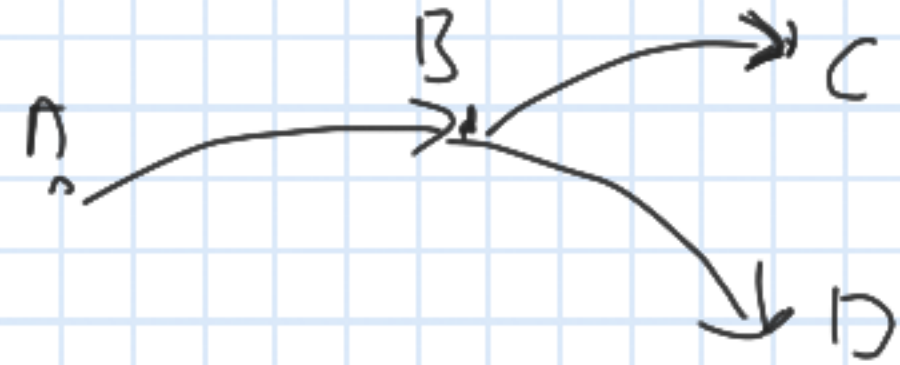


① Ścieżka HAMILTONA ~ DAG

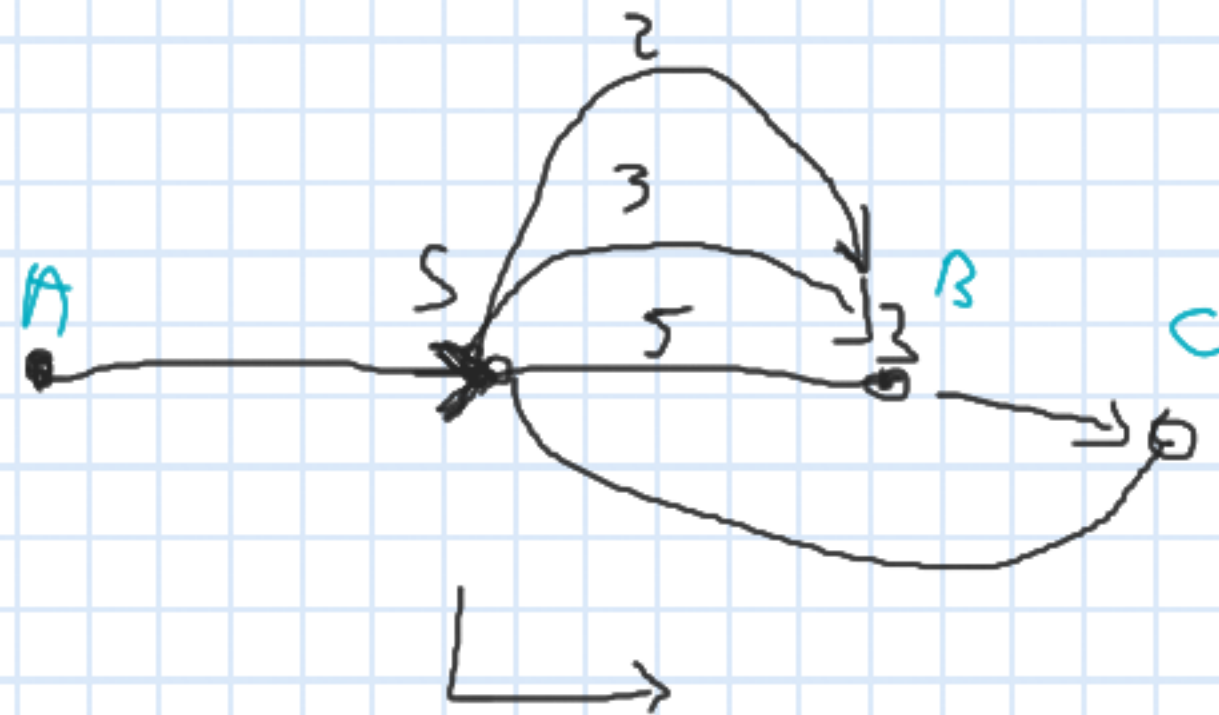
Ky ścieżka istnieje

②  $G$  - skierowany - DOSTRZĄTEK

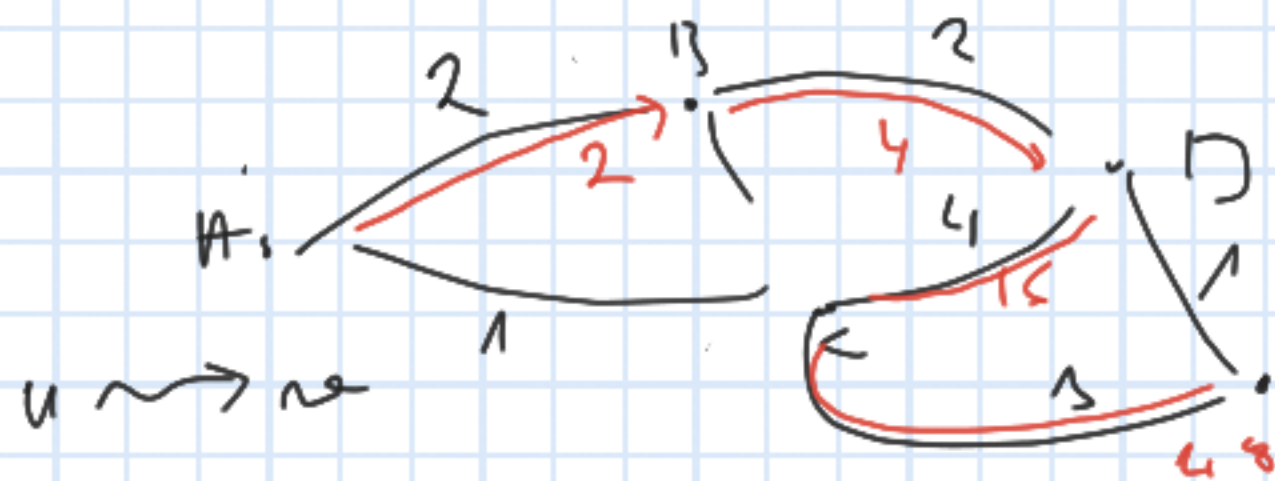
Ky DP istnieje?



