HIST kostry v kubických grafoch

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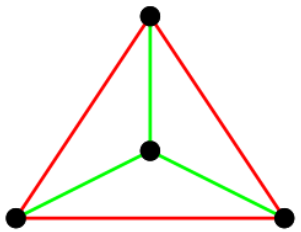
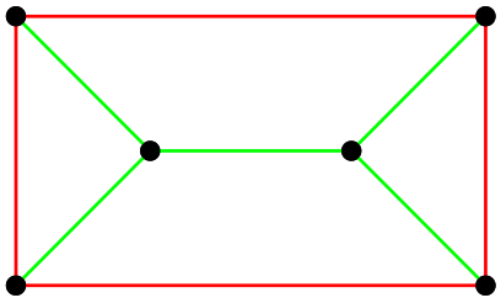
Motivácia

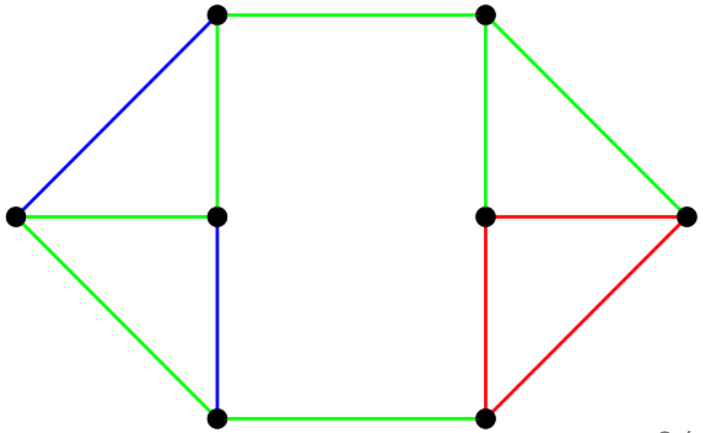
Hoffmann–Ostenhofova hypotéza (2011)

Každý kubický graf je možné rozložiť na tri hranovo disjunktné podgrafy :

- párenie
- množinu kružníc
- kostru



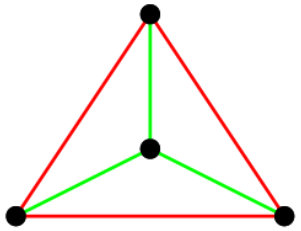


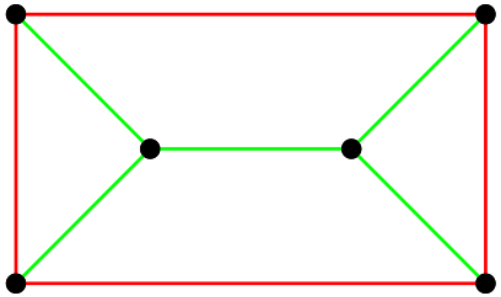


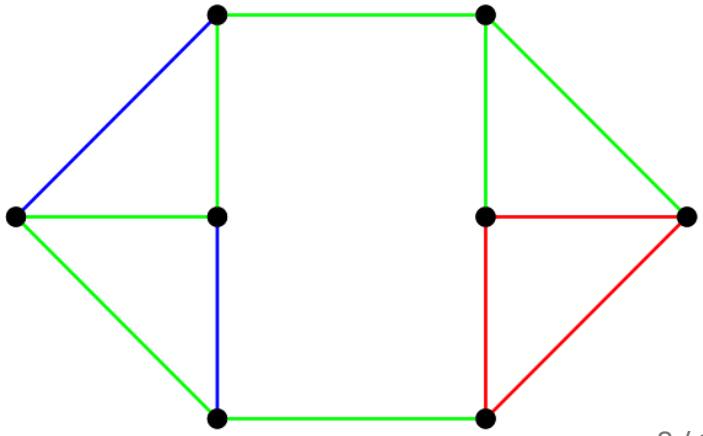
Motivácia

- dokázané triedy grafov
  - kubické grafy s Hamiltonovskou cestou
  - 3-súvislé planárne kubické grafy

