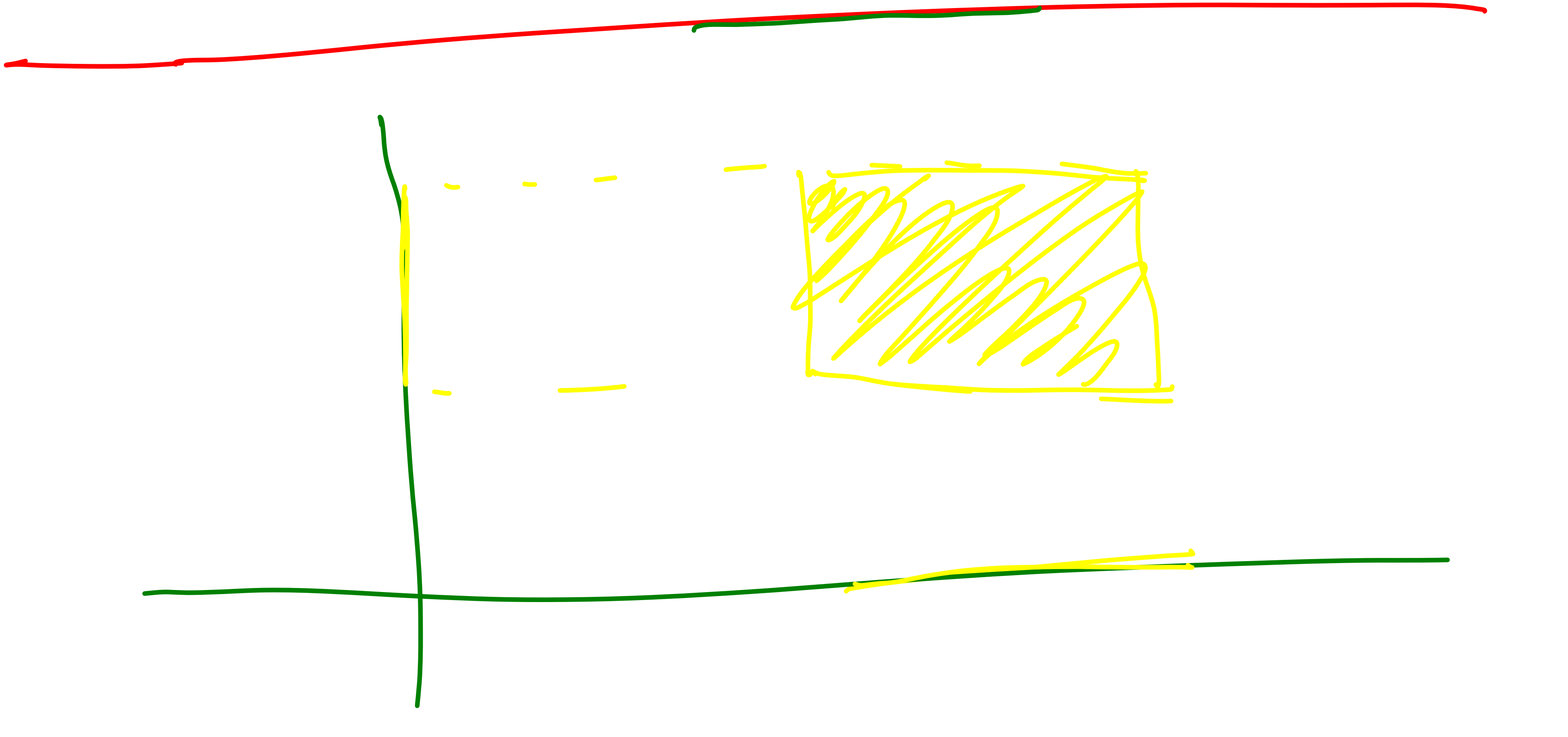
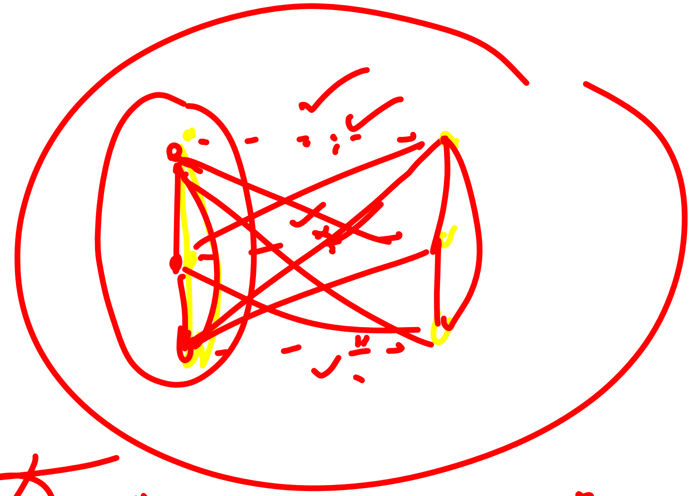
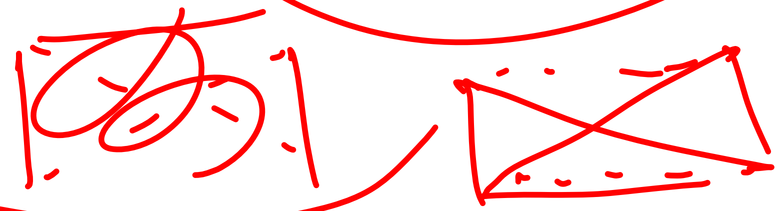
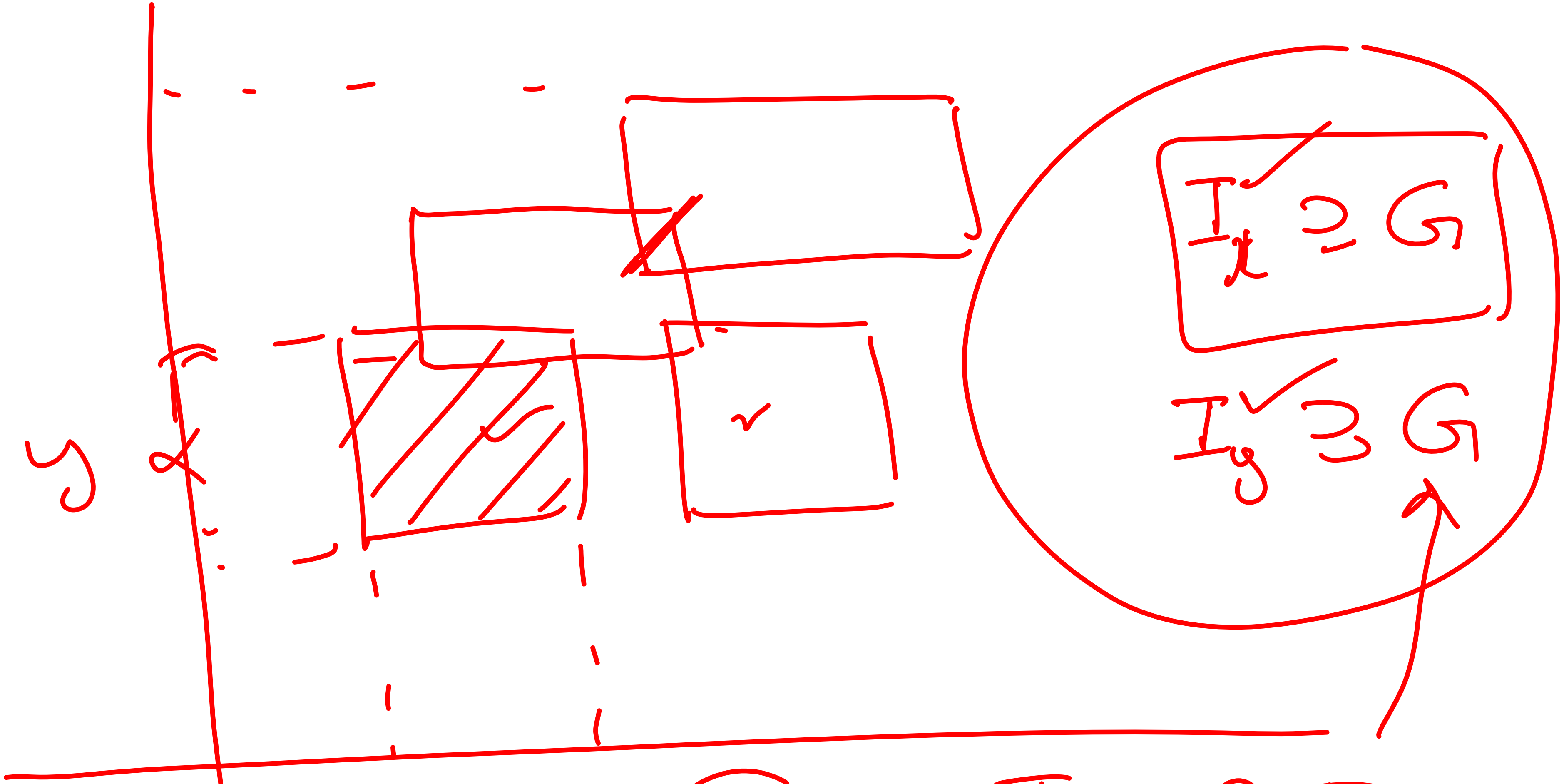


