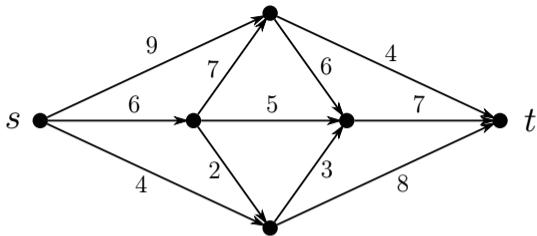


(G, s, t, c)

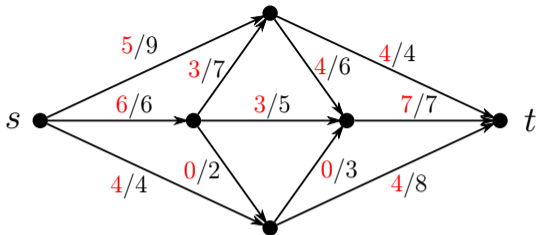


Feladat. Adjunk meg egy maximális értékű folyamot a fenti hálózatban!

(G, s, t, c)

f folyam

$\acute{e}(f) = 15$



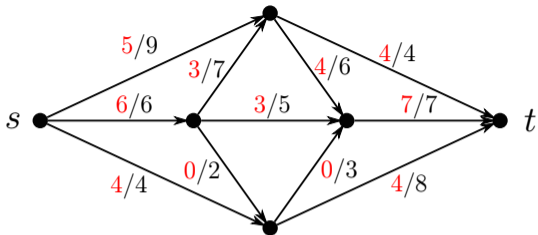
Feladat. Adjunk meg egy maximális értékű folyamot a fenti hálózatban!

Megoldás. A Ford–Fulkerson-algoritmus kiindulópontja egy tetszőleges megengedett folyam. A gyakorlatban ez mindig lehet az azonosan 0 folyam, mi azonban a szükséges lépések számának csökkentése érdekében egy kevésbé triviális folyamból indulunk ki ebben a szemléltető példában.

(G, s, t, c)

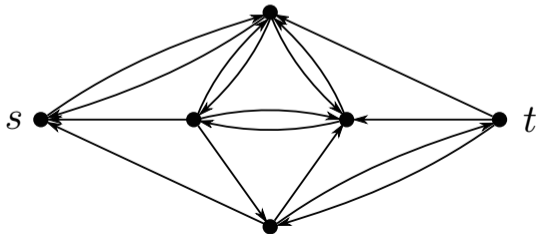
f folyam

$\acute{e}(f) = 15$



Javító út keresés

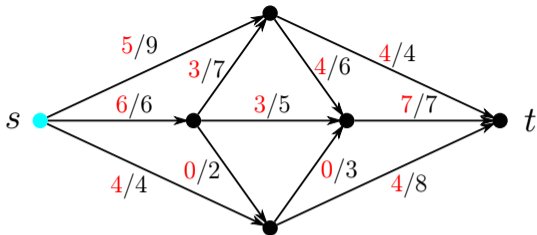
G_f



(G, s, t, c)

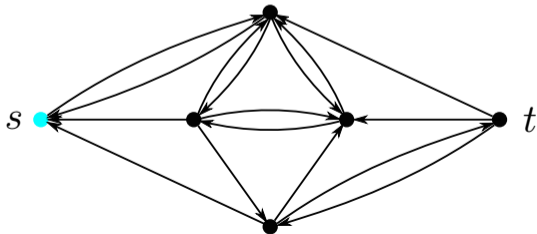
f folyam

$\acute{e}(f) = 15$



Javító út keresés

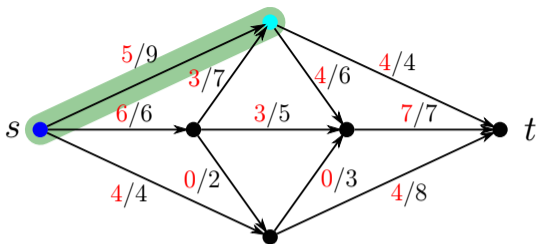
G_f



(G, s, t, c)