- oslabená verzia
  - namiesto párenia -> cesty dĺžky najviac 2

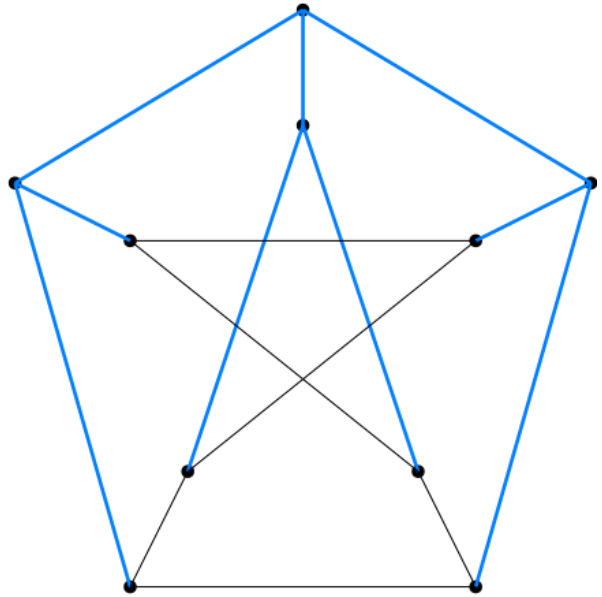


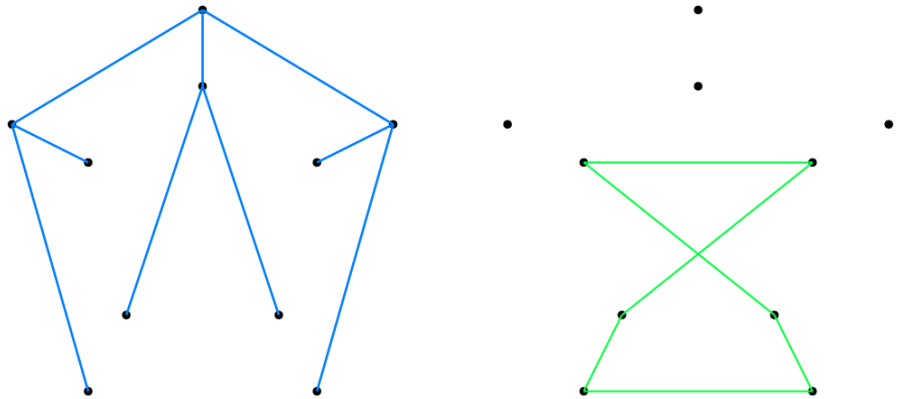




HIST kostry

- Homeomorphically Irreducible Spanning Trees
- vrcholy stupňa 1 alebo 3
- grafy obsahujúce HIST kostru spĺňajú 3-dekompozíciu

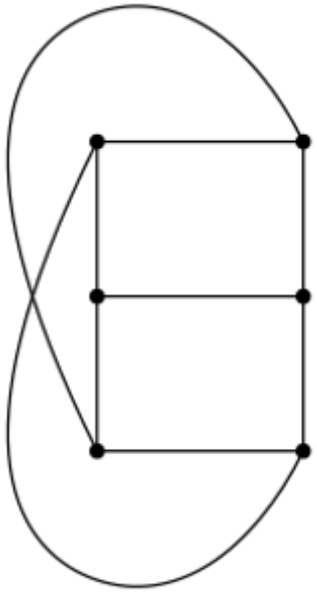




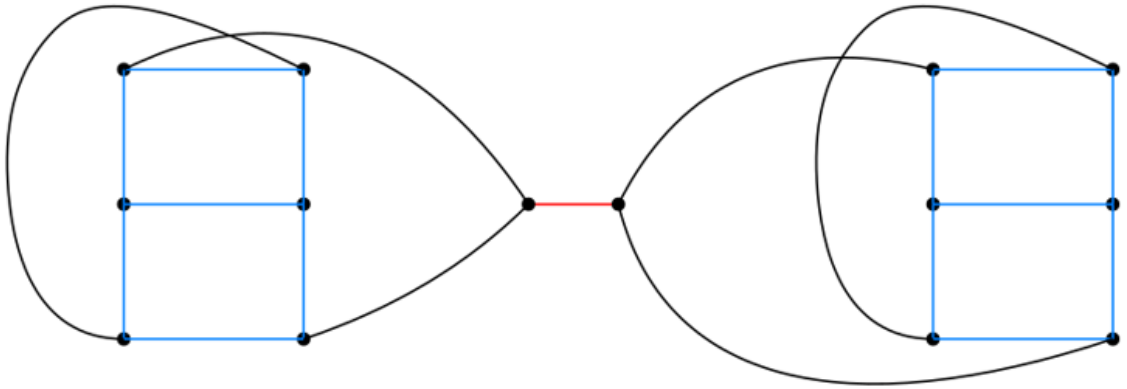
Maximálny počet HIST kostier

- Počítačovo spracované do 26 vrcholov
- Bez trojuholníkov
- 4 “triedy” podľa párnych zvyškových tried modula 8

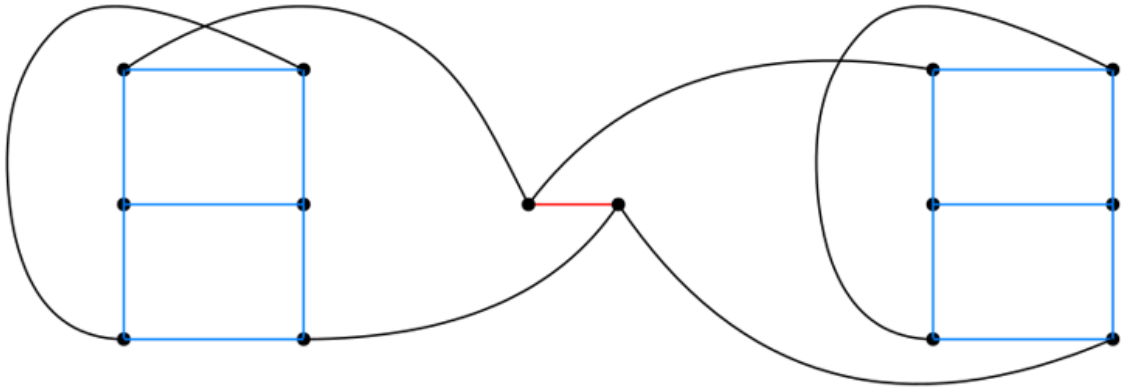
Trieda 6 (mod 8)