$I_x \cap I_y$

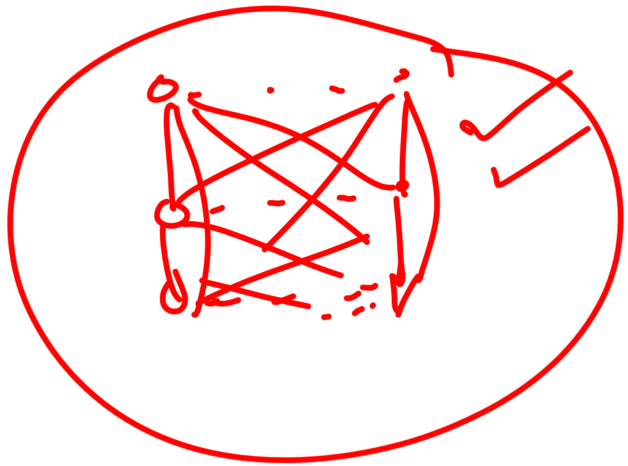


I_x





$$G = I_x \cap I_y$$



n vertices $\longrightarrow \frac{n}{2}$

$v \in V(G)$ $\qquad \{v\} \cup N(v) \cup \overline{N}(v) = V(G)$

$v \to N(v)$

$\overline{N}(v)$

I_v

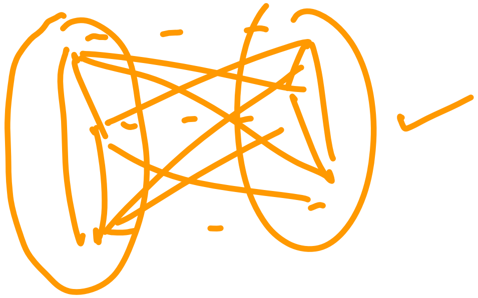
I_v

(x, y)

$(x, y) \notin E(G)$

$(x, y) \notin I_x$

"n"