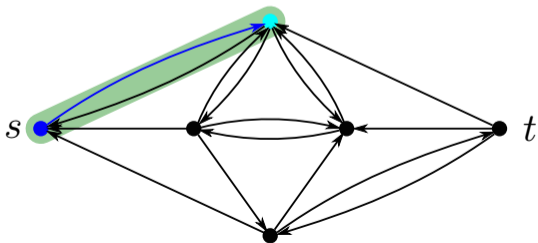
f folyam

$\hat{e}(f) = 15$



Javító út keresés

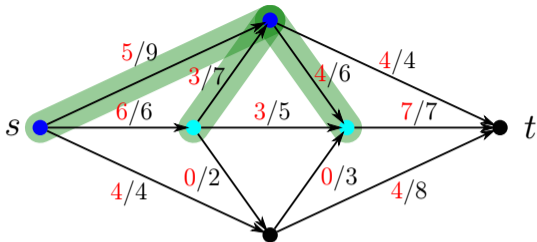
G_f



(G, s, t, c)

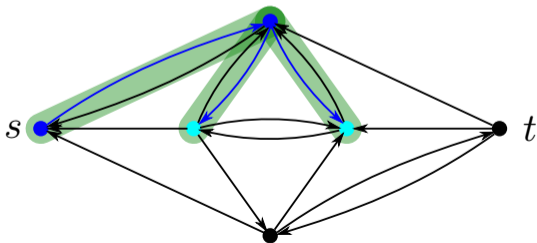
f folyam

$\acute{e}(f) = 15$



Javító út keresés

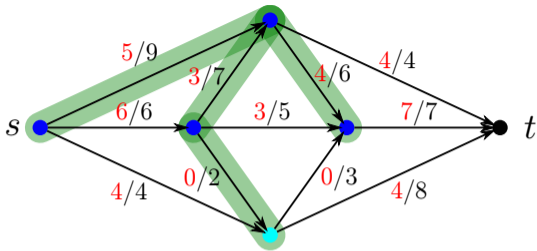
G_f



(G, s, t, c)

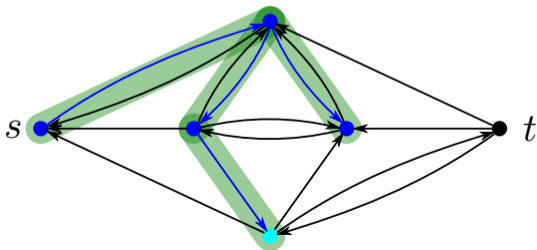
f folyam

$\acute{e}(f) = 15$



Javító út keresés

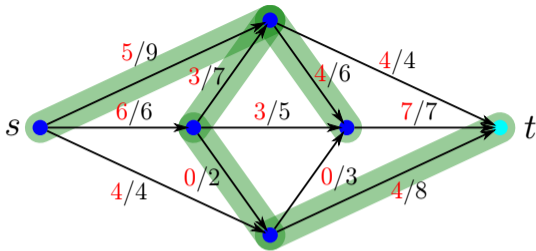
G_f



(G, s, t, c)

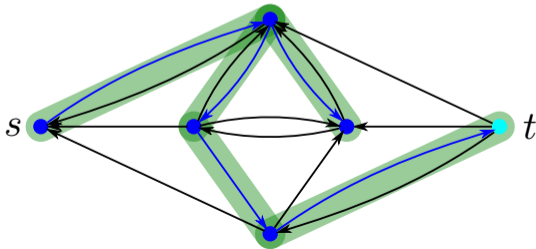
f folyam

$\hat{e}(f) = 15$



Javító út keresés

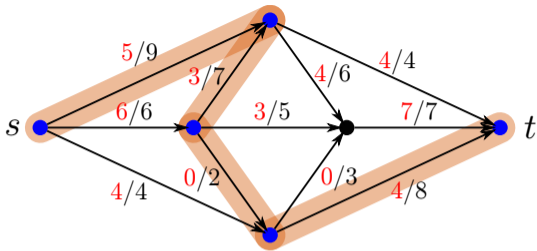
G_f



(G, s, t, c)

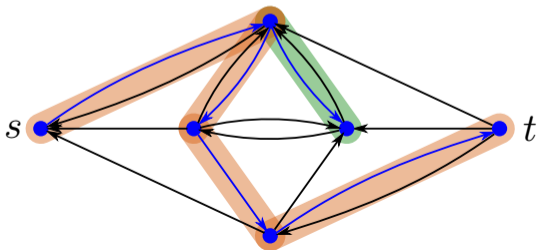
f folyam

$\hat{e}(f) = 15$



Javító utat találtunk.