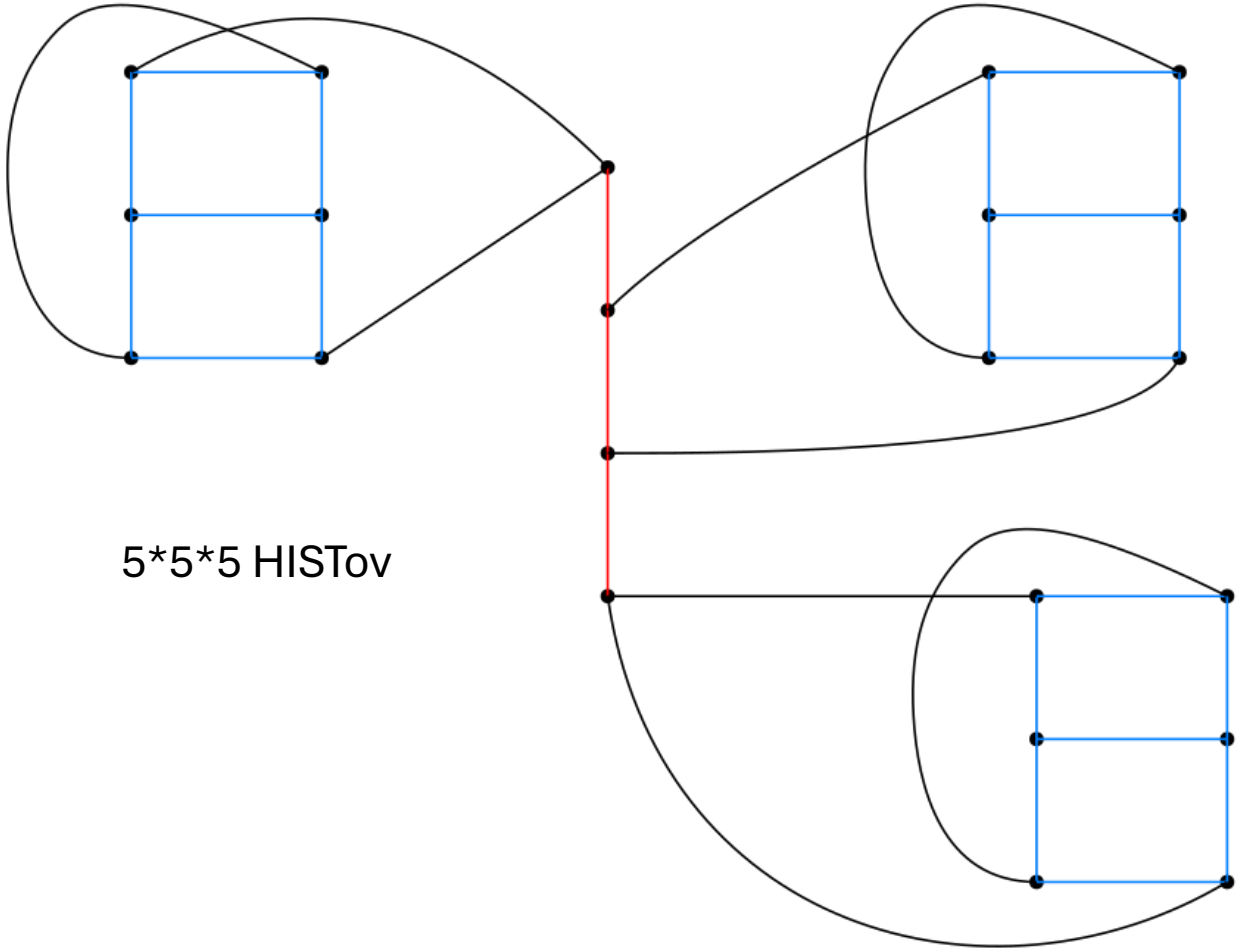
9 HISTov



25 HISTov

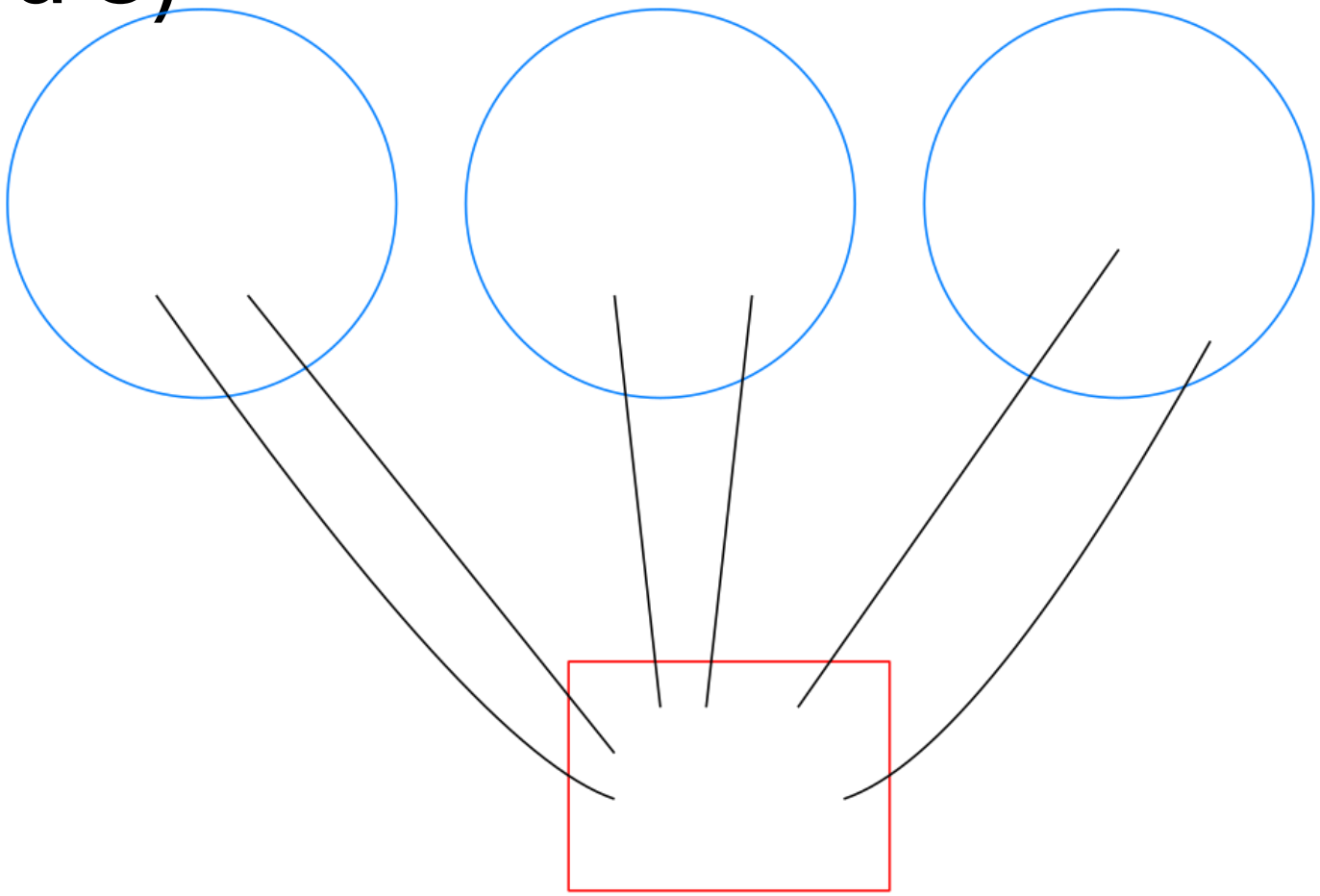


Trieda 6 (mod 8)

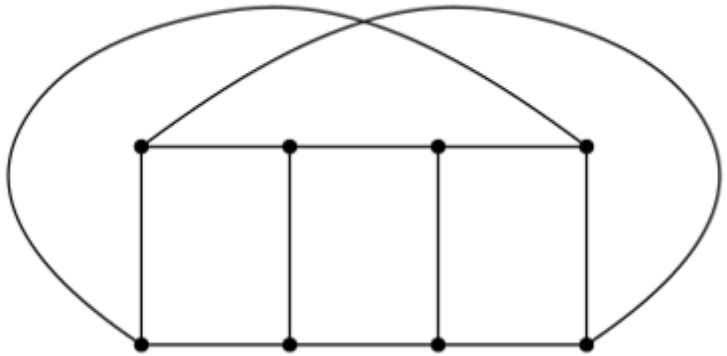