$\leq \frac{n}{2}$

$\frac{n}{2}$

$\leq \frac{n}{2}$

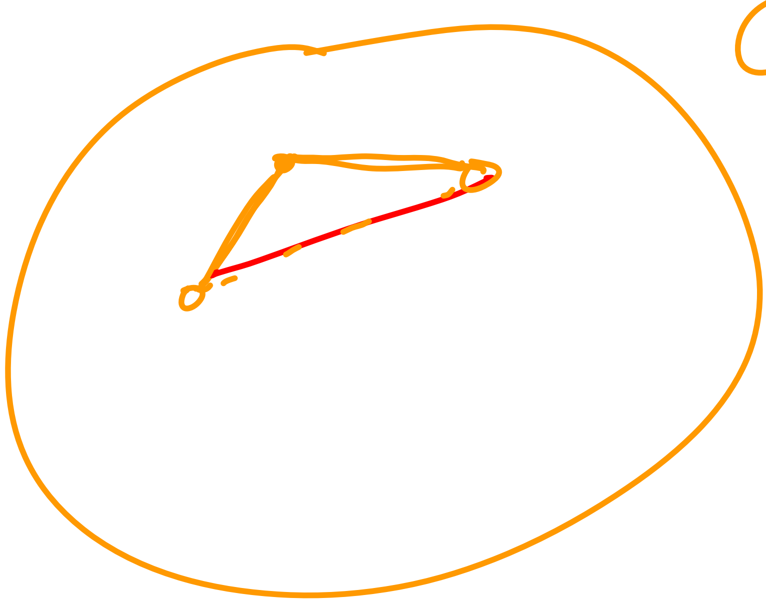
boxicity (G) = minimum k

such that

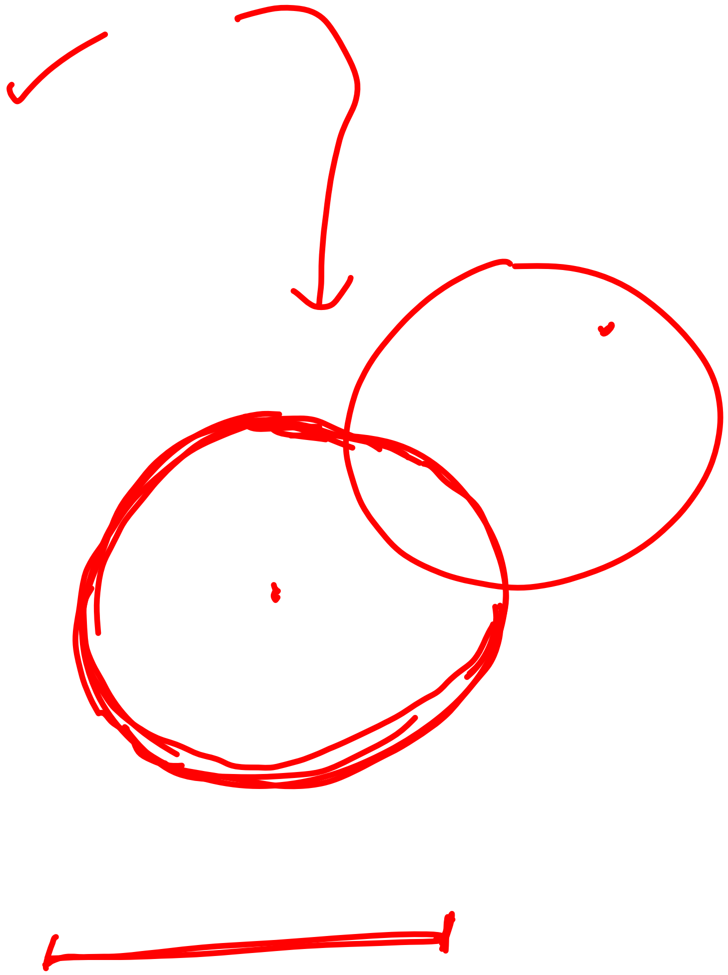
G

boxicity $\leq 2\chi(G^2) \leq 2\Delta^2 + 2$

