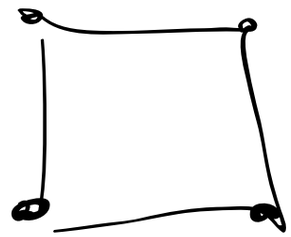
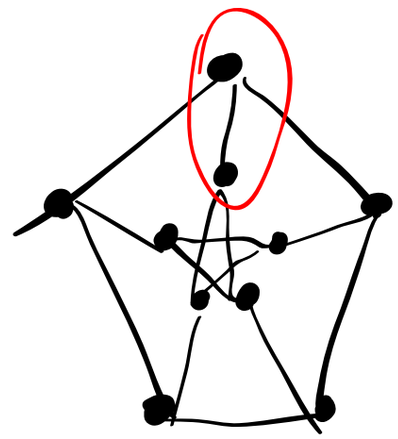
Vertices 10.



in → 7.



$$\binom{10}{4} = \frac{10 \cdot 9 \cdot 8 \cdot 7}{4 \cdot 3 \cdot 2 \cdot 1} = 210.$$

Ad Hoc

#1 By Tuesday

#2 By Thursday

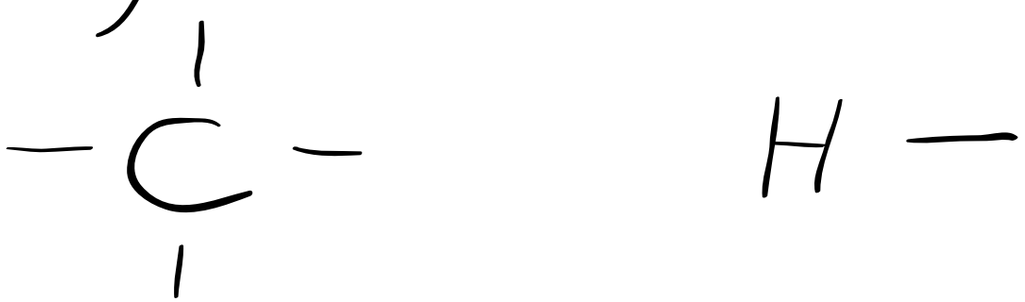
Isomers of "HC" molecules.

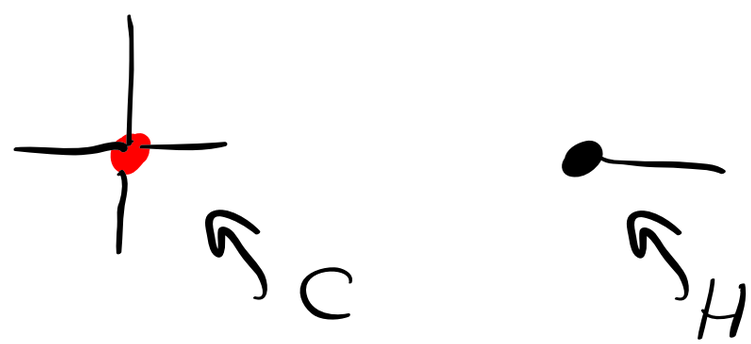
Same chemical formula, different chemical properties.

Ex: C_4H_{10} ⟶ n-butane
⟶ 2-methyl propane.

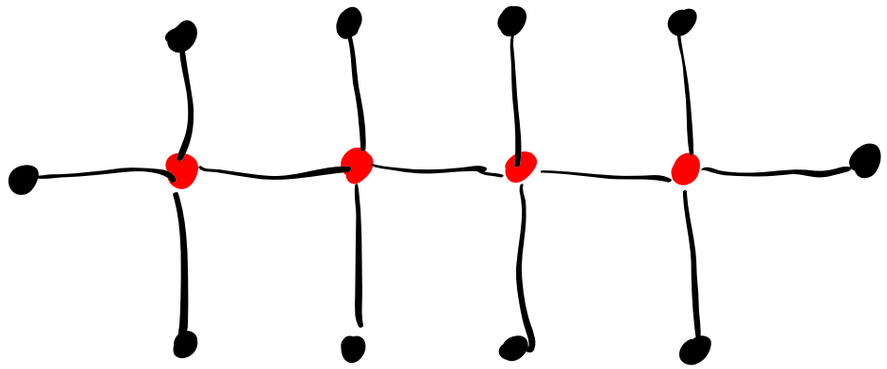
C: Carbon has "valence" 4. It has four "places" it can bond.