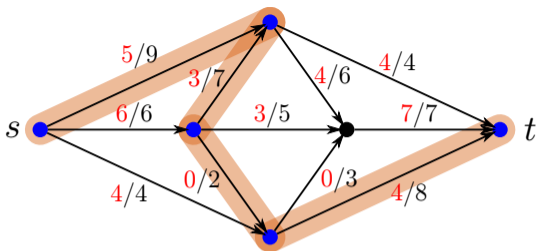
G_f



(G, s, t, c)

f folyam

$\acute{e}(f) = 15$



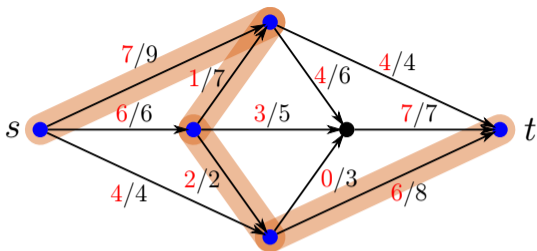
Javítás: $\delta = \min\{4, 3, 2, 4\} = 2$

G_f

(G, s, t, c)

f folyam

$\hat{e}(f) = 17$



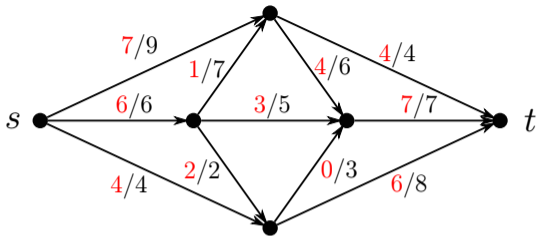
Javítás: $\delta = \min\{4, 3, 2, 4\} = 2$

G_f

(G, s, t, c)

f folyam

$\hat{e}(f) = 17$

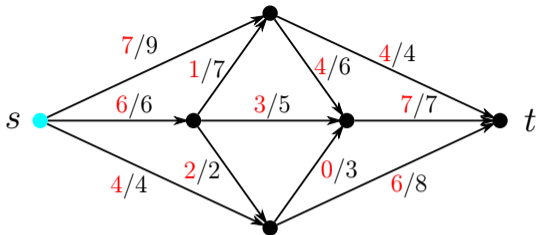


G_f

(G, s, t, c)

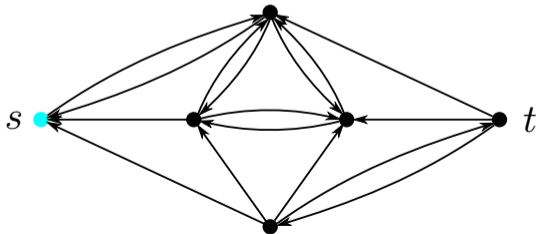
f folyam

$\hat{e}(f) = 17$



Javító út keresés

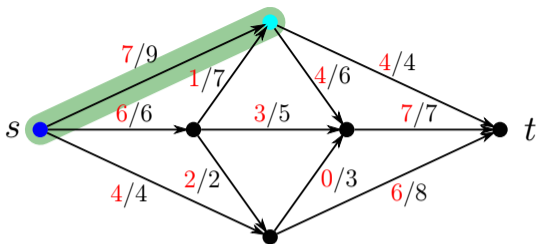
G_f



(G, s, t, c)

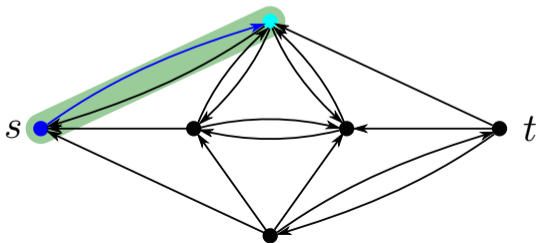
f folyam

$\hat{e}(f) = 17$



Javító út keresés

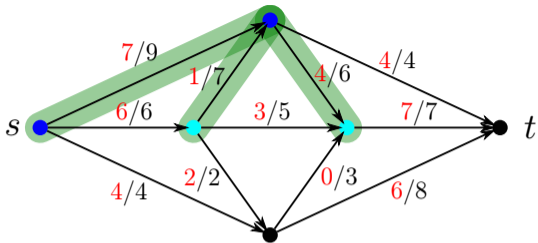
G_f



(G, s, t, c)