G^2 is the square of G $\quad 2\Delta^2$

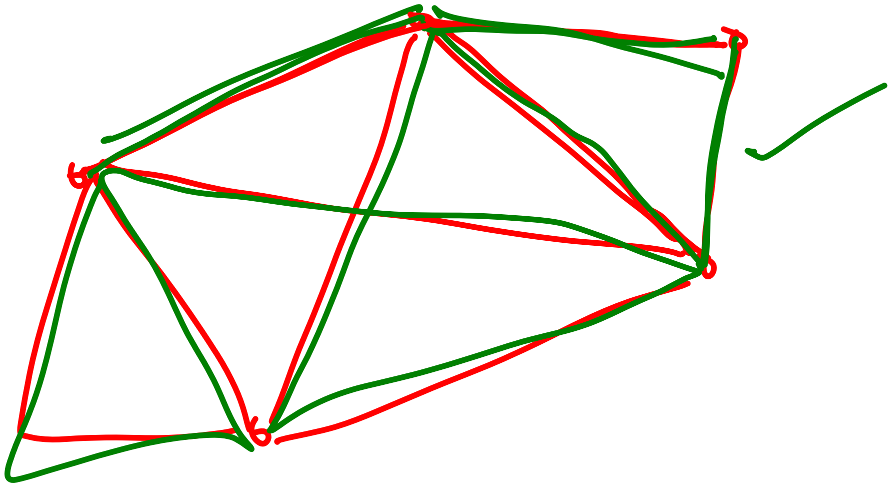


Sphericity

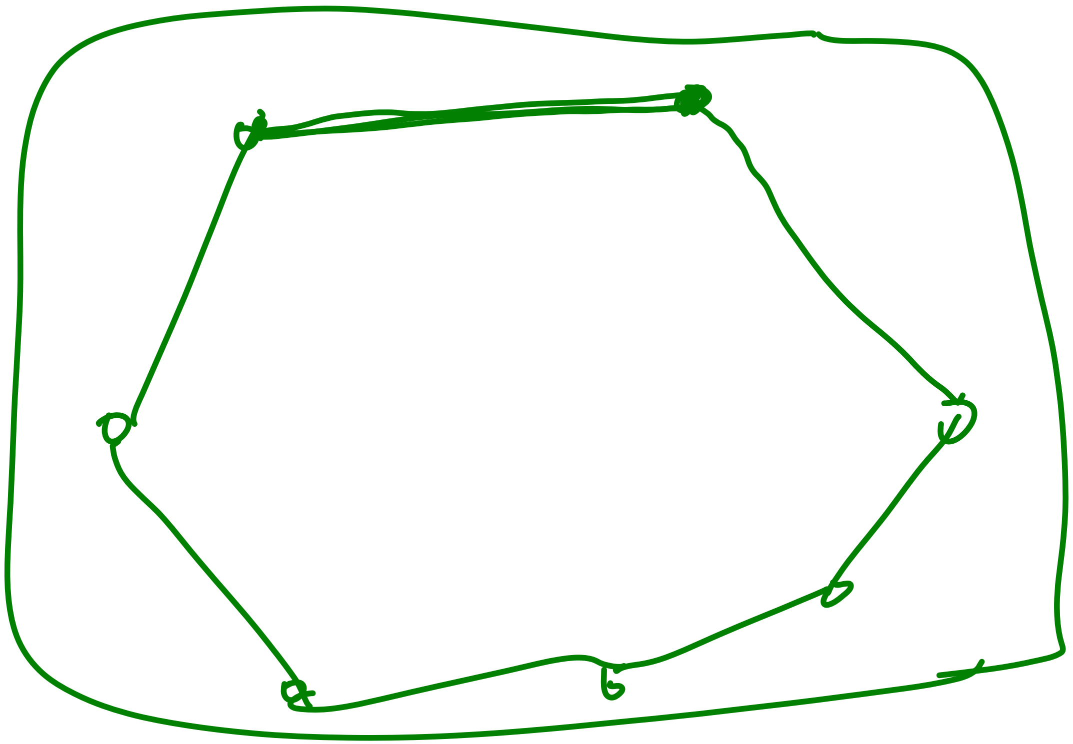


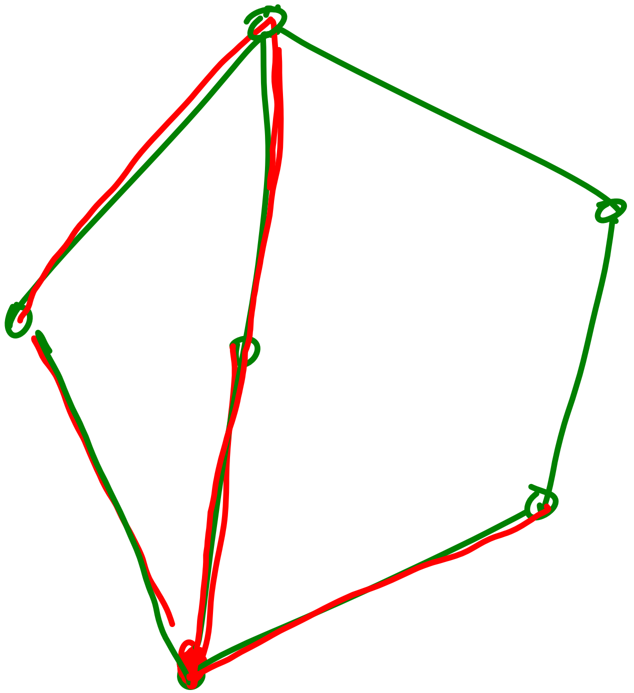
Hamiltonian circuits

G