H: Hydrogen. has "valence" 1

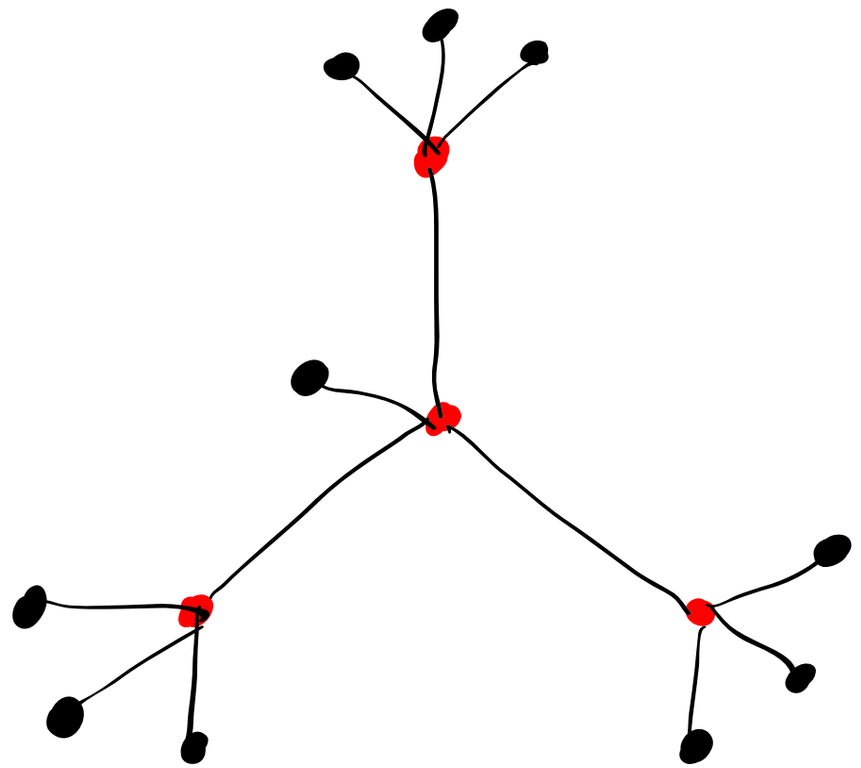




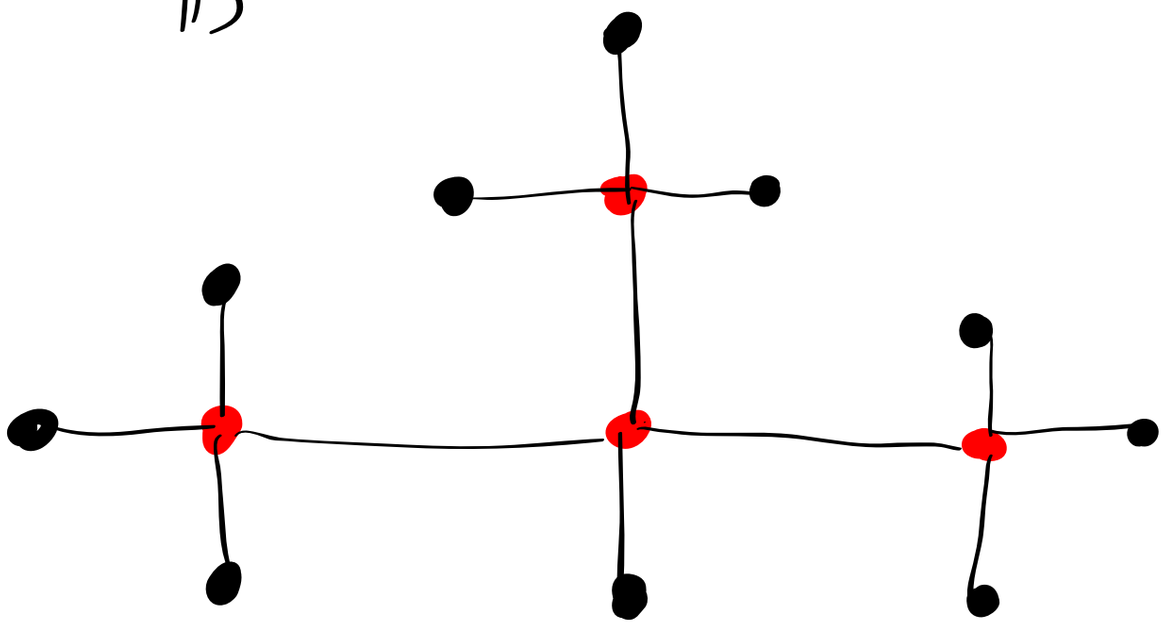
n-butane



2-methyl propane



IIS



Are there any other graphs, connected, simple, with degree sequence

$(1,1,1,1,1,1,1,1,1,1,4,4,4,4)$ ←

lose 10

① claim the C_4 subgraph must be connected.

pf:

