$$(a+b)^n = \sum_{k=0}^{n} \binom{n}{k} a^k b^{n-k}$$

$$\left(3xy - \frac{4}{xz}\right)^{10} =$$

$$= \sum_{k=0}^{10} \binom{10}{k} (3xy)^k \left(-\frac{4}{xz}\right)^{10-k} \cdot$$

$$= \sum_{k=0}^{10} \binom{10}{k} \cdot 3^k \cdot (-4)^{10-k} \cdot x^k \cdot y^k \cdot \frac{1}{x^{10-k} z^{10-k}}$$

$$= \sum_{k=0}^{10} \binom{10}{k} \cdot 3^k \cdot (-4)^{10-k} \, x^{2k-10} \cdot y^k \, z^{k-10}$$

Coef. de $x^3 y^4 z^1$. Cal:

$$2k-10 = 3$$
$$k = 4$$
$$k-10 = 1 \quad \text{> NO TE SOLUCIÓ !}$$

$\Rightarrow$ el coeficient de $x^3 y^4 z$ és $\underline{0}$

T. multinomi

$$\left(3y-\frac{2}{y}+x\right)^5 =$$

$$= \sum_{a+b+c=5} \binom{5}{a,b,c} (3y)^a \cdot \left(-\frac{2}{y}\right)^b x^c$$

$$= \sum_{a+b+c=5} \binom{5}{a,b,c} 3^a \cdot (-2)^b \cdot y^{a-b} \cdot x^c$$

on:
a,b,c enters
$0 \le a,b,c \le 5$

Coeficient de: y^3x^2:

$$\left.\begin{array}{r} a+b+c=5 \\ a-b=3 \\ c=2 \end{array}\right\}$$

Solució:

$c=2 \Rightarrow$

$$\begin{cases} a+b=3 \\ a-b=3 \end{cases}$$

$$\Rightarrow \begin{cases} a=3 \\ b=0 \\ c=2 \end{cases}$$

Coef. de y^3x^2:

$$\binom{5}{3,0,2} \cdot 3^3 \cdot (-2)^0 =$$

$$= \frac{5!}{3!0!2!} \cdot 27 = \dots$$

y^3x:

$$\left.\begin{array}{r} a+b+c=5 \\ a-b=3 \\ c=1 \end{array}\right\}$$

Solució:

