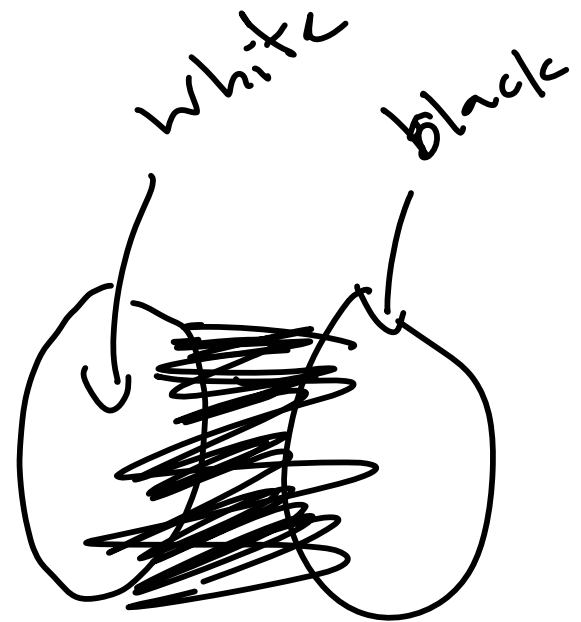
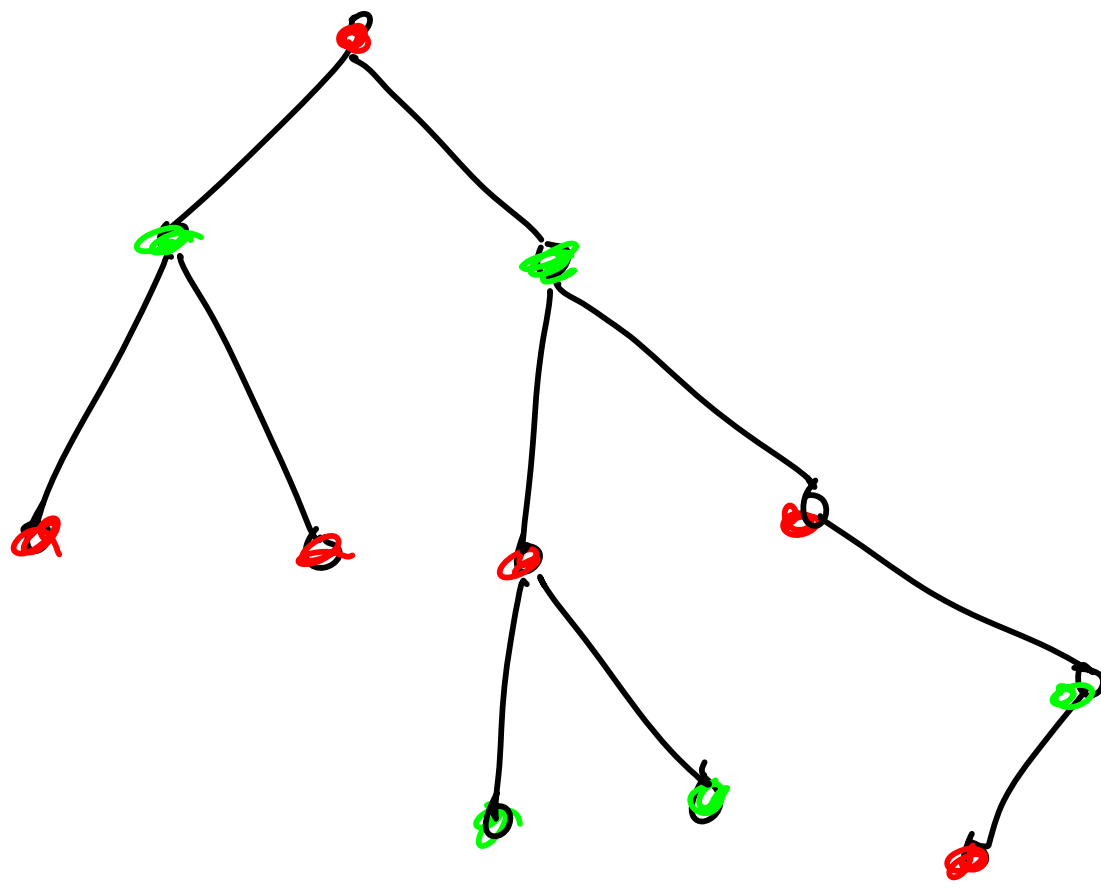