5*5*5 HISTov

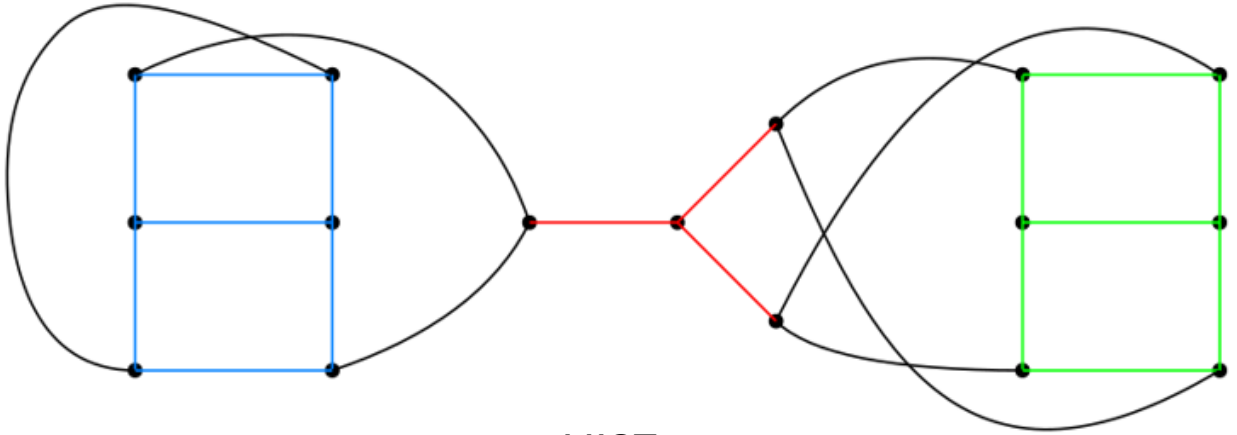
Trieda 6 (mod 8)



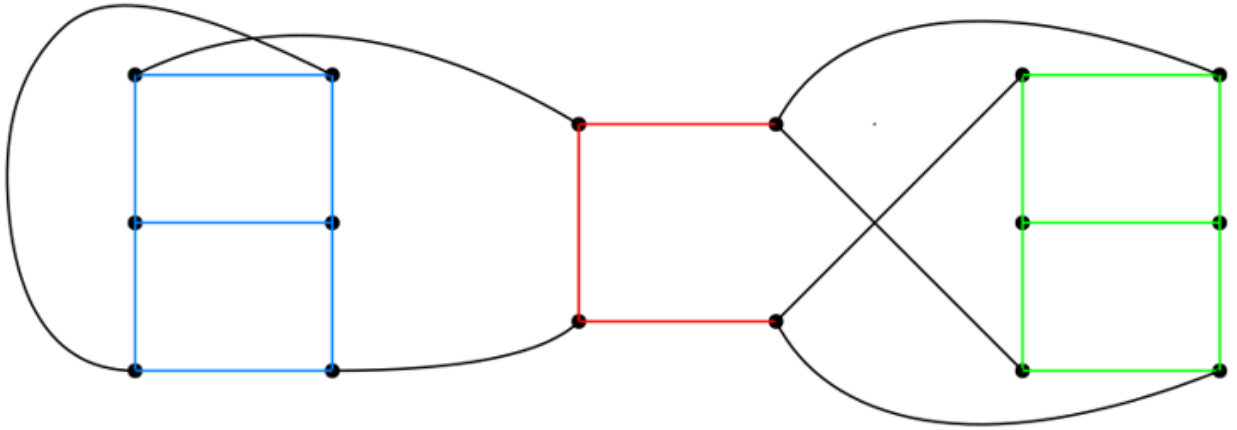
Trieda 0 (mod 8)