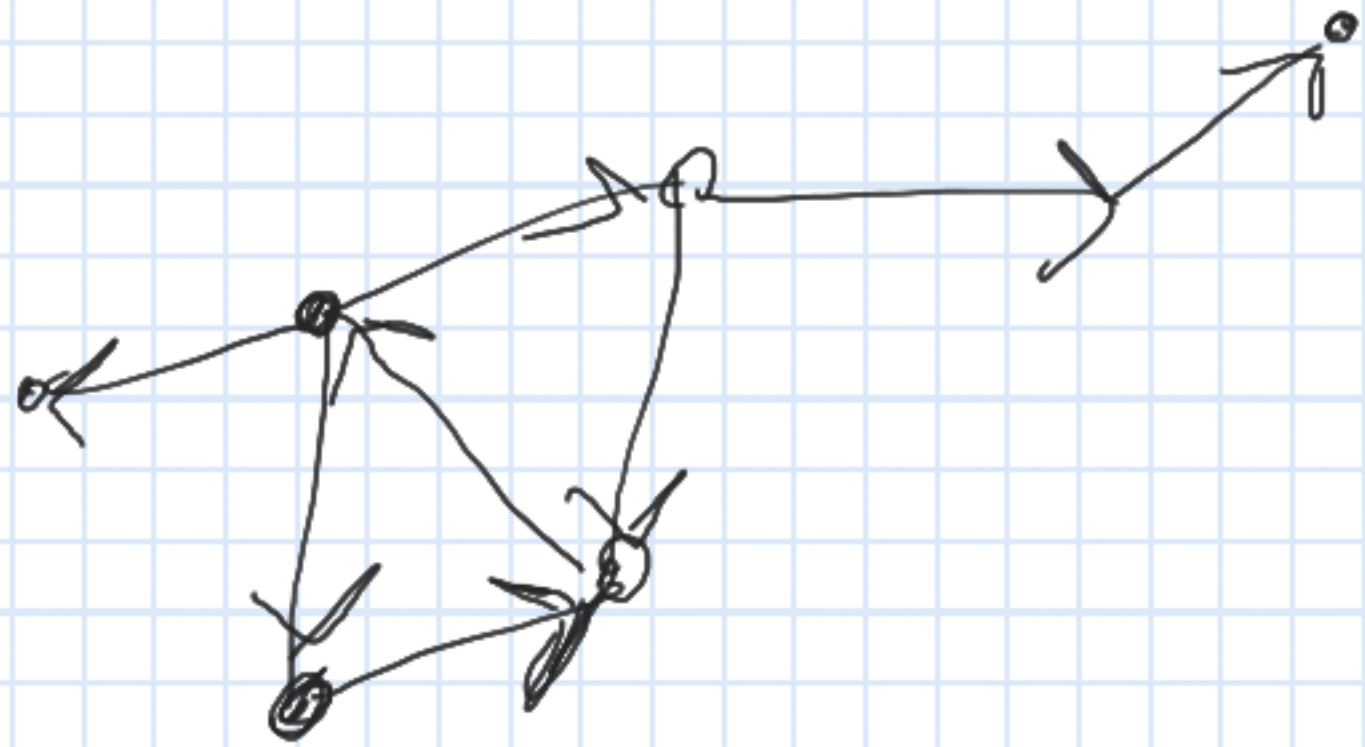
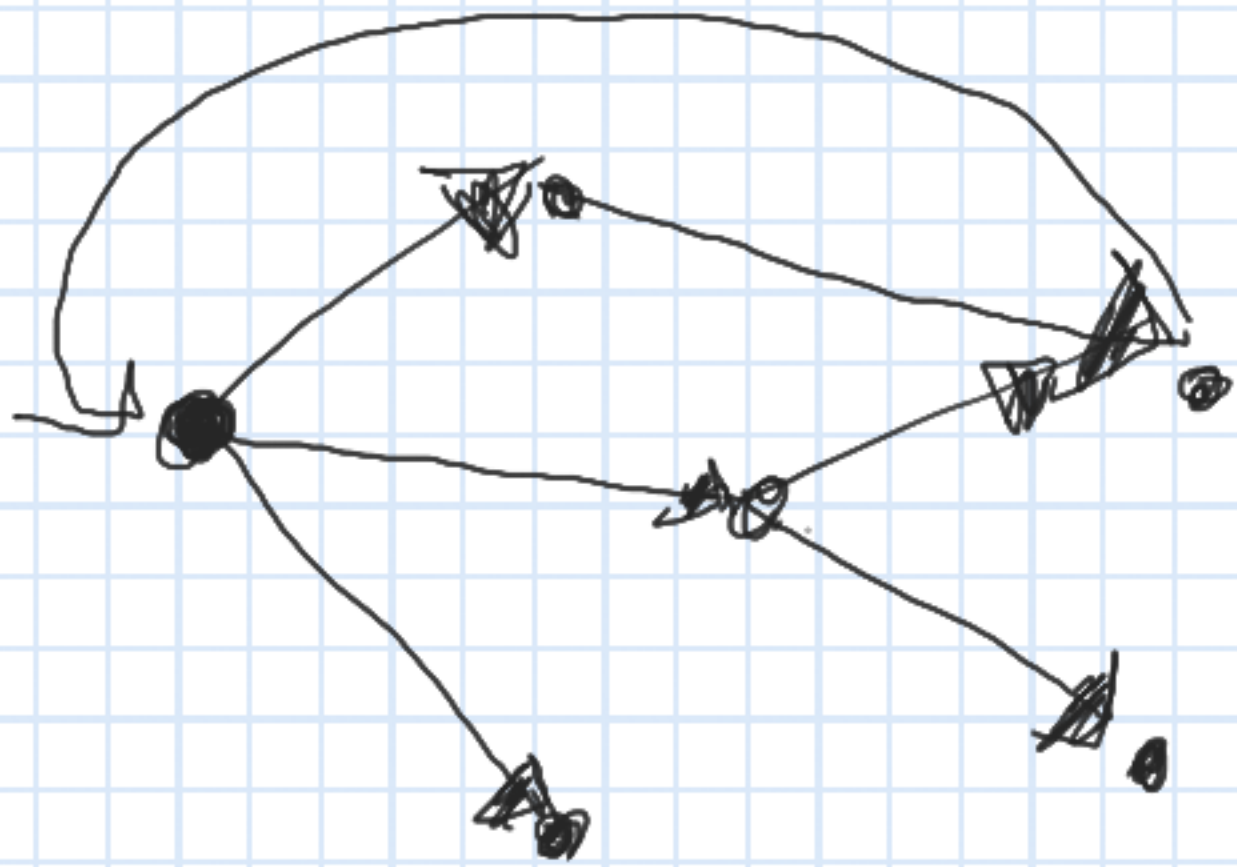
③ Znaleźć najkrótsze ścieżki z danego  
wierzchołka ~ DAG.