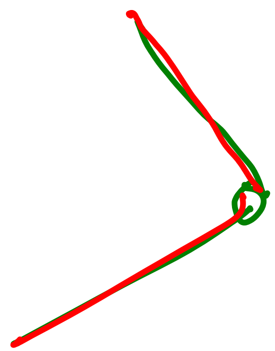


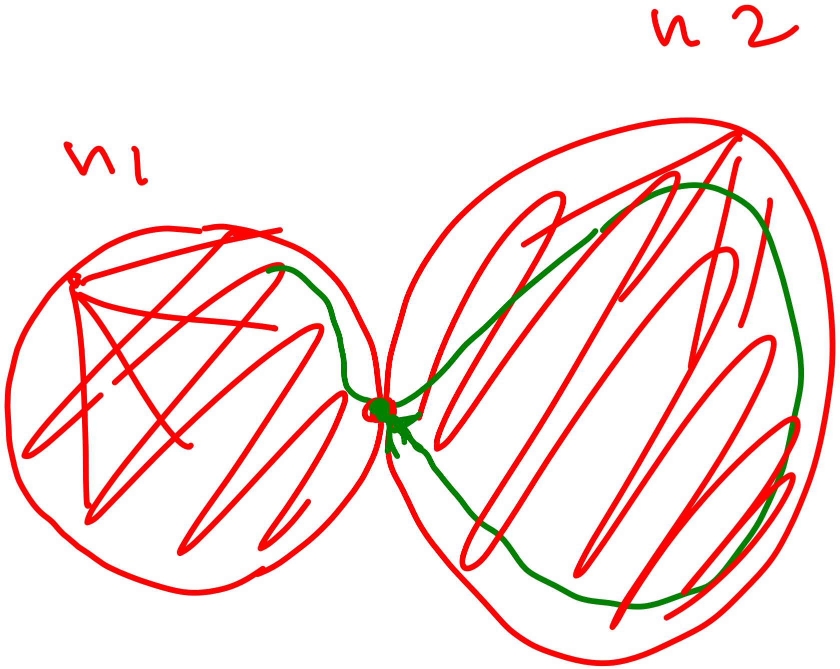
G



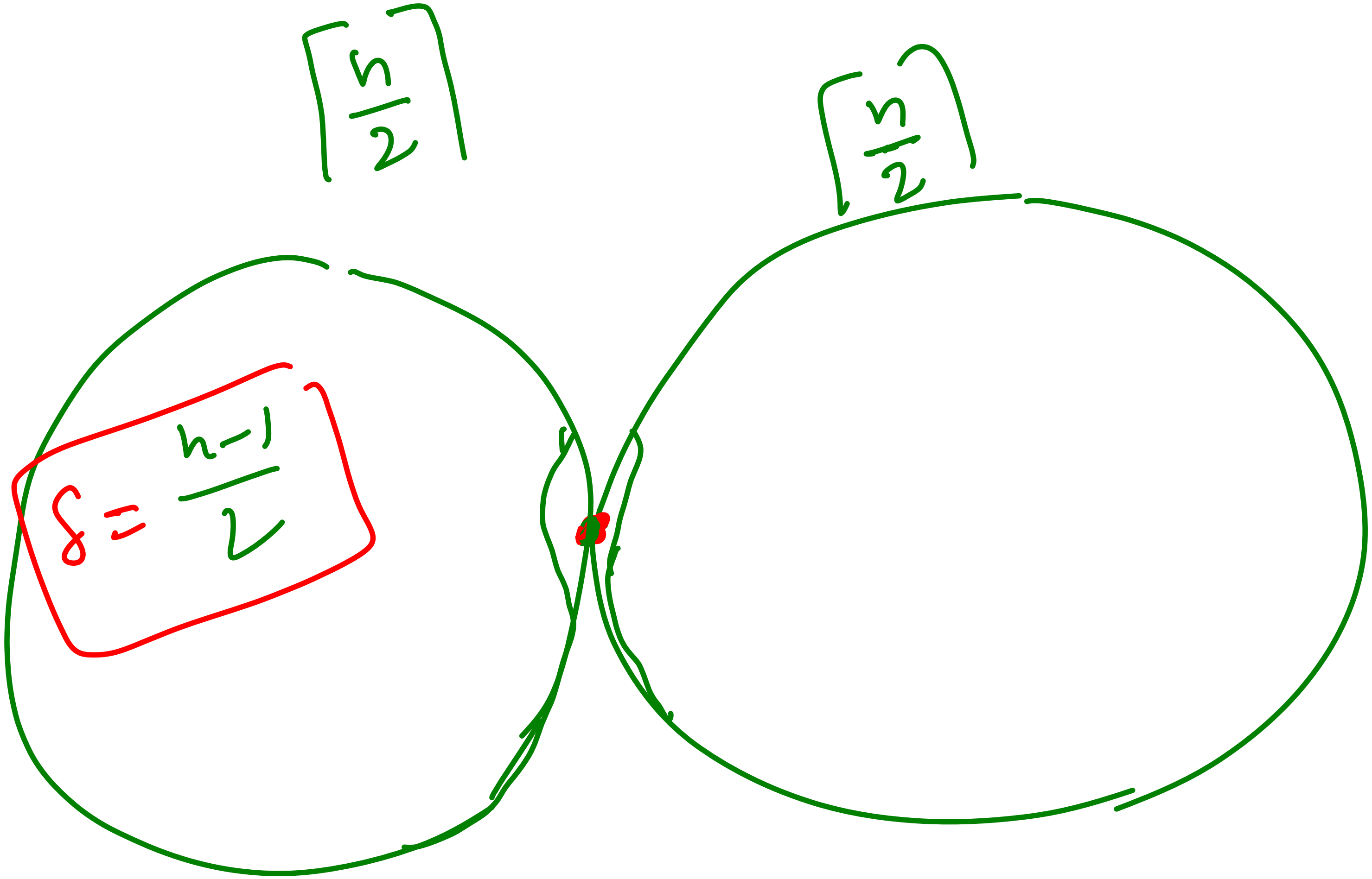


$$\boxed{\delta(G) \geq 2}$$



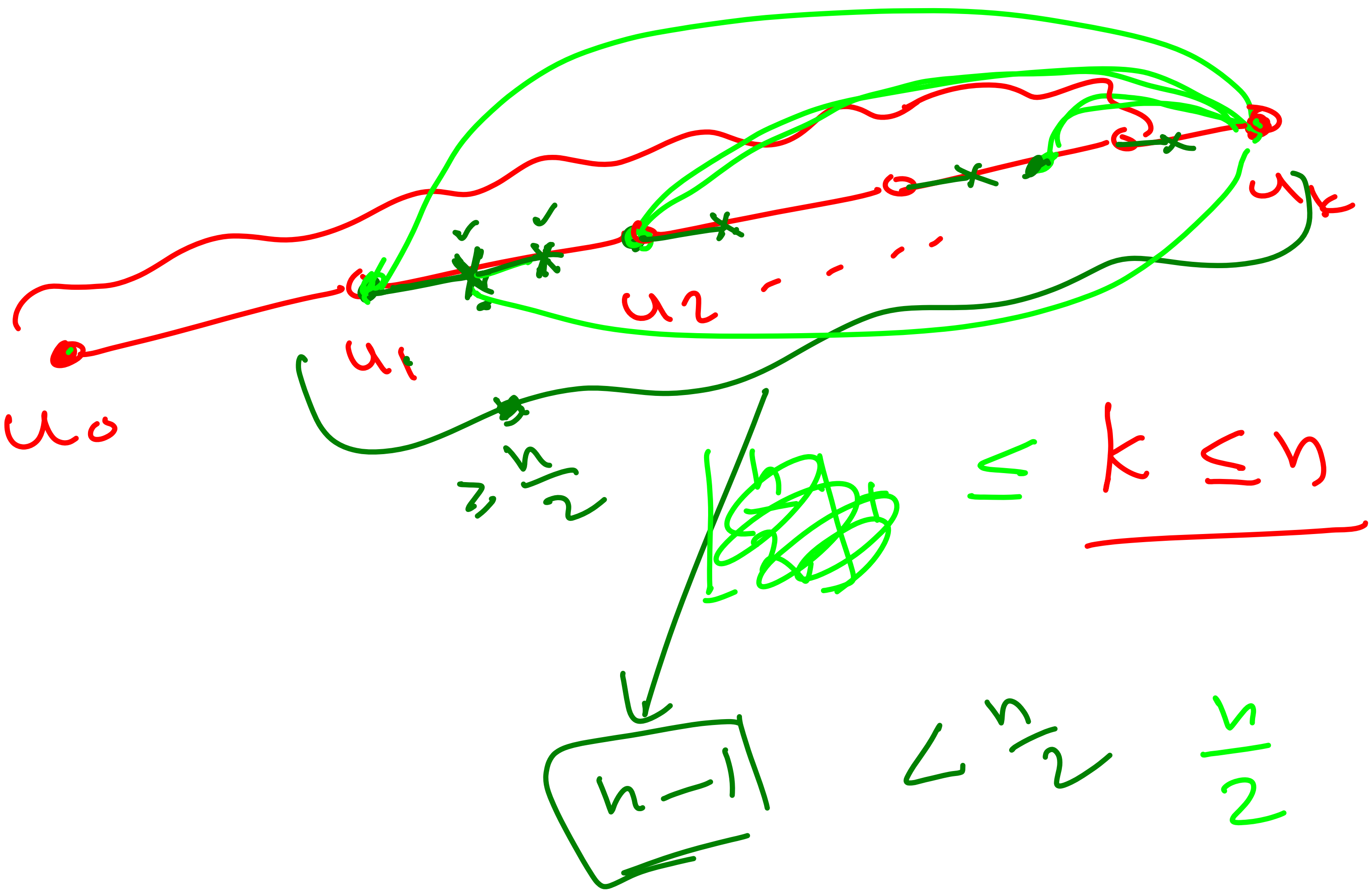


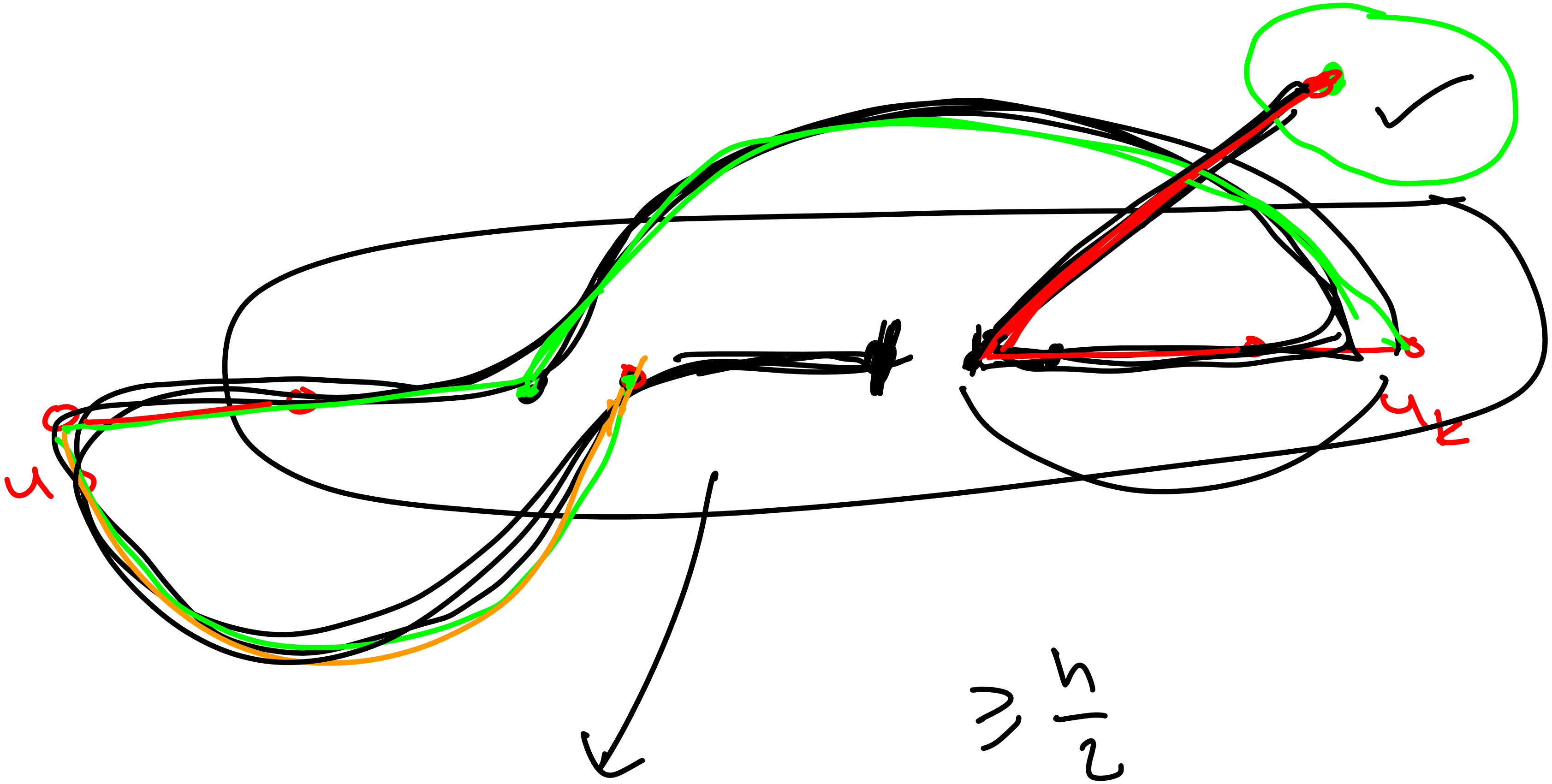