$c=1 \Rightarrow$

$$\begin{cases} a+b=4 \\ a-b=3 \end{cases}$$

$\Rightarrow 2a=7$

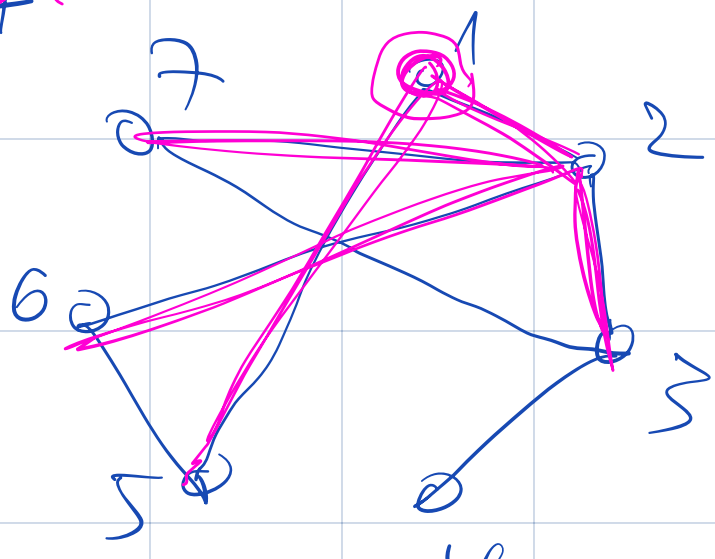
$\Rightarrow a=3.5 \notin \mathbb{Z}$

$\Rightarrow$ NO té solució

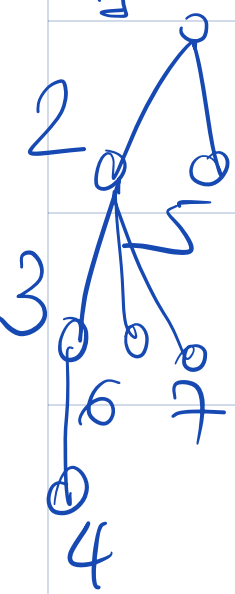
Coef. de y^3x: 0

DFS / BFS

1	2	3	4	5	6	7
2	1	2	3	4	2	2
5	3	4		6	5	3
	6	7				
	7					



BFS



L: 1 2 5 3 6 7 4

W: 1 2 5 3 6 7 4

aristes:

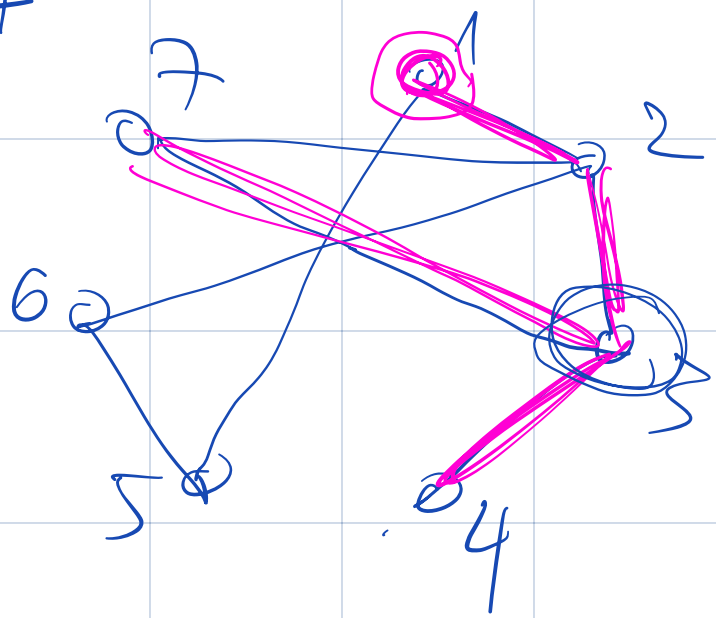
12
15
23
26
27
34

vertexs

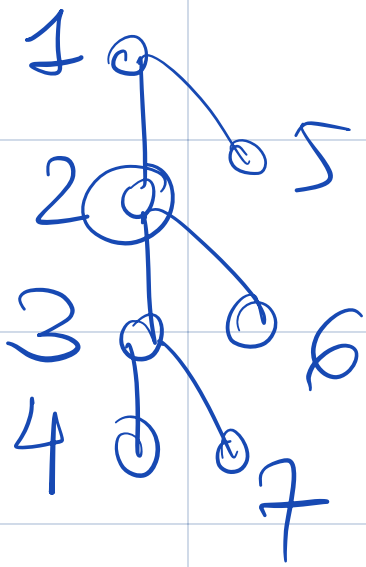
1
2
5
3
6
7
4

DFS / BFS

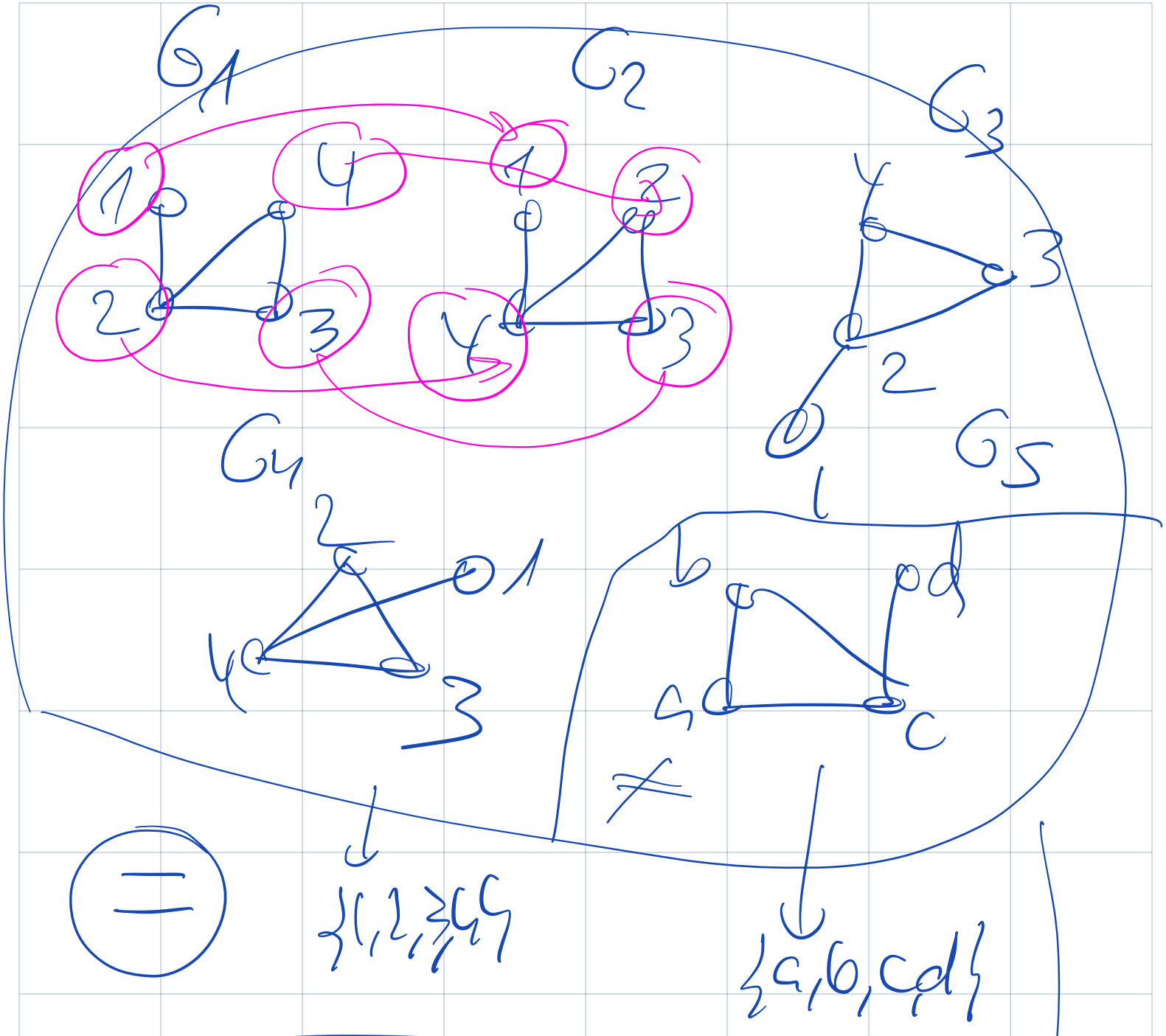
1	2	3	4	5	6	7
2	1		3	4	2	2
5	3	~~4~~		6	5	3
	6	~~7~~				
	7					