④  $G = (V, E)$  nieskierowany

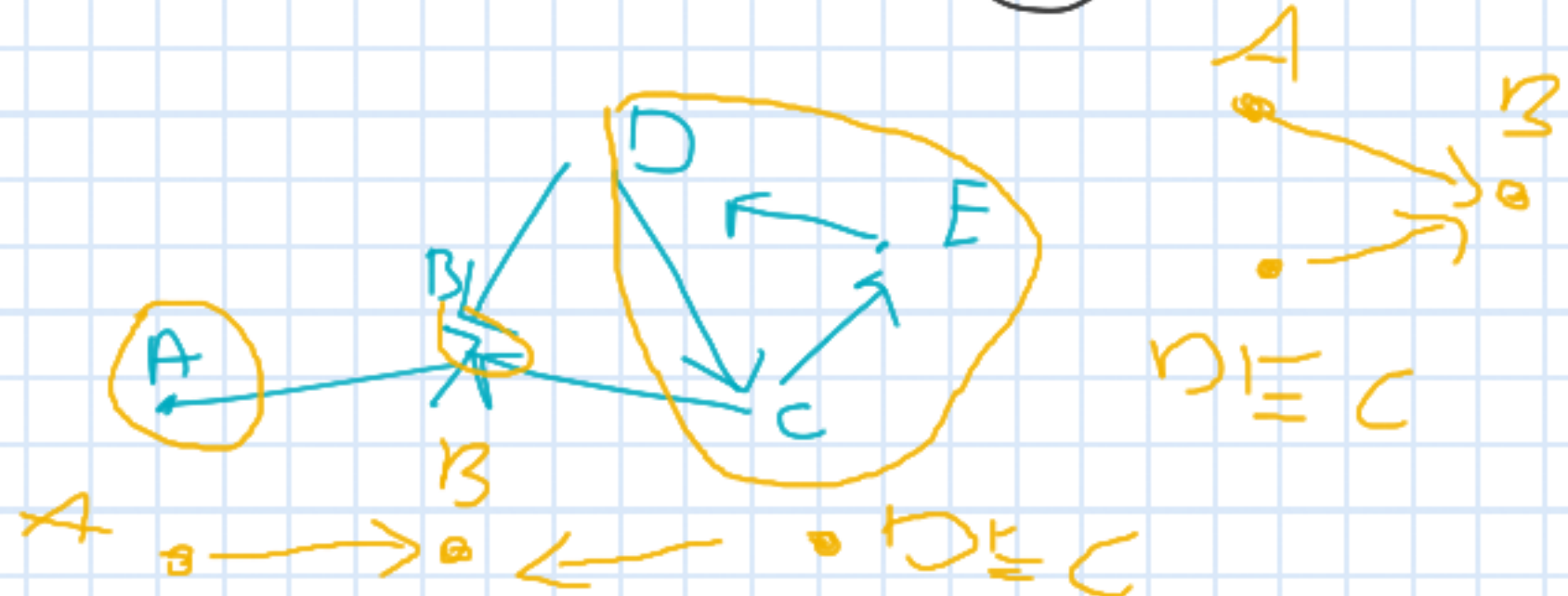


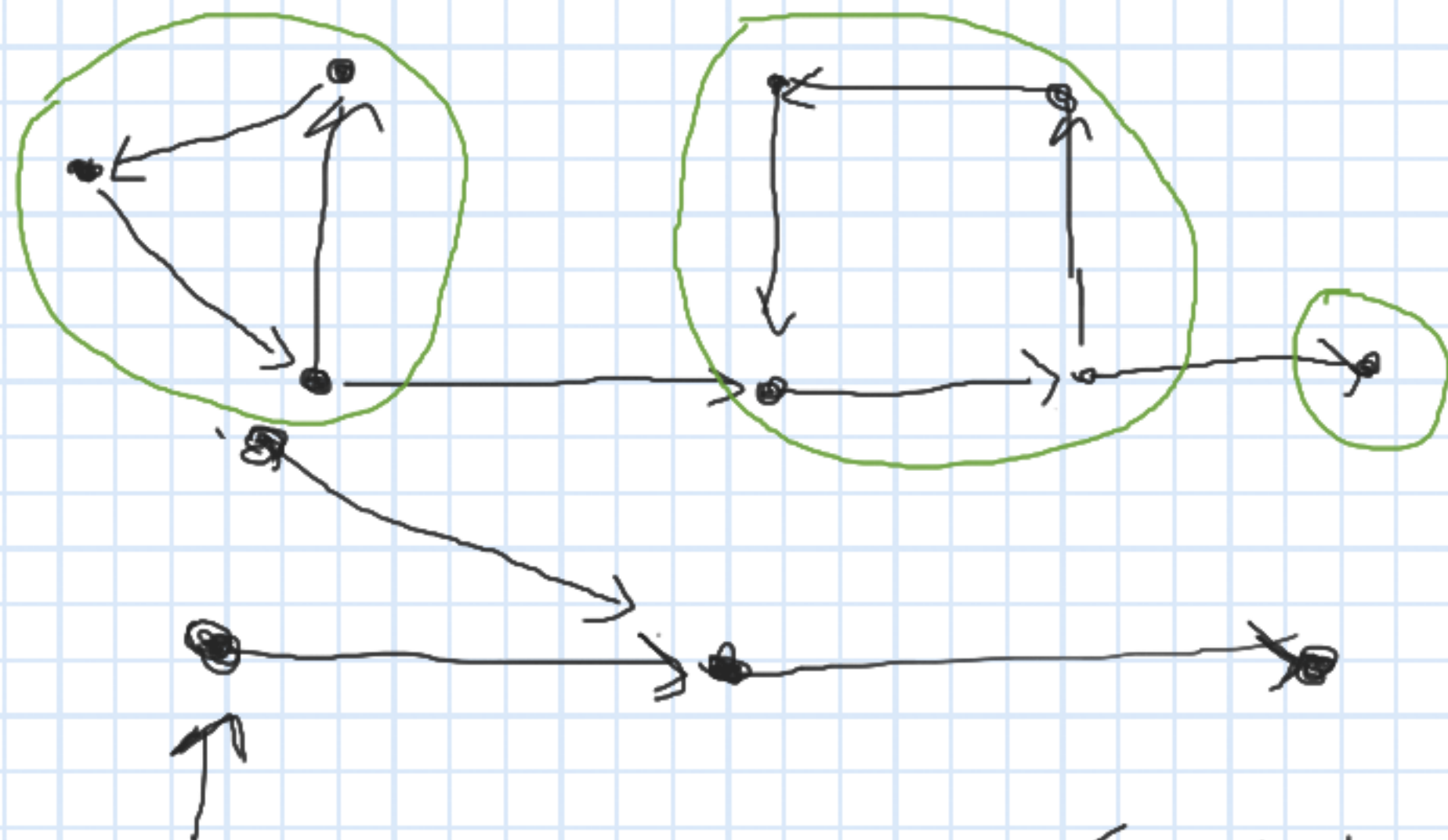
niezorientowany  
wagi:  $E \rightarrow \mathbb{N} - \{0\}$



→

DIFS {  
 • Wielekij wie 1 si erot + 4  
 • 4 R 4, 4 R 4, 4 R 4, 4 R 4  
 1 w 1 m 1 o t o  
 1 i s + 4 o b r 4 p a z 4 t i e k