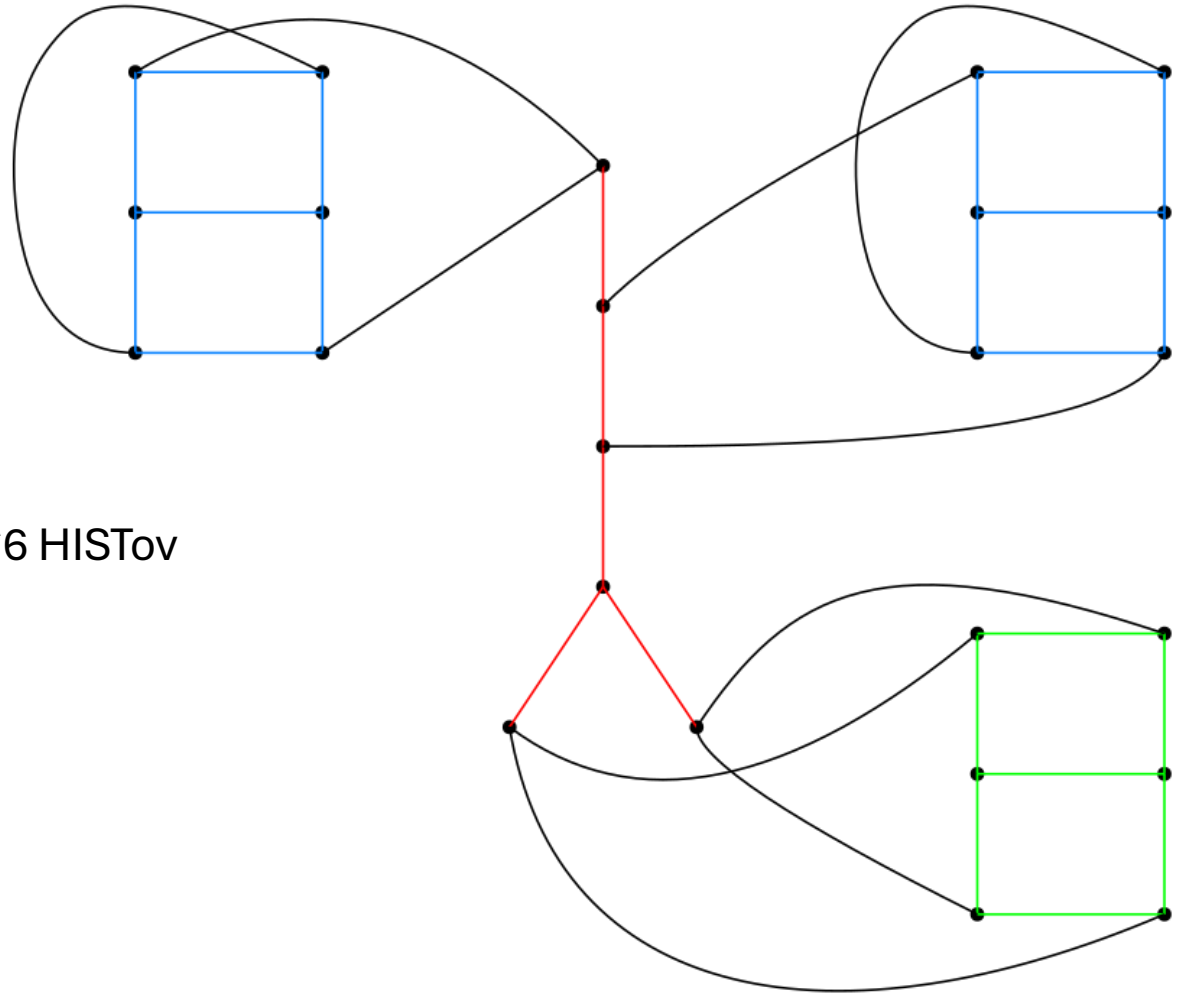
8 HISTov



30 HISTov

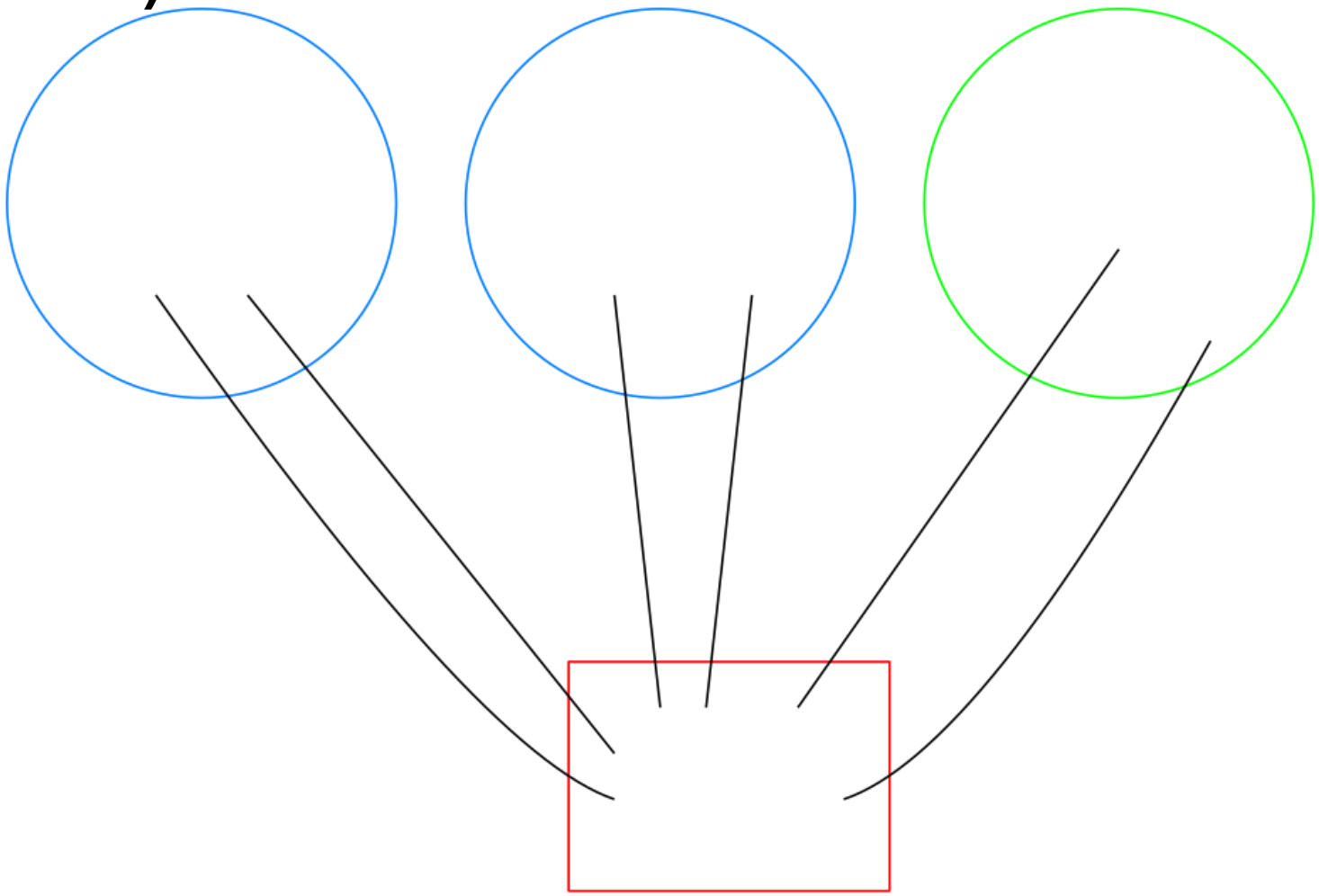


Trieda 0 (mod 8)

