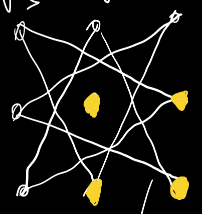
DS2V FMF 2024-04-25

N_3 (graf kuga)



$\gamma G = 4$

$\gamma_t N_3$ nidefinirano

cikel C_8 ... $\left\lceil \frac{8}{3} \right\rceil = 3$

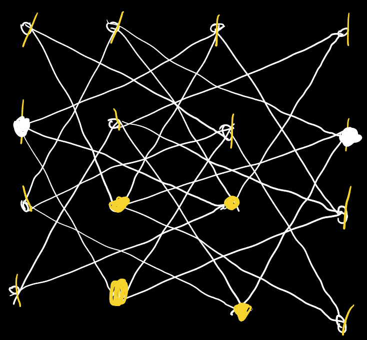
$$\frac{9}{2+1} \leq \gamma G \leq \frac{9}{2}$$

$$3 \leq \gamma G \leq 4,5$$

splošno G:

$$\frac{|V_G|}{\Delta_G + 1} \leq \gamma G \leq \frac{|V_G|}{2}$$

N_4:



$$\gamma(N_4) = \left\lceil \frac{16}{4+1} \right\rceil = 4$$

✓

- extension do γ_t
- dominacija in neodvisna dominacija

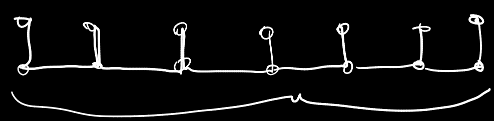
dn: a je možno $\gamma_t N_4 = 5$?

N

n vozlišč, povezan graf.

a.) $\gamma G = 1$

$\gamma G = \frac{n}{2}$



$\frac{n}{2}$

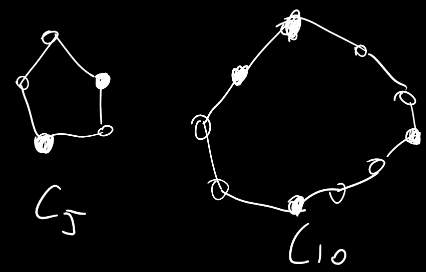
ali pa poti: $\left\lceil \frac{n}{3} \right\rceil = \frac{n}{2}$

N

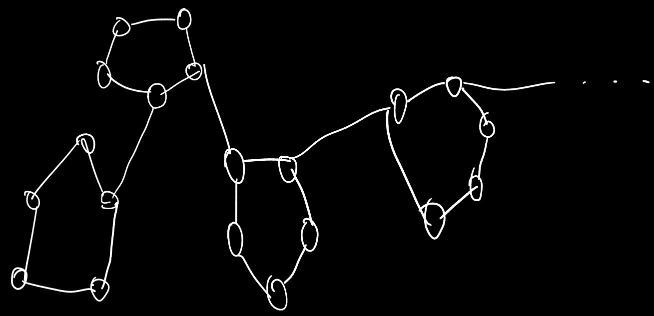
najdi: n vozlišč, povezan

$\delta = 2$

$\gamma = \frac{2n}{5}$



let G_k k-krat C_5, povezan z mostom:

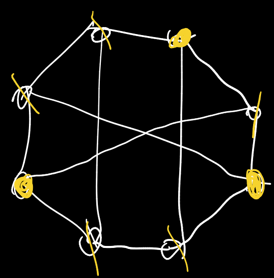


N

n vozlišči povezan

c.) $\delta G = 3$ let $n = 8$ $\gamma = 3$

$\gamma G = \frac{3n}{8}$



N

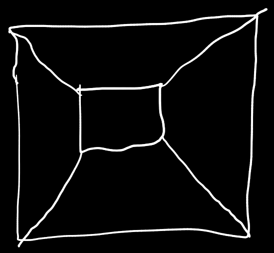
let G graf, diam $G = 2$ → najdaljša razdalja

$\gamma G \le \delta G$

...

N

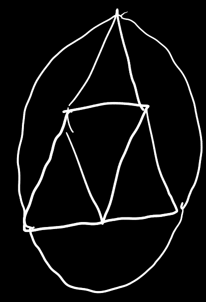
Q_3 :



$\gamma G \le \alpha G$

$\alpha G \, \chi G \ge |V G|$

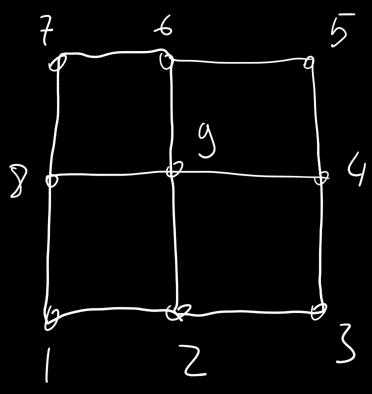
...



N

zero force

$P_3 \square P_3$



imamo 1 operacijo:

- vozlišču in njegovim sosedom zamenjamo barvo.

imamo 2 barvi.

najti zaporedje vozlišč, da prebarvamo graf iz bele na črno

(1, 3, 5, 7, 9)

N

✓ ✓ ✓

N

Dominacijske igre: D, S dva igralca

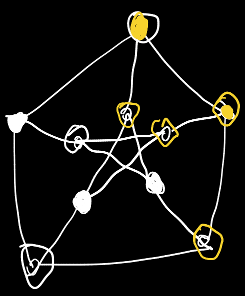
↓ dominator

↳ zavlačevalka

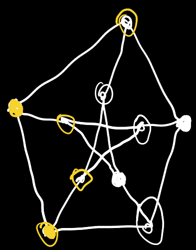
vsaka poteza: vsaj eno novo vozlišče dominirano

konec igre, ko je izbrana dominantna množica.

začne D: γ_g game domination number: najmanjše število potez, če oba igralca igrata optimalno začne S: γ'_g

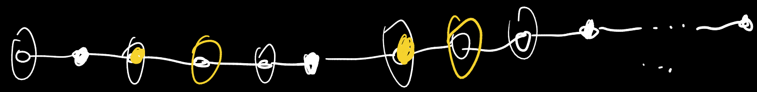


$\gamma_g = 5 = \gamma'_g$

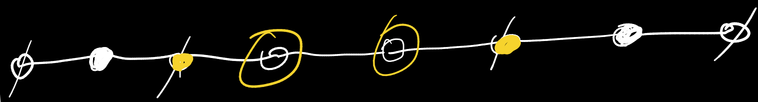


$\gamma'_g = 4$

P_n : $\gamma_g =$



$$\gamma_g P_n = \begin{cases} \lceil \frac{n}{2} \rceil - 1 ; & n \,\%\, 4 = 3 \\ \lceil \frac{n}{2} \rceil & \text{sicer} \end{cases}$$



N

Dokaži, da $\exists$ grafi, tako je $\gamma_{tg} G < \gamma_g G$?

težko. smo nakedili