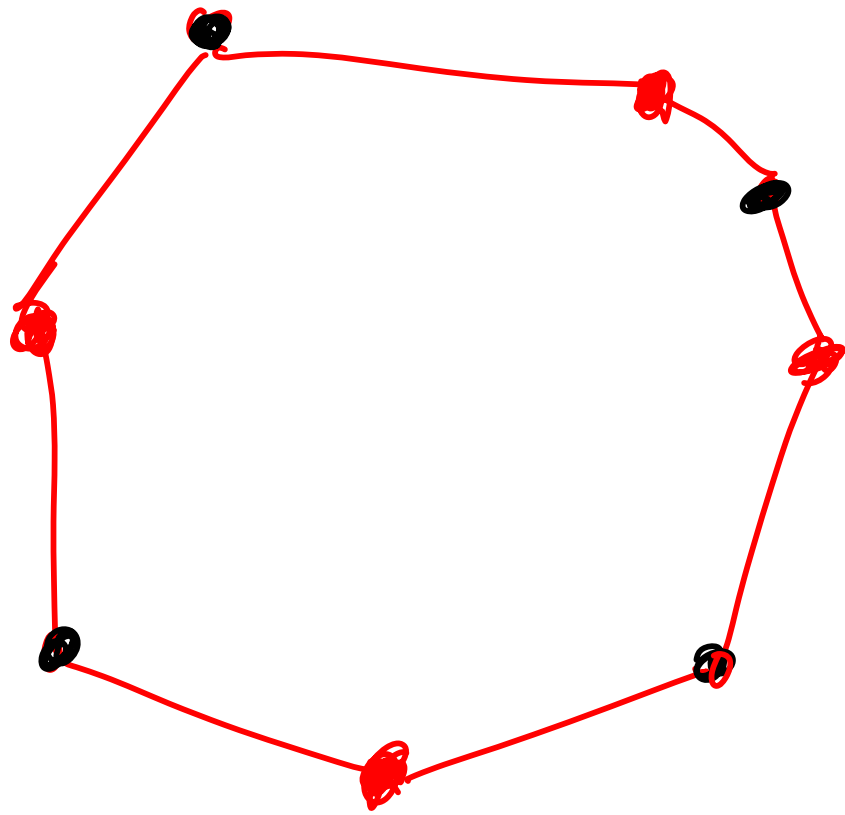
The complete graph K_n

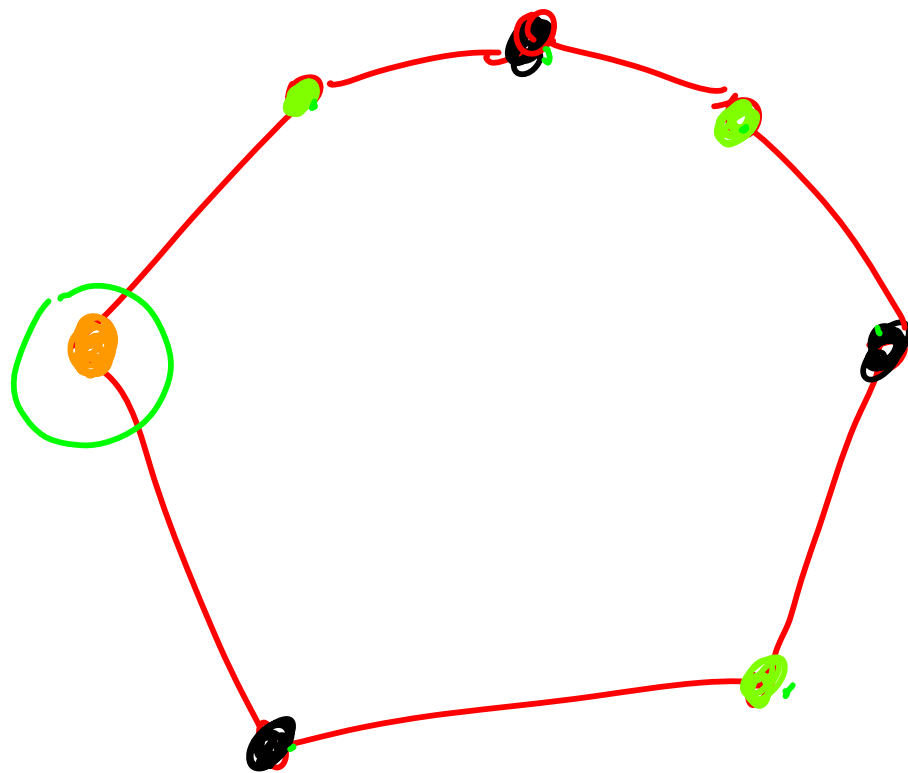
