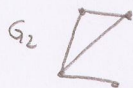


1) O que são grafos isomorfos?

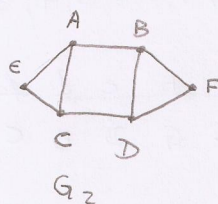
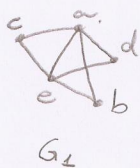
Grafos isomorfos são grafos equivalentes (iguais). O problema é identificar funções que $V_1 \xrightarrow{f} V_2$ \leftrightarrow $\{f(V_1) \xrightarrow{g(e)} f(V_2)\}$ e para isso não existe um critério para encontrá-lo, sendo assim precisamos recorrer a "força bruta".

2) Se isomorfos $\rightarrow |V|$ e $|E|$ é igual. Mostre que isso é falso.



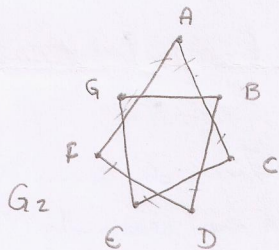
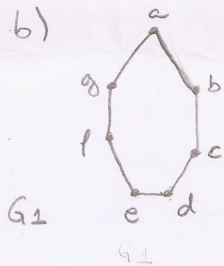
3) Verificar isomorfismo

a)



Não são isomorfos, $|V_{G_1}| \neq |V_{G_2}|$

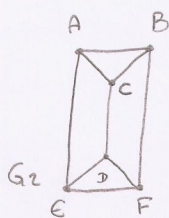
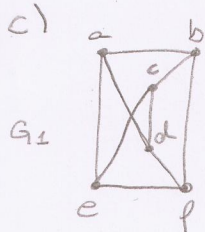
b)



| V | a | b | c | d | e | f |
|--------|---|---|---|---|---|---|
| $f(V)$ | A | F | D | B | G | E |

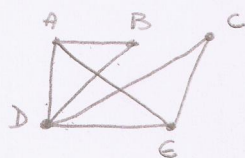
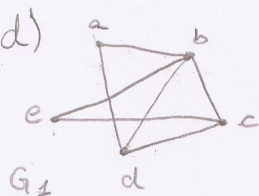
Isomorfos

c)

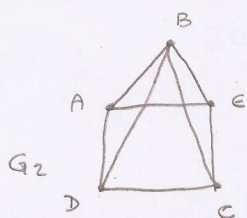
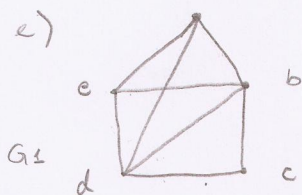


Não são isomorfos, G_1 não possui ciclos de comprimento 3.

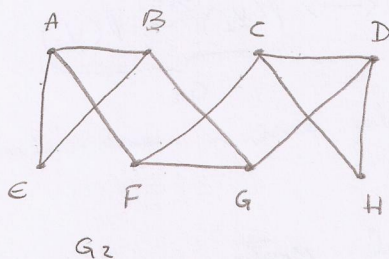
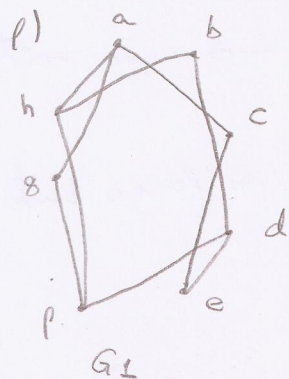
d)



| V | a | b | c | d | e |
|--------|---|---|---|---|---|
| $f(V)$ | B | D | A | E | C |



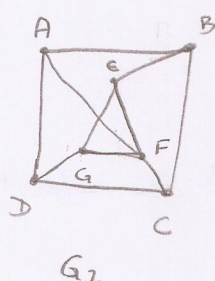
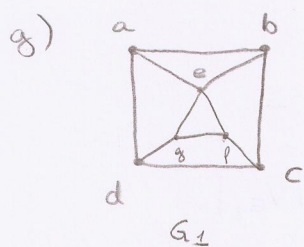
Não são isomorfos, a lista de graus não é equivalente, G_1 tem 2 vértices de grau 4 e G_2 tem somente 1.



$$L_{G_2} = (3, 3, 3, 3, 2, 3, 3, 2)$$

$$L_{G_1} = (3, 2, 2, 3, 2, 3, 2, 3)$$

Não são isomorfos, lista de graus diferentes.

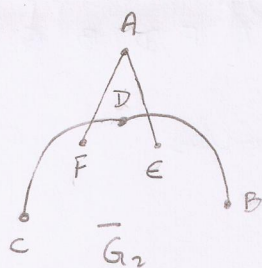
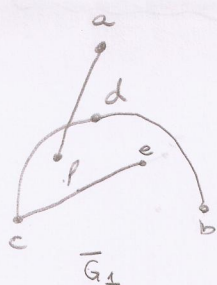


$$L_{G_1} = (3, 3, 3, 3, 4, 3, 3)$$

$$L_{G_2} = (3, 3, 3, 3, 3, 4, 3)$$

| V | e | a | b | c | d | f | g |
|------|---|---|---|---|---|---|---|
| p(v) | F | E | G | D | B | C | A |

h) $G_1 \cong G_2 \Leftrightarrow \bar{G}_1 \cong \bar{G}_2$



\bar{G}_1 os vértices de grau 2 são adjacentes, não ocorre no segundo, \therefore não são isomorfos.