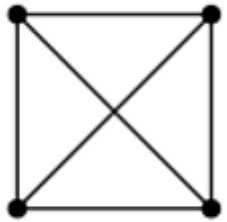


5*5*6 HISTov

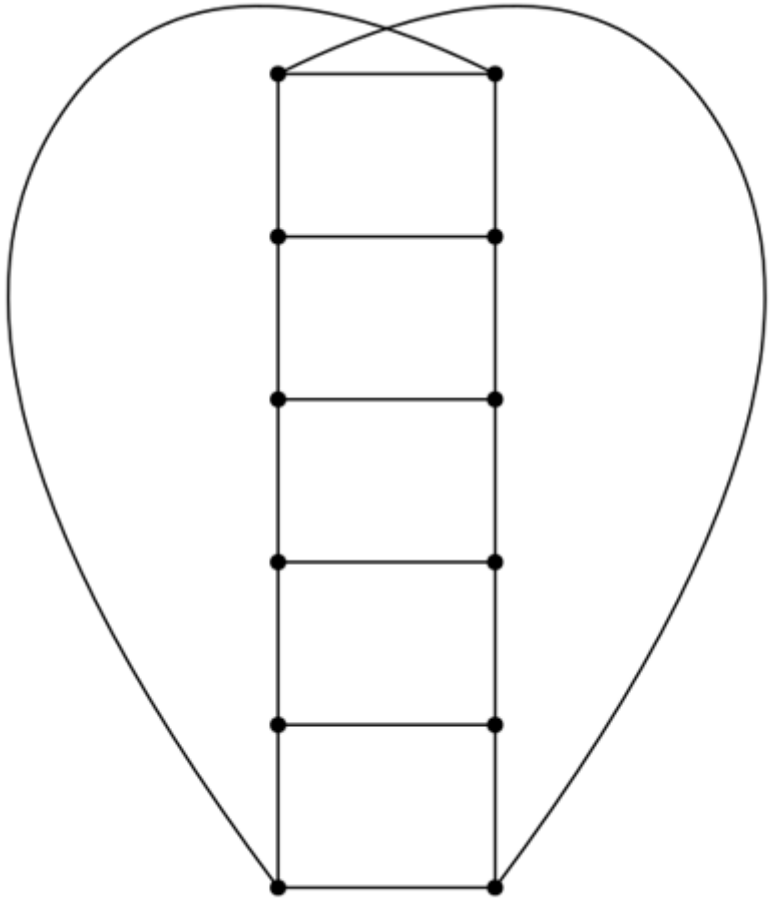
Trieda 0 (mod 8)