$$\chi(K_n) = n \checkmark$$

$$\chi(K_{n,n})$$

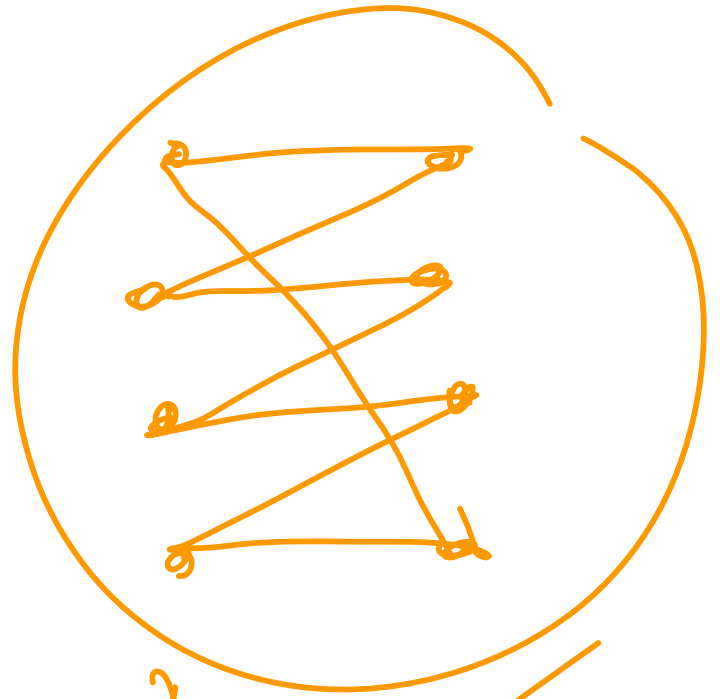
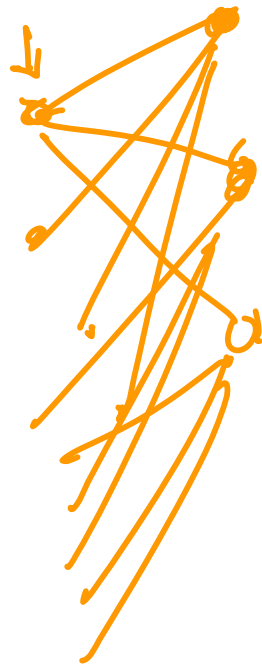




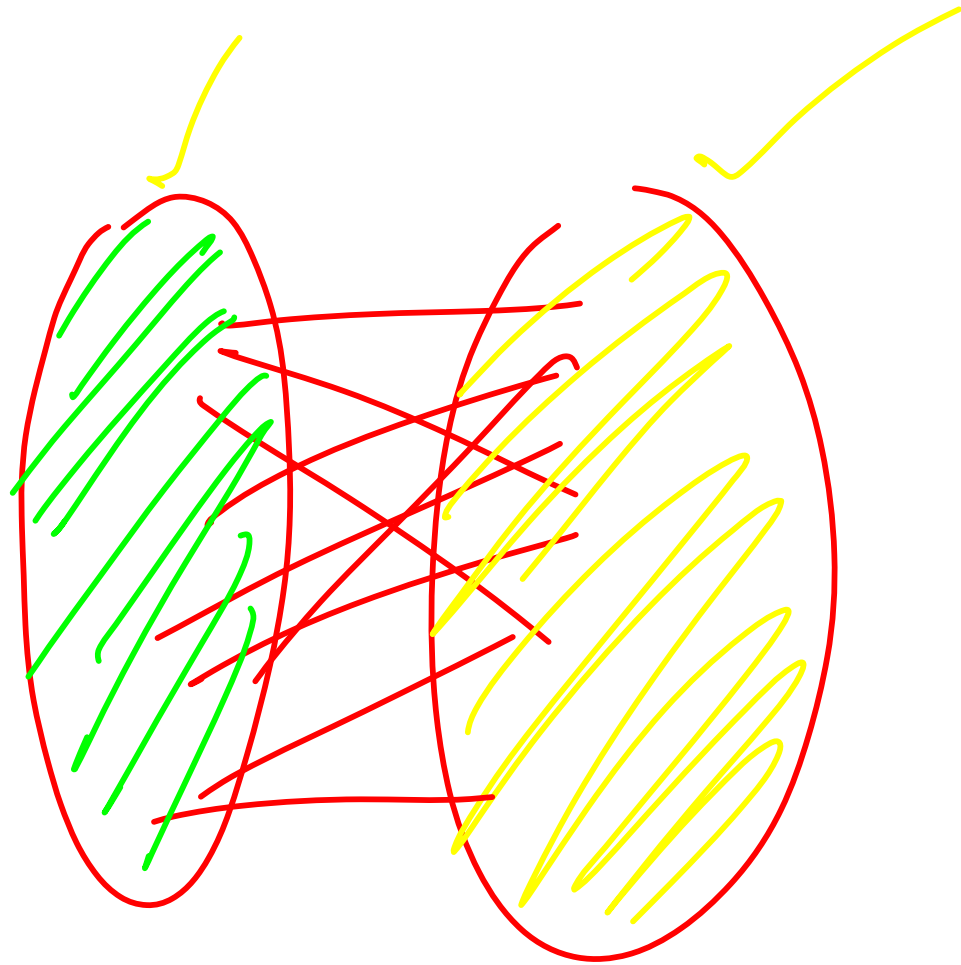




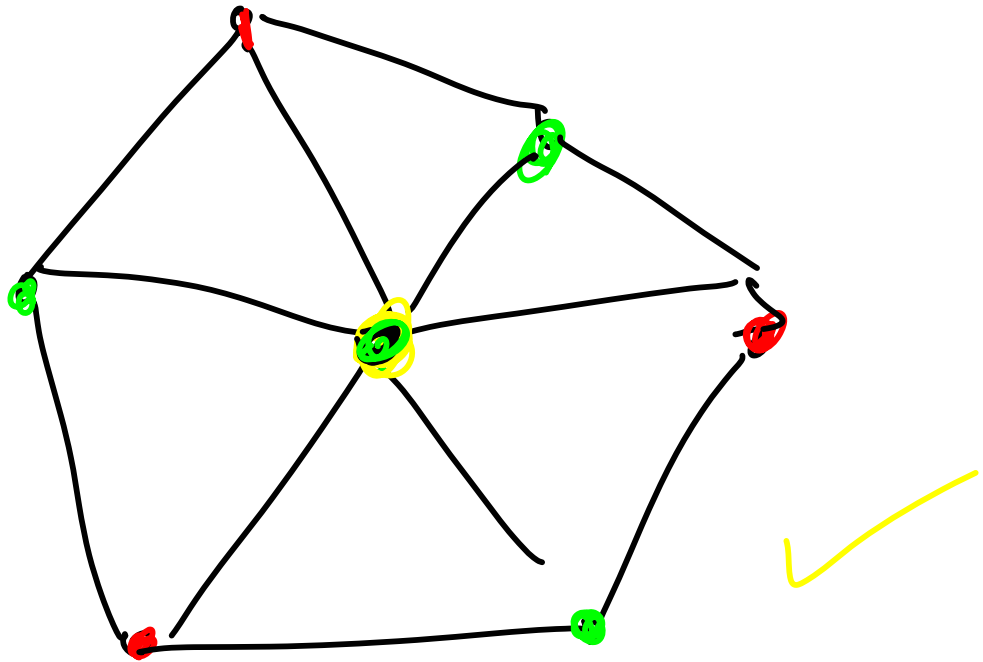
$$\chi(G_n) = 3$$



over
unde.

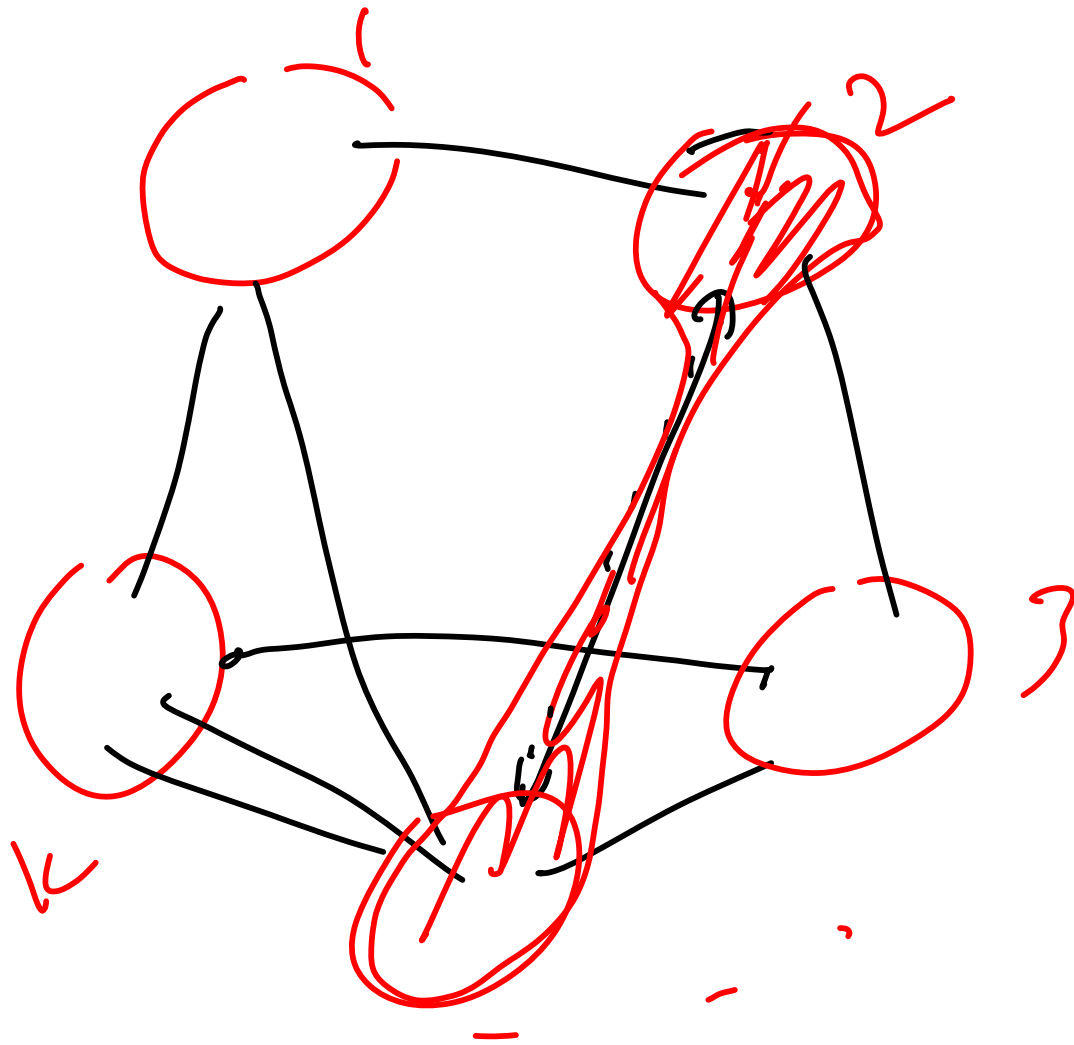


$$X(G) \cong \frac{h}{\alpha(G)}$$

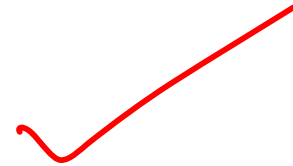


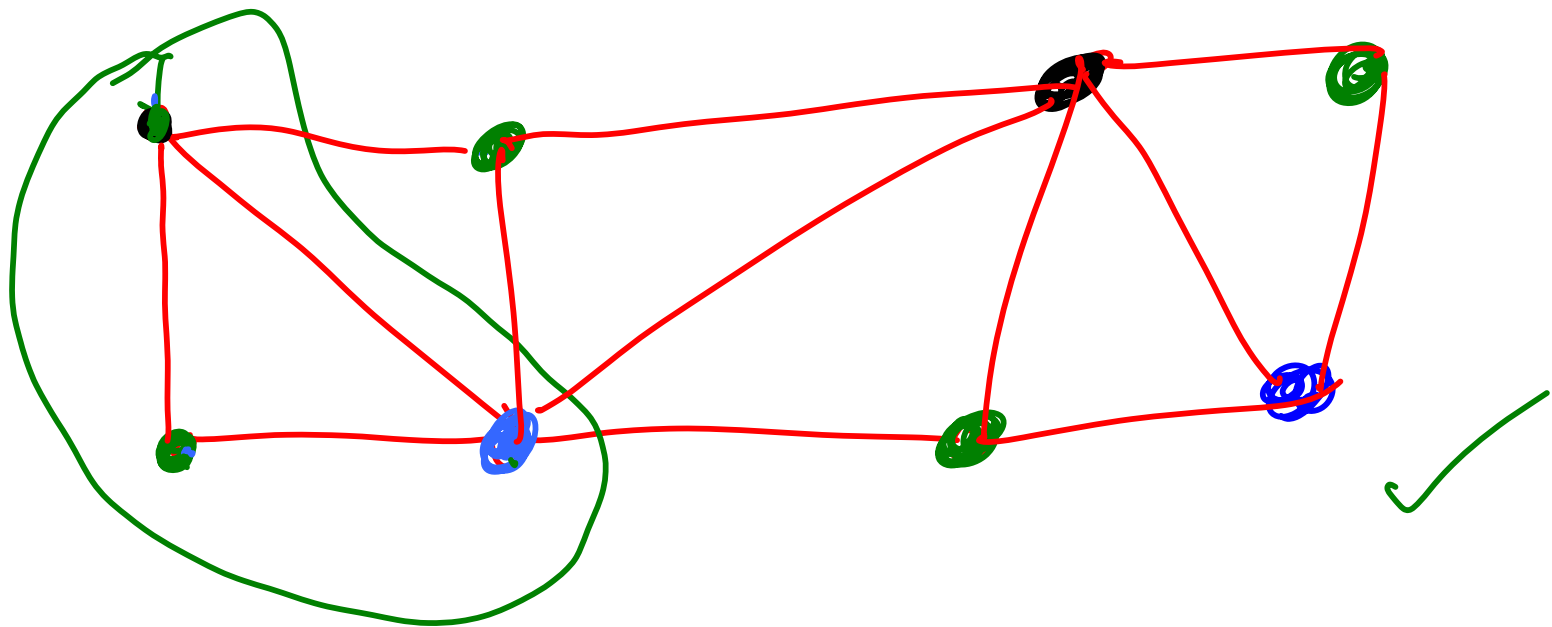