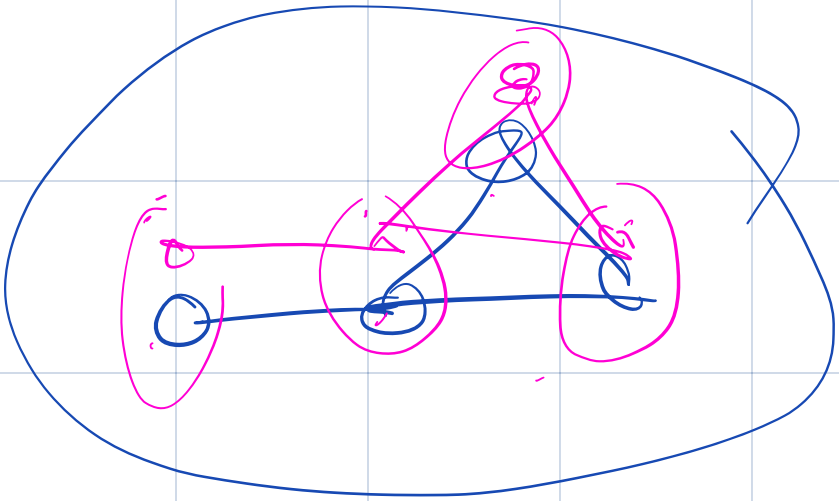
DFS



L	W	A
	1	12
	2	23
	3	34
	4	37
	7	26
	6	15
	5	



$$\left| \begin{array}{c} G_1 \\ \| \\ G_3 \end{array} \right| \left| \begin{array}{c} G_2 \\ \| \\ G_4 \end{array} \right| G_3$$