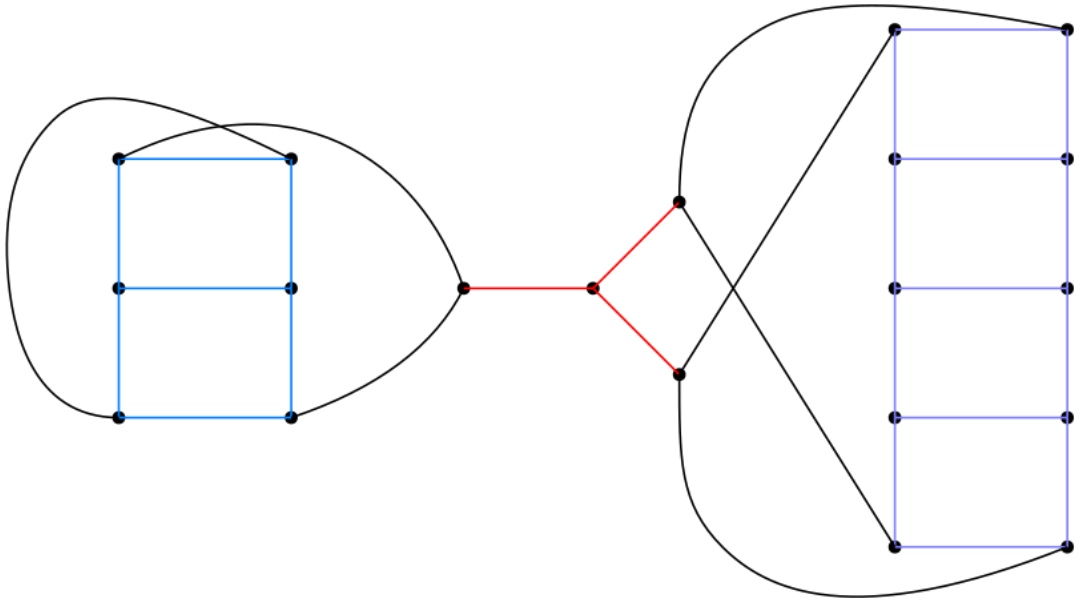
Trieda 4 (mod 8)