deg is ≥ 2, All are red

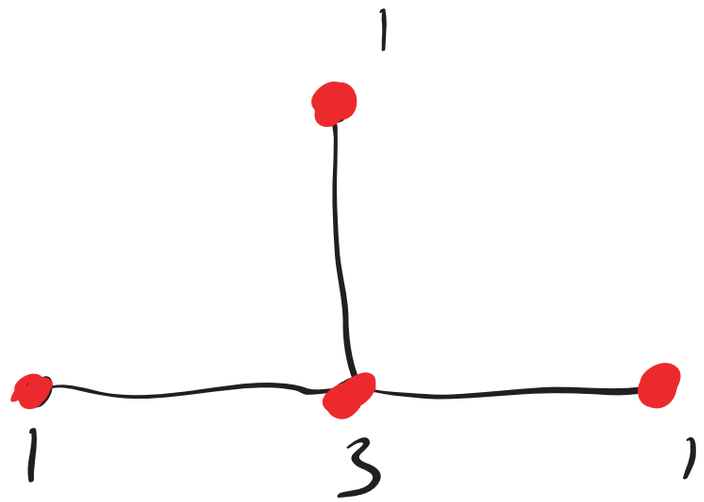
② What is the degree sequence of this subgraph?

(a,b,c,d) $a \le b \le c \le d$, $a+b+c+d = 6$

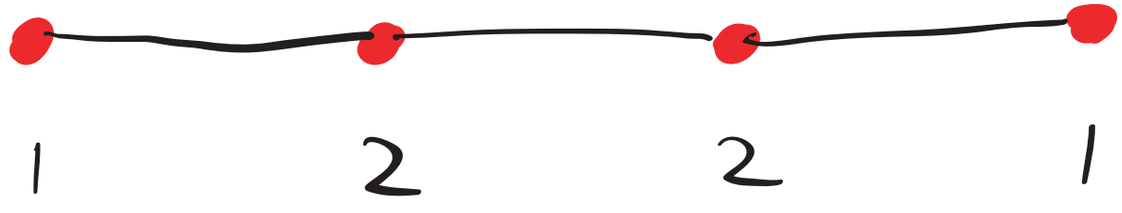
$(1,1,1,3)$ connected means $a,b,c,d \ge 1$.

$(1,1,2,2)$ ///

$(1, 1, 1, 3)$



$(1, 1, 2, 2)$



Now Add on $\mathbb{R}e\ H_{10}$: