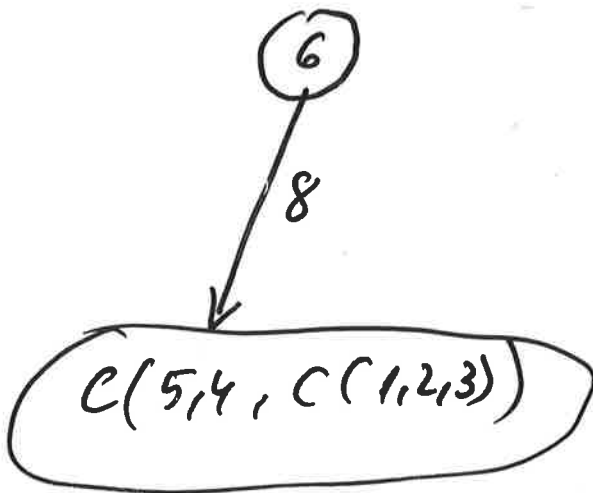
G_3, B_3

$i=3$
 $B_3 = \emptyset$
(kreisfrei)
cycle free

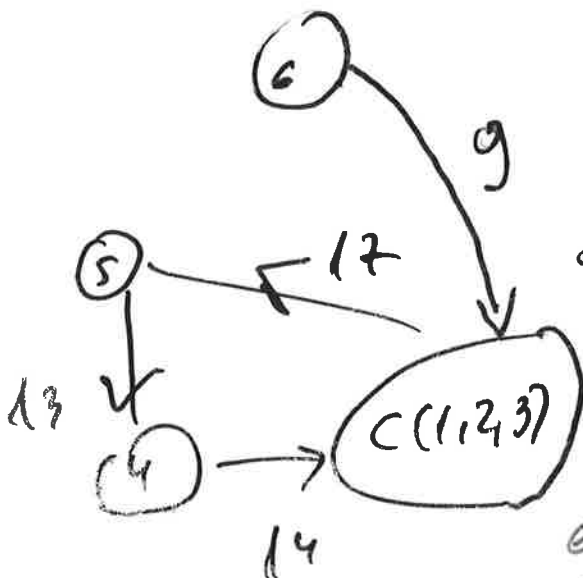


Schritt 5: • Suche kreise in B_2 (search for cycles in B_2)

Entferne billigste kante (remove the cheapest edge)



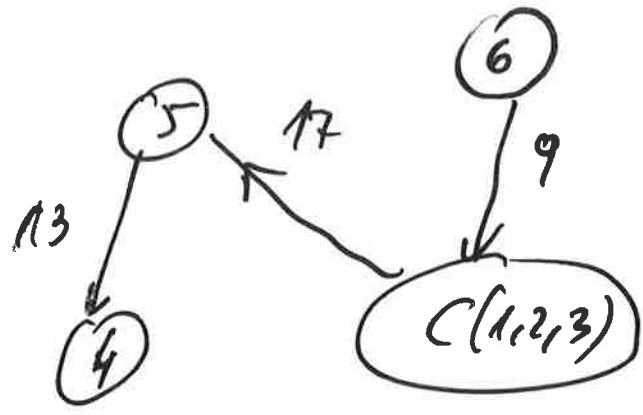
• Suche kreise in B_1 : (search for cycles in B_1)



entferne kante (4, C(1,2,3))
da es eine andere in C(1,2,3) einmündende kante gibt
Remove edge

(4, C(1,2,3))

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

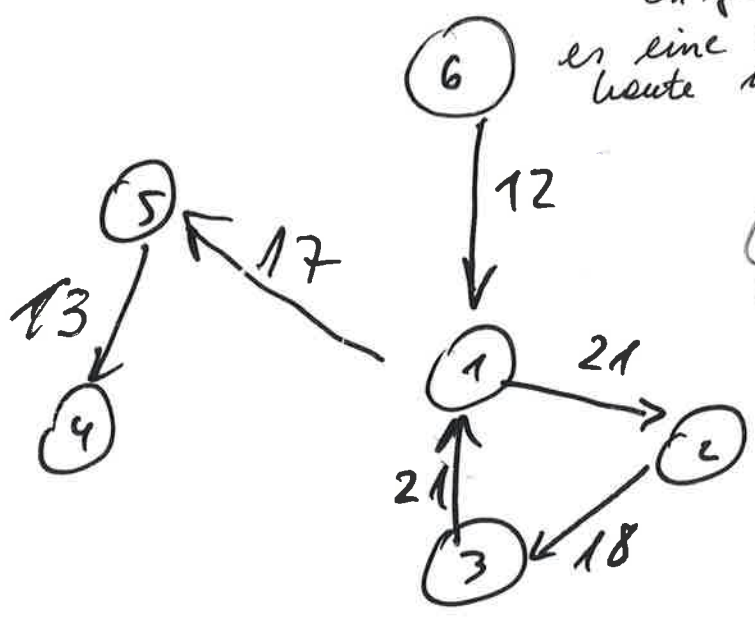


• Suche kreise in B_0 (search for cycles in B_0)

Entferne kante (3,1), da es eine andere in 1 einmündende kante im kreis gibt

Remove edge (3,1)

(because there is another edge pointing into the cycle at 1)



Optimales Branching
optimal branching!