Sprawl

$$O(V + E) \quad 2$$

$$O(V + E) \quad 1$$

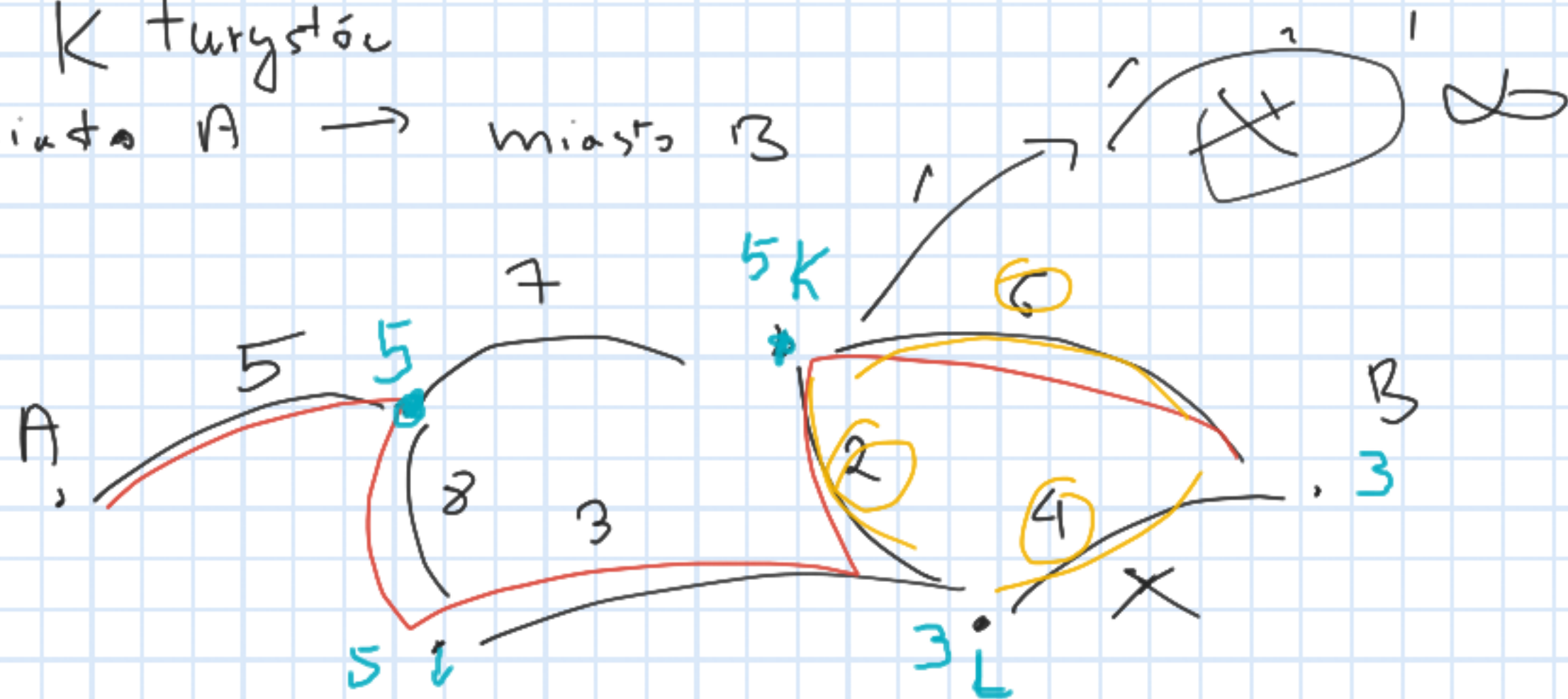
$$O(V + E) \quad 1$$

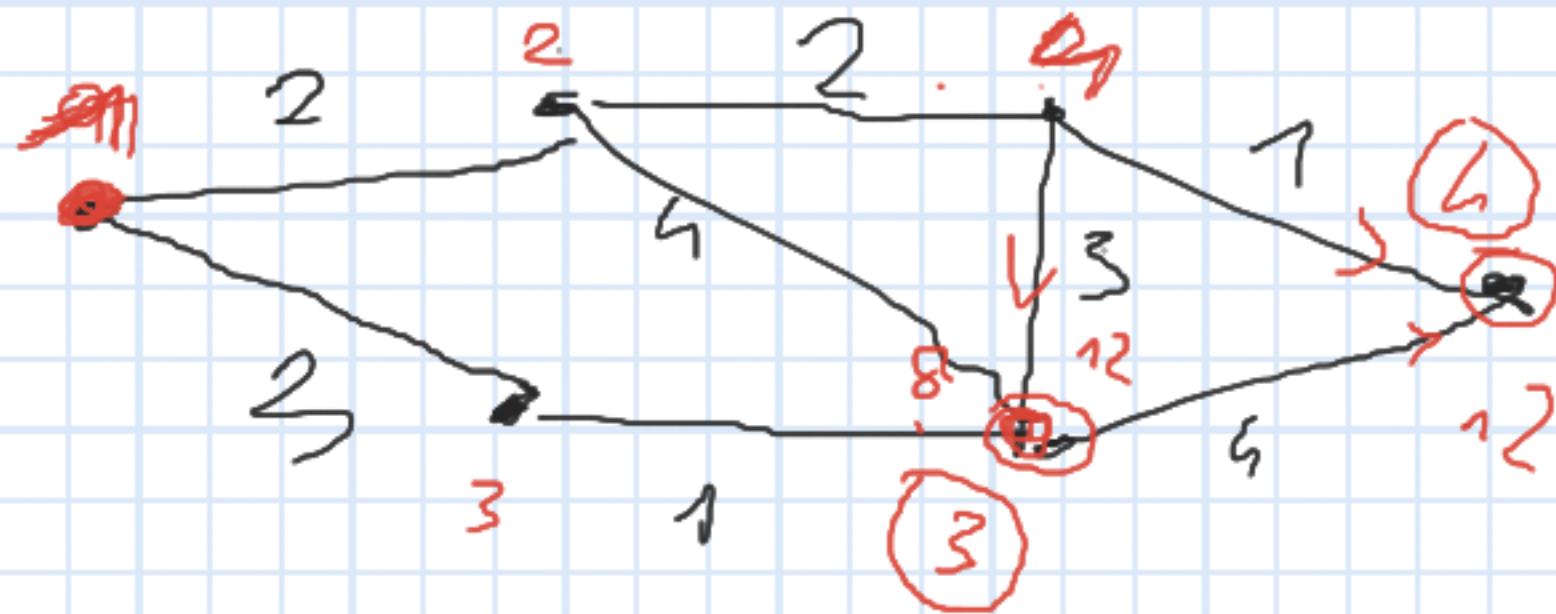
---


$$4$$

K turyści

miasto A  $\rightarrow$  miasto B


$$\begin{matrix} 6 \\ 4 \\ 2 \end{matrix} \begin{matrix} \\ \\ 2 \end{matrix}$$
$$\begin{array}{l} \text{np. } K = 160 \\ p = 21 \end{array} \Rightarrow \underline{15 \text{ groups}}$$



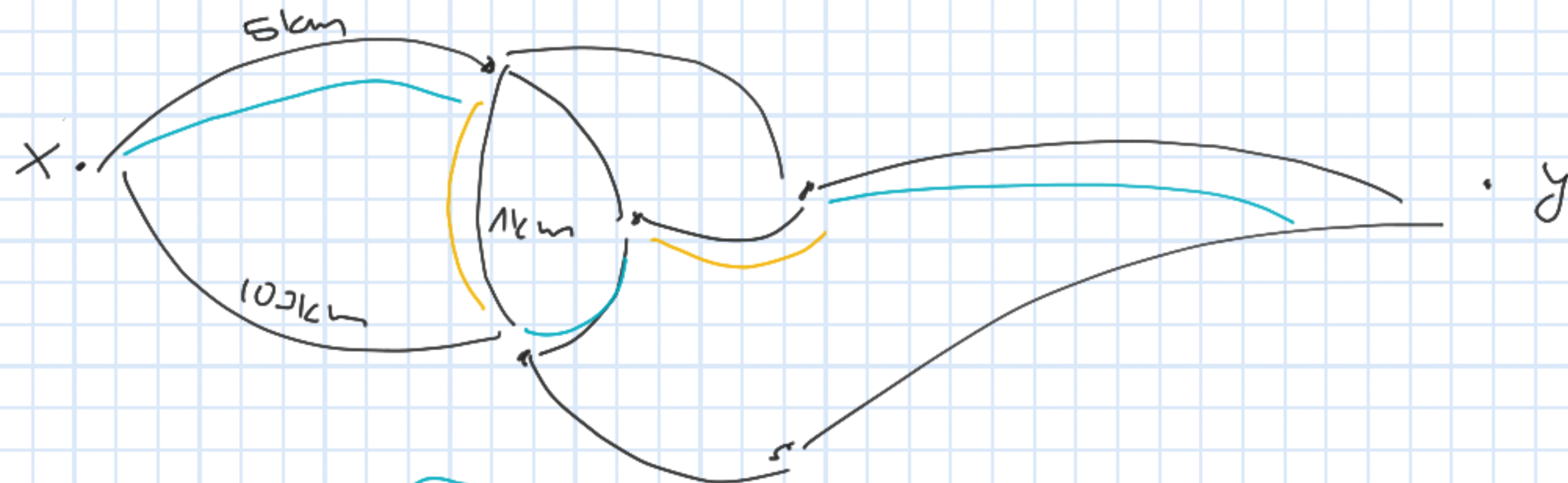
$C, P_2, P_3$

$\log(-11-)$

$\log P_1 + \log P_2 + \log P_3$



6.



duża kierowca:

Alija

Bob

↑  
wybiera trasę

Najkrótsza trasa Aliji