$$\chi(G) = k.$$

$$m \geq \frac{(k-1)k}{2}$$



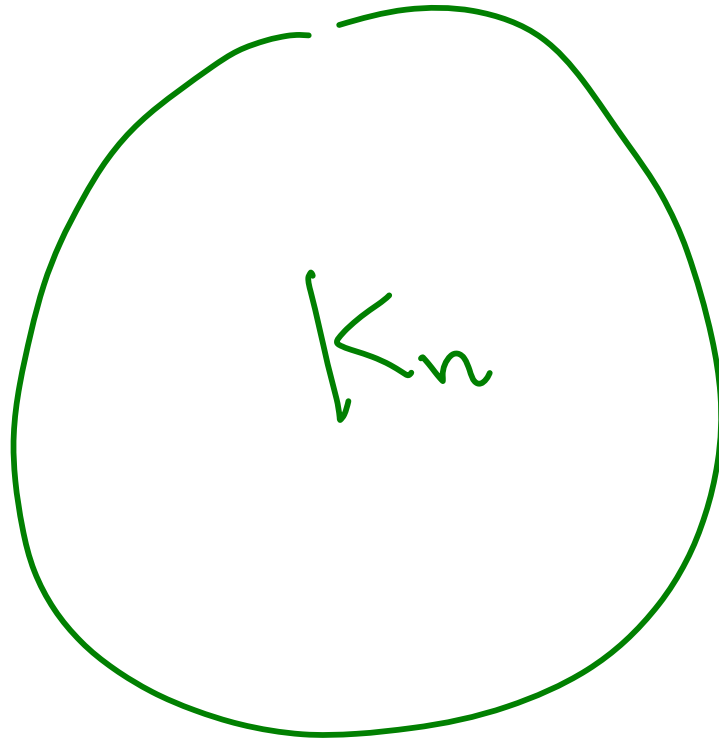
$$m \geq \binom{k}{2} = \frac{k(k-1)}{2}$$