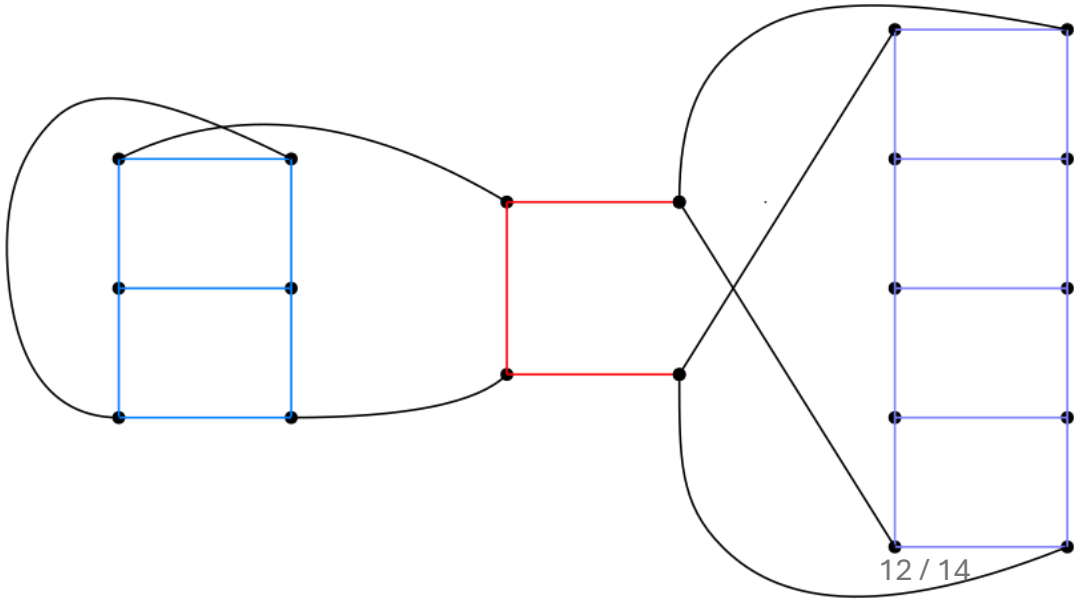
4 HISTy



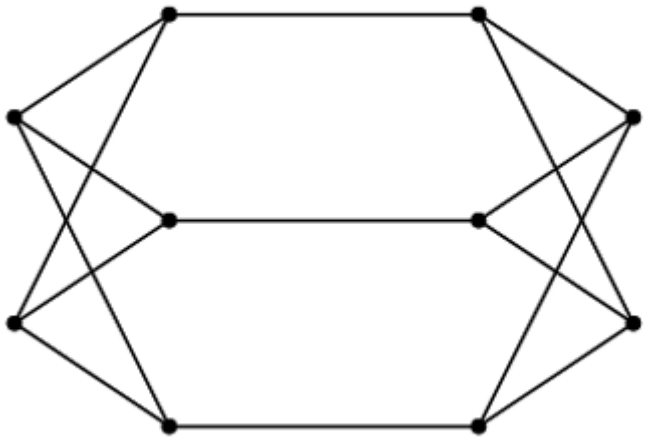
12 HISTov



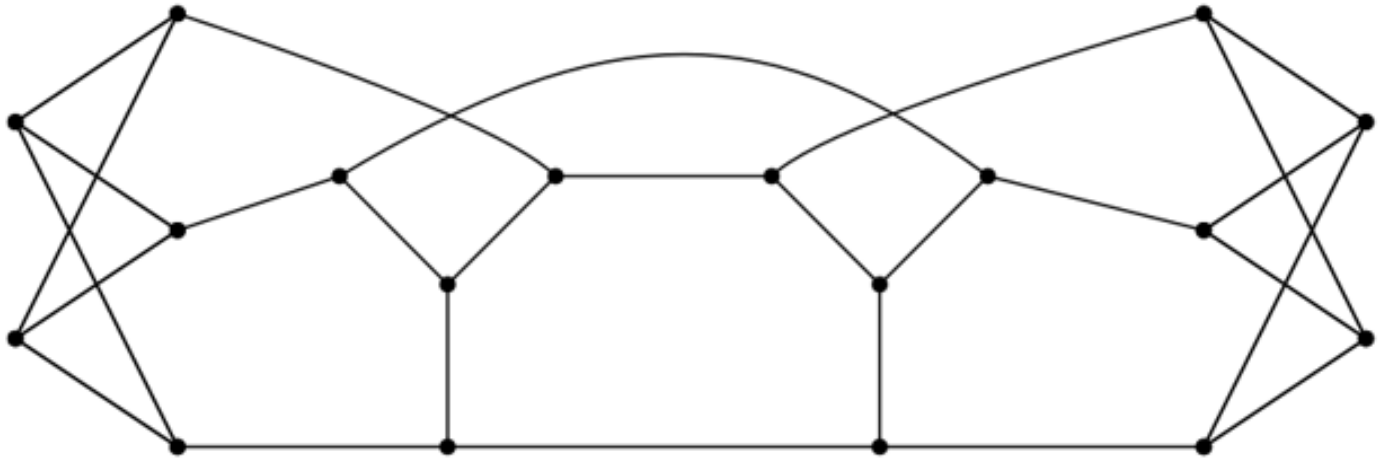
50 HISTov



Trieda 2 (mod 8)

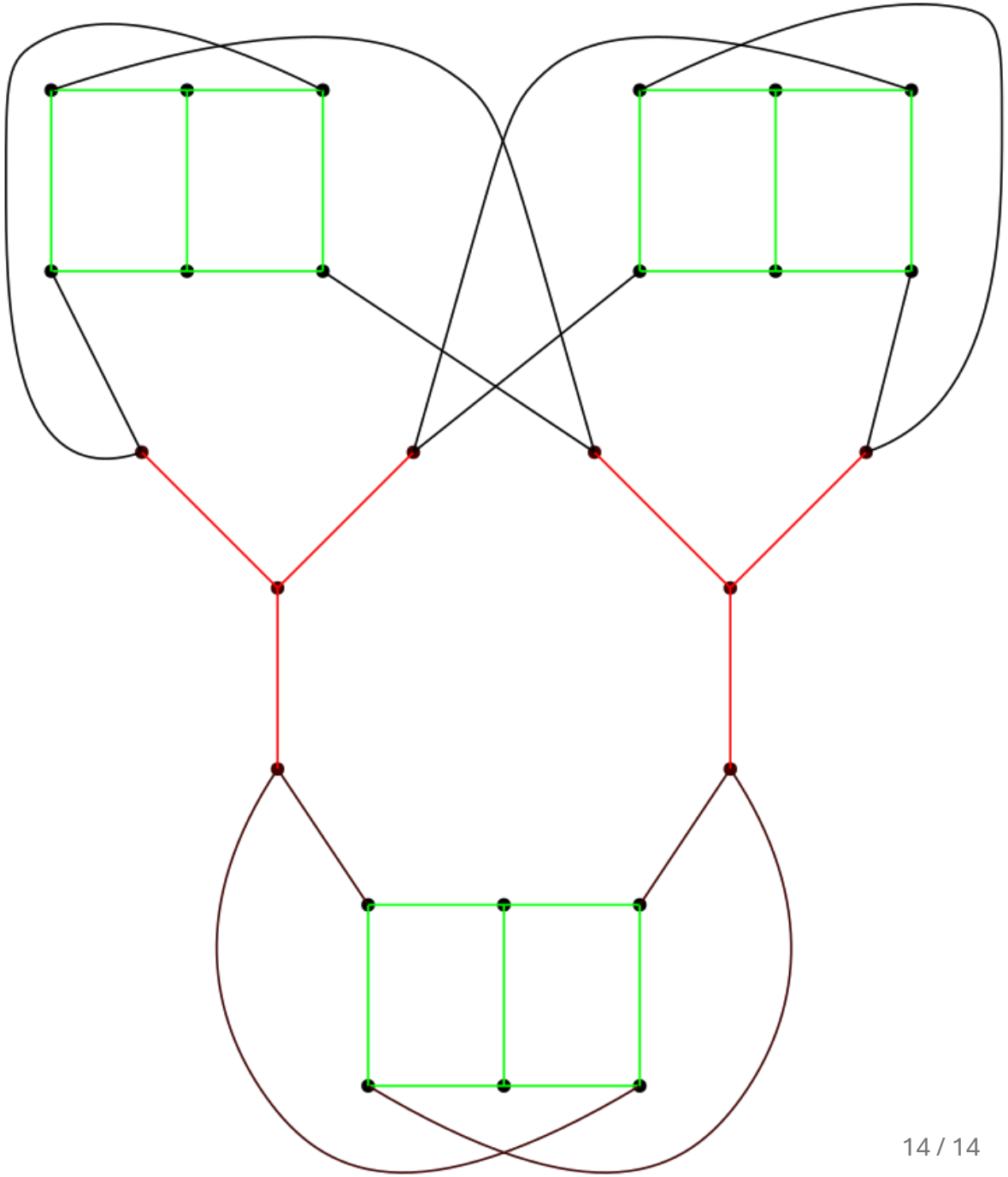


12 HISTov



48 HISTov

Trieda 2 (mod 8)



216 HISTov