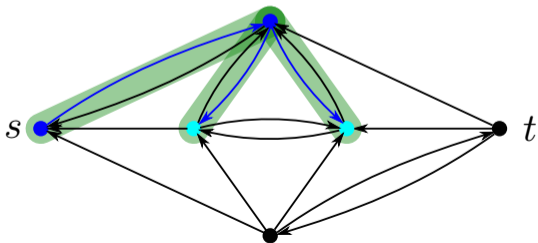
f folyam

$\acute{e}(f) = 17$



Javító út keresés

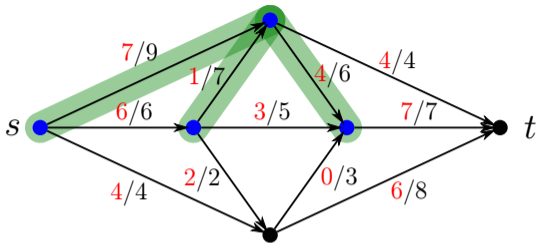
G_f



(G, s, t, c)

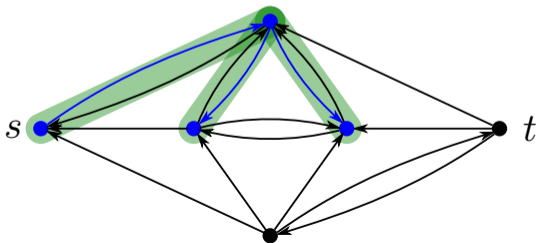
f folyam

$\hat{e}(f) = 17$



Nincs javító út, STOP.

G_f

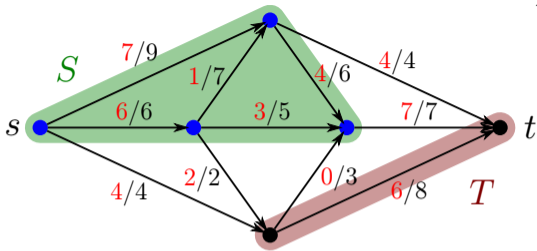


(G, s, t, c)

f folyam

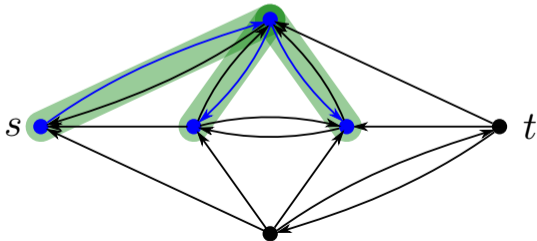
$\acute{e}(f) = 17$

$\mathcal{V} = \{S, T\}$



A javítóút-kezdemenyek végpontjai kijelölik a maximalitást bizonyító vágást.

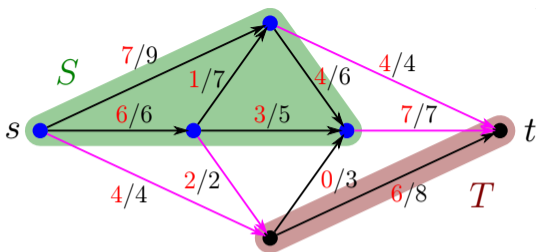
G_f



(G, s, t, c)

f folyam

$\acute{e}(f) = 17$



$\mathcal{V} = \{S, T\}$

A javítóút-kezdemények végpontjai kijelölik a maximalitást bizonyító vágást.
(Ez a \mathcal{V} vágás a hálózat egy minimális vágása lesz.)

$$\max_{f \text{ folyam}} \acute{e}(f) \leq c(\mathcal{V}) = 4 + 2 + 7 + 4 = 17 = \acute{e}(f).$$



f maximális értékű folyam, a maximális folyamérték 17.