$\Delta = \text{maximum degree}$

$\Delta + 1$ ✓

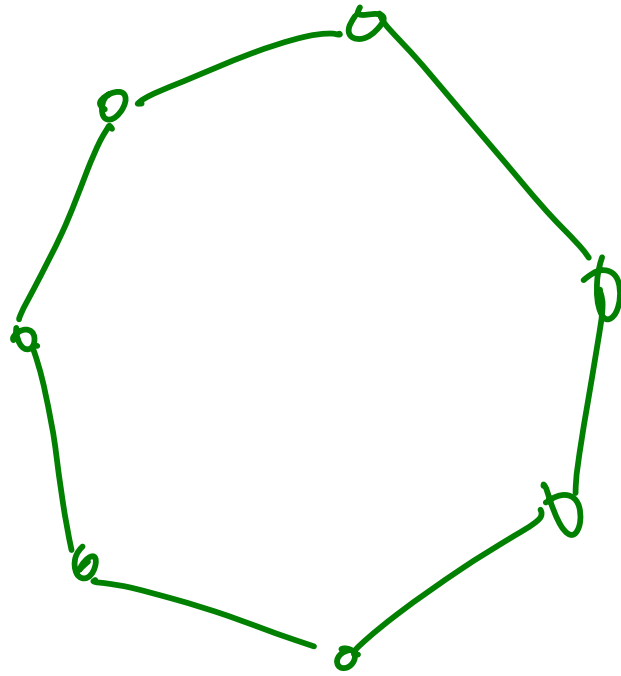


$$\Delta = n - 1$$



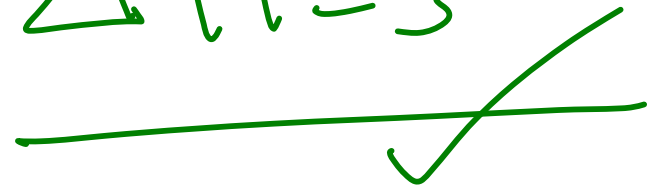
$$\Delta + 1 = n$$

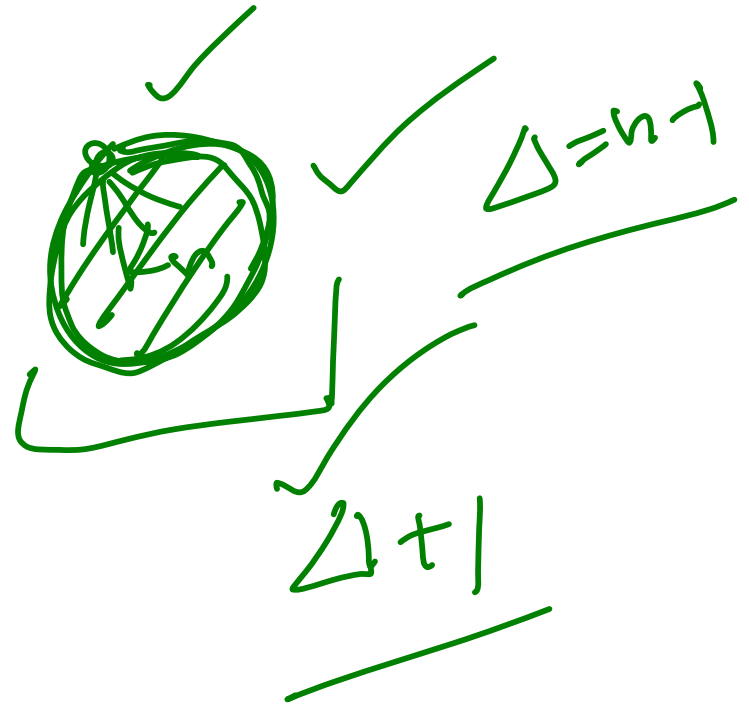
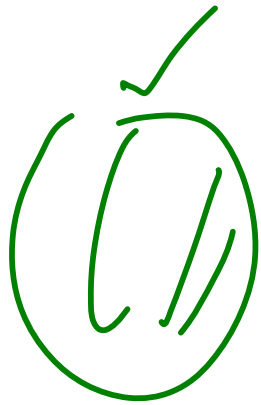
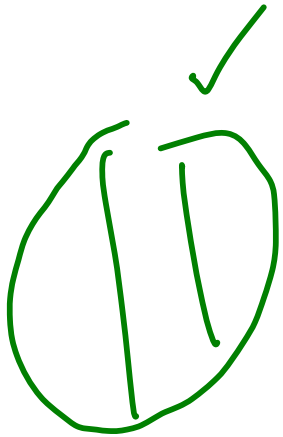