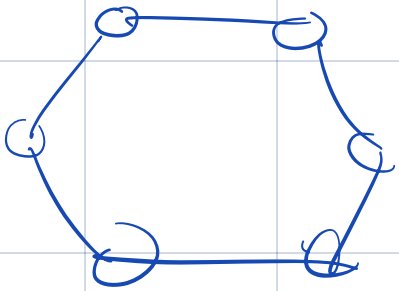
$u_1 \longleftrightarrow v_1$

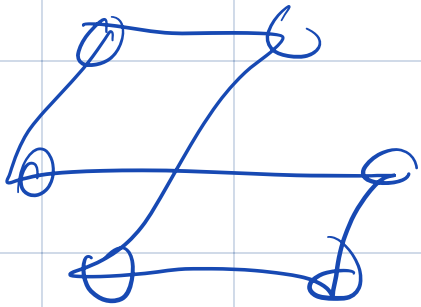
$u_2 \longleftrightarrow v_2$

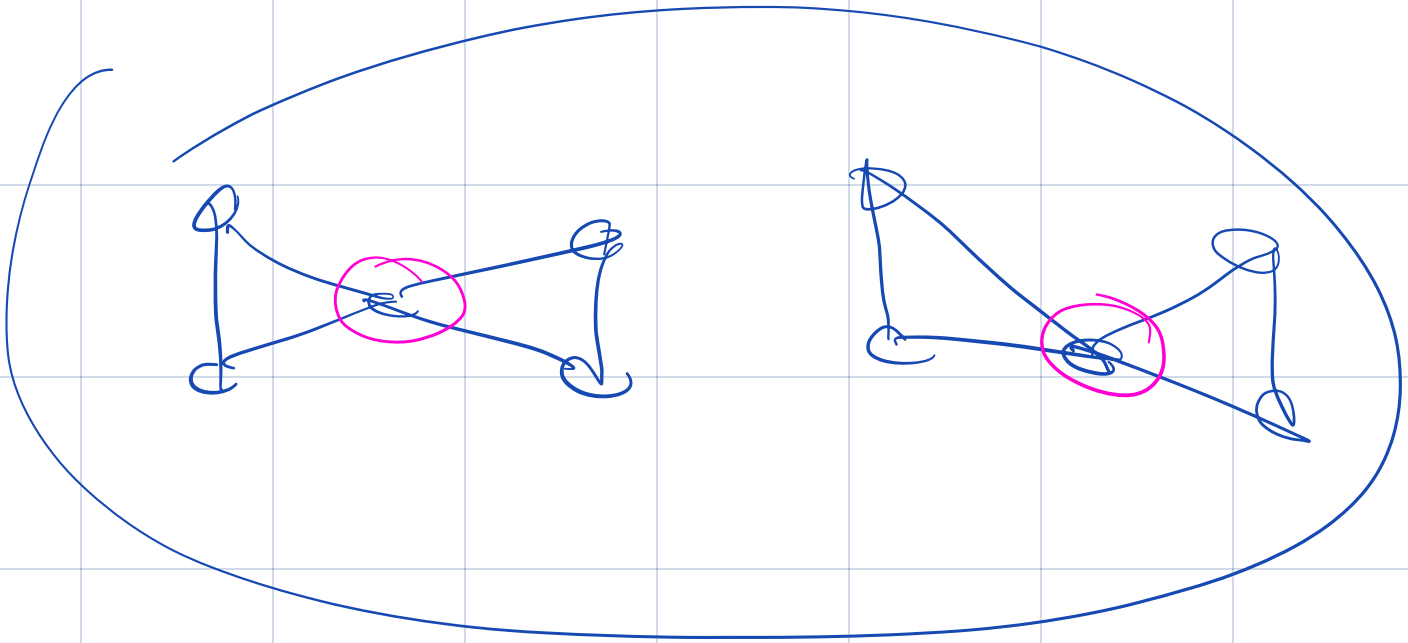
$u_3 \longleftrightarrow v_3$

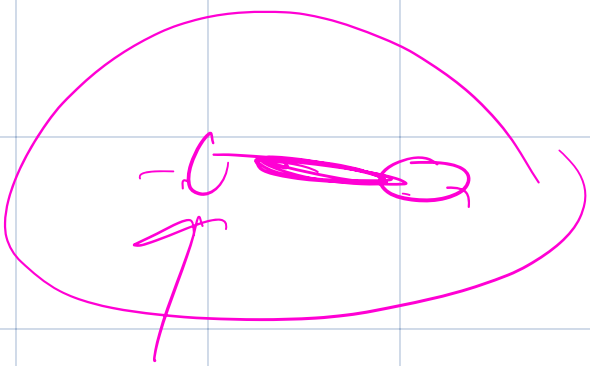
$\vdots$

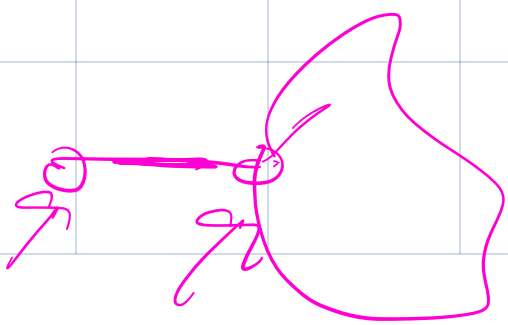
$u_i \sim u_j \iff v_i \sim v_j$

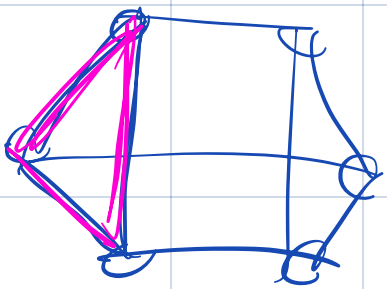


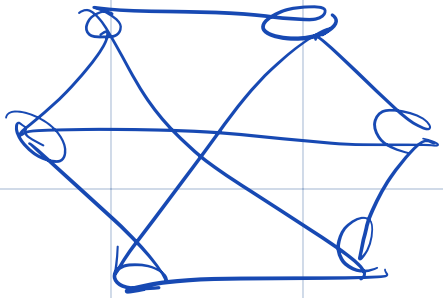


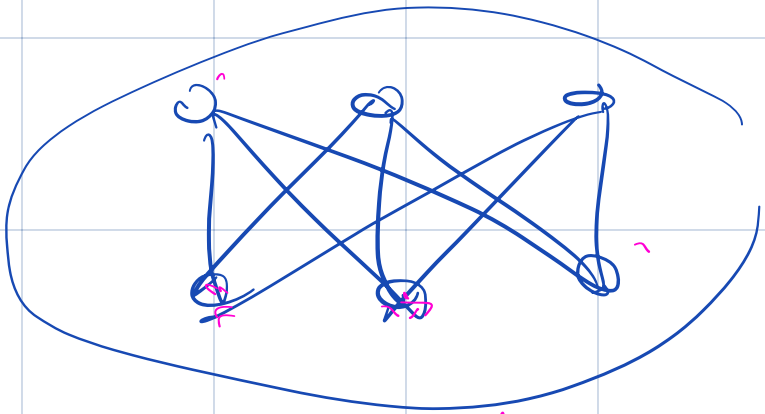












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