$\delta(G) \geq n_1 - 1$


$\lceil \frac{n}{2} \rceil$
$\lceil \frac{n}{2} \rceil$
$\delta = \frac{n-1}{2}$

For G, if $\delta \geq \frac{n}{2}$ then

G is hamiltonian


u0
u1
u2
uk
≥ n/2
≤ k ≤ n
n−1
< n/2
n/2

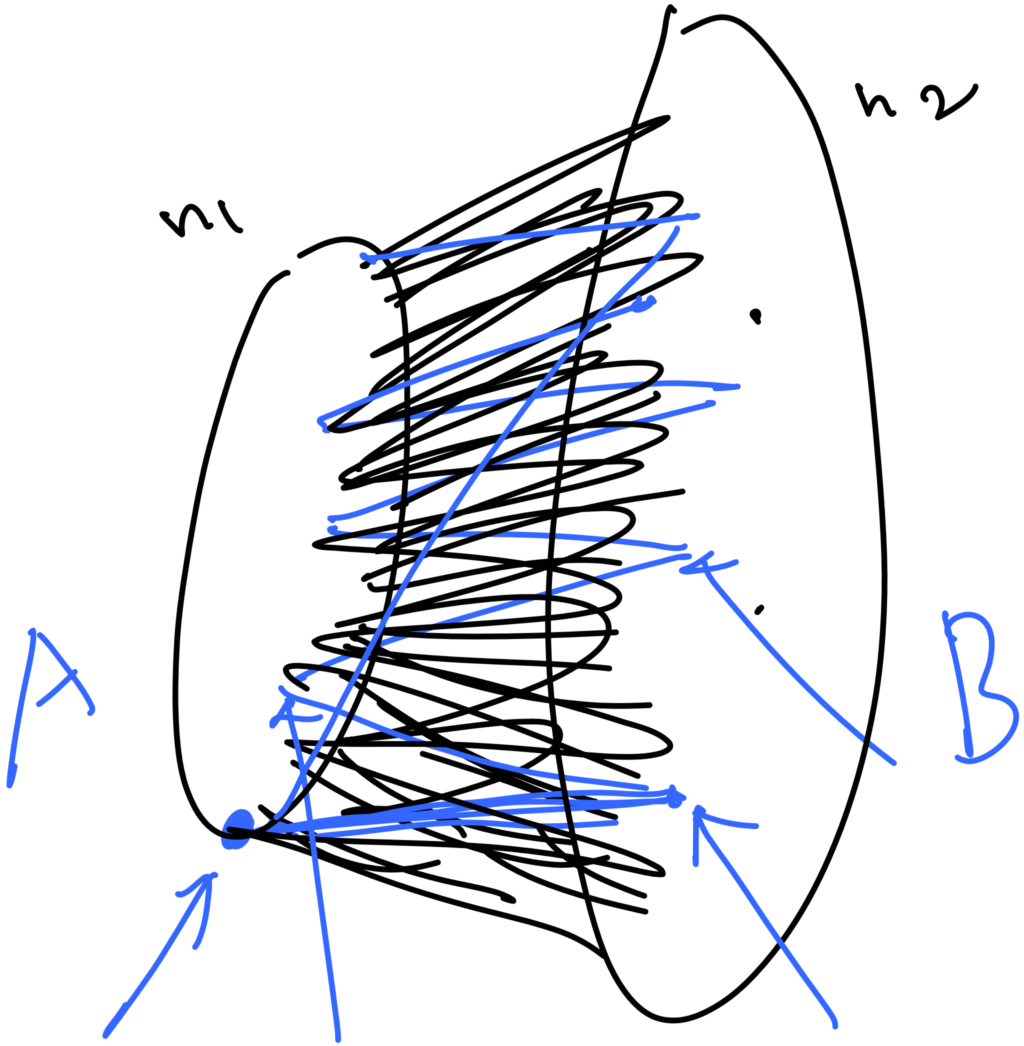


$\geq \frac{n}{2}$

$n-1$

$n-1-\frac{n}{2}$

$< \frac{n}{2}$



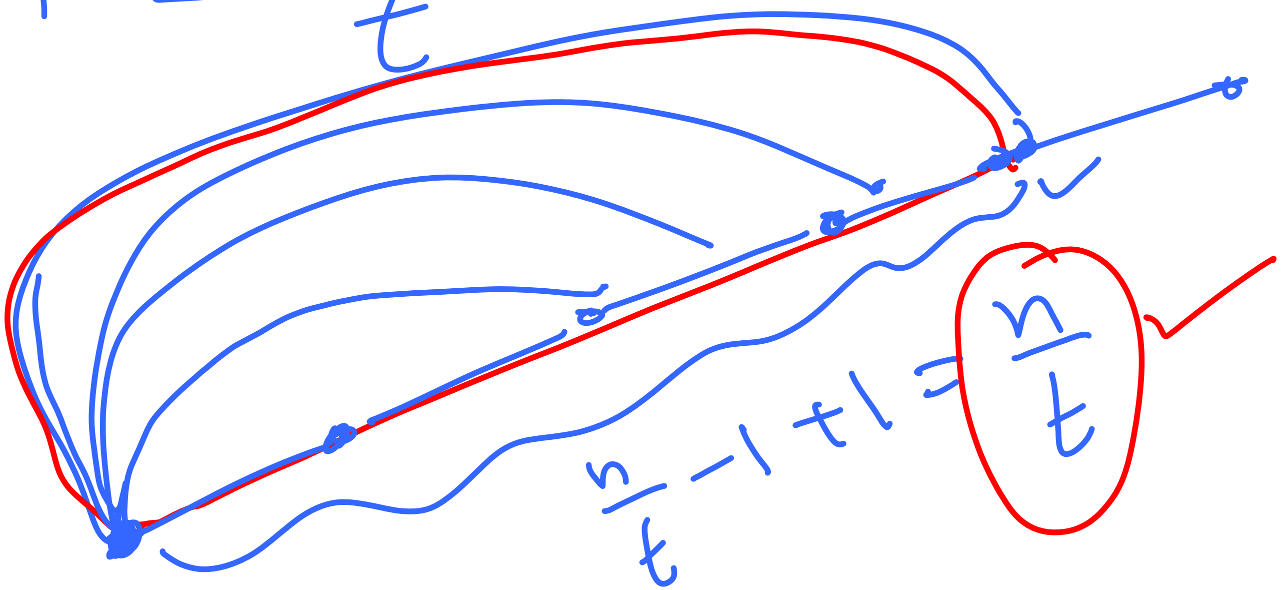
$n_1 < n_2$

$$\alpha(G) \leq t$$

$\frac{n}{t}$ sized cycle.