$$\Delta = 2$$

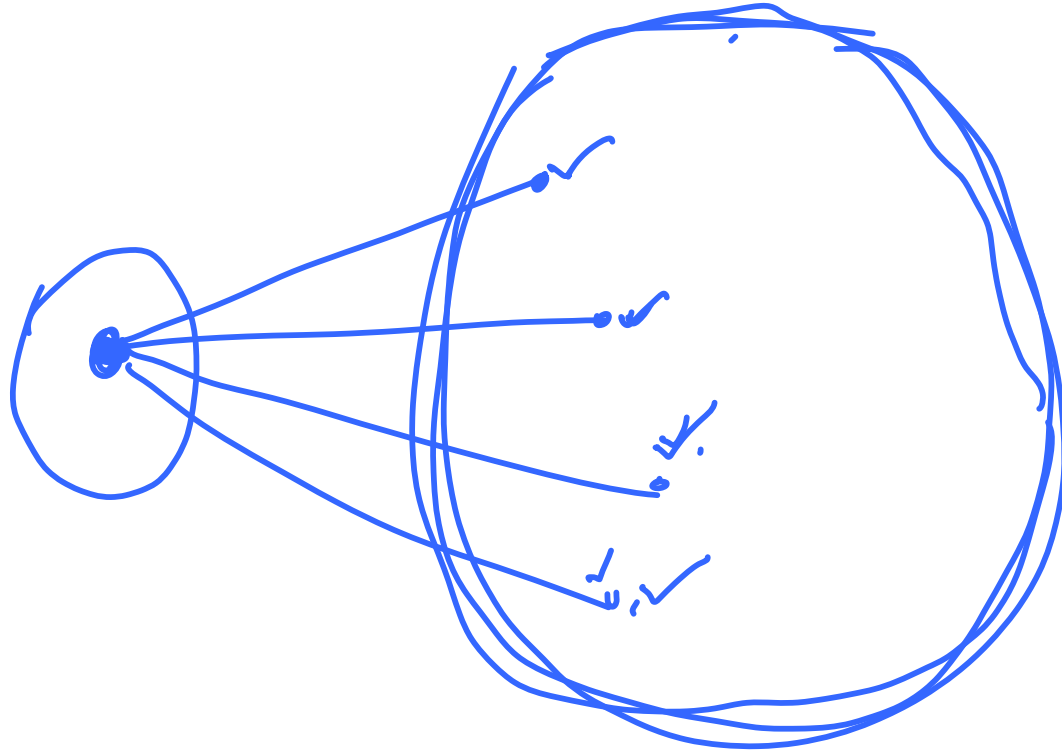
$$\Delta + 1 = 3$$

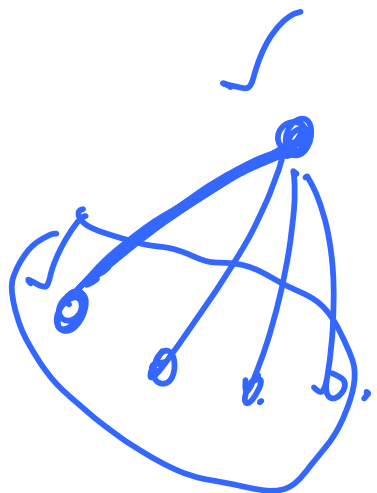




n vertices

Δ colors





$$\underline{\Delta - 1 + 1 = \Delta} \checkmark$$