$$\chi(G) \geq \frac{n}{\alpha} = \frac{n}{\alpha} \geq \frac{n}{t}$$

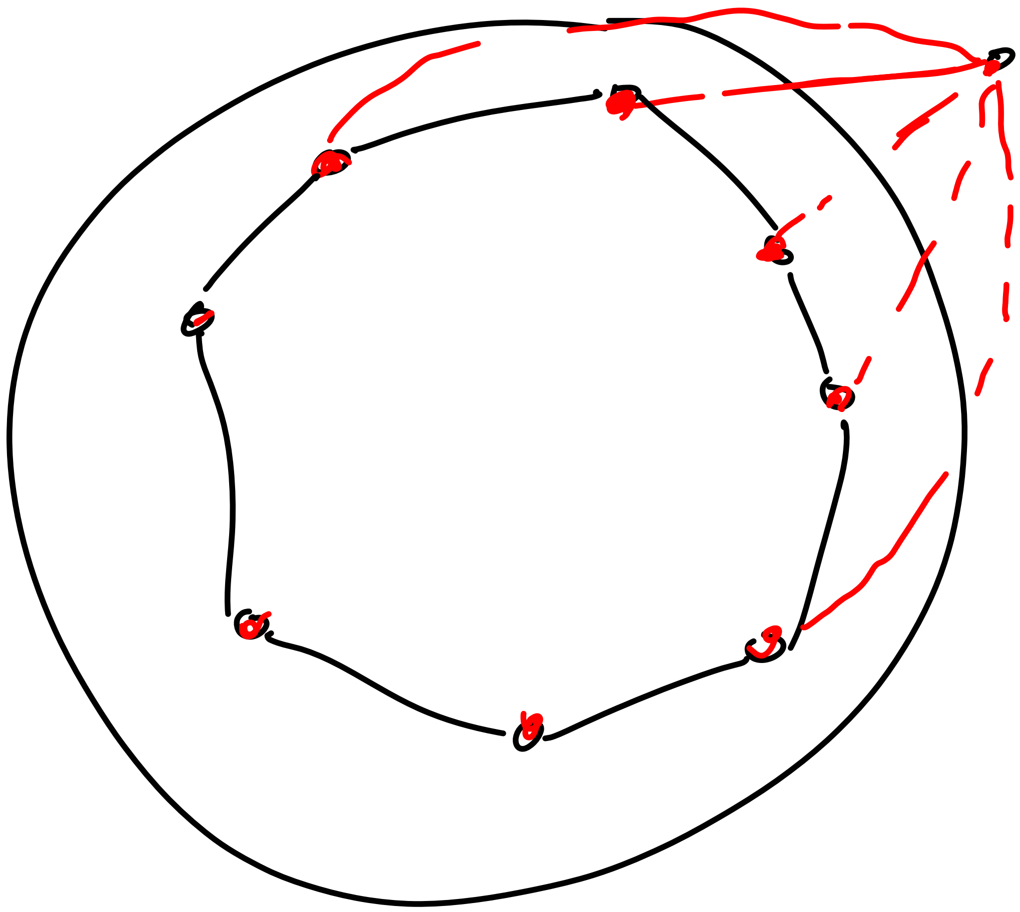
$$\delta \geq x - 1 = \frac{n}{t} - 1$$

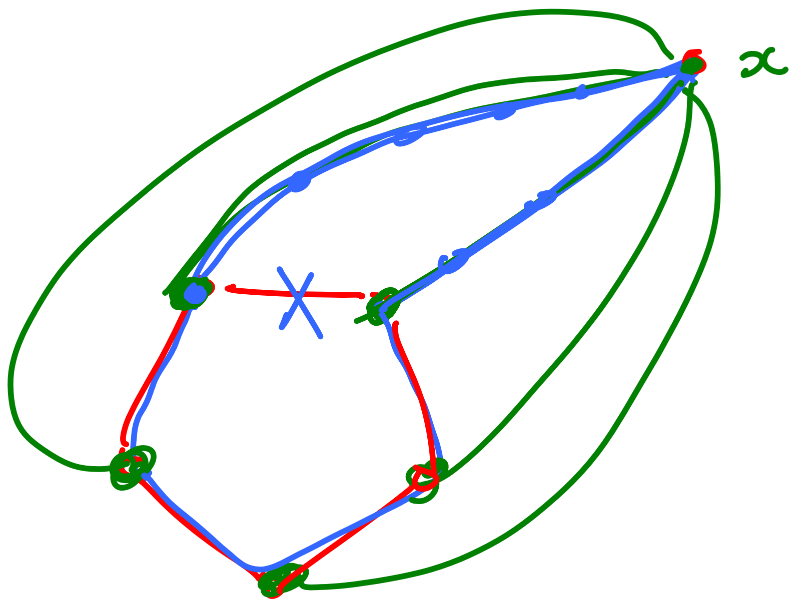


If $\alpha \leq t$, then

$\exists$ $\frac{n}{t}$-cycle in G

$\alpha \leq \cancel{k} \, \chi(G)$ then





$|C|$

$\min\left(|C|, k\right)$

$|C| > k$