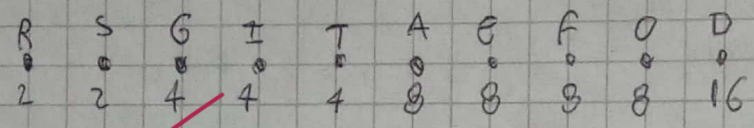
Ángel López, Giancarlo González

Taller 6 - Grafos

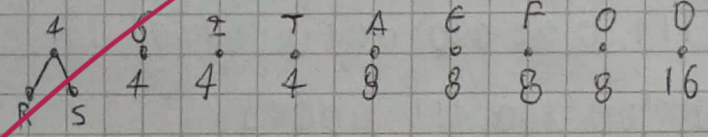
45

(2)

a)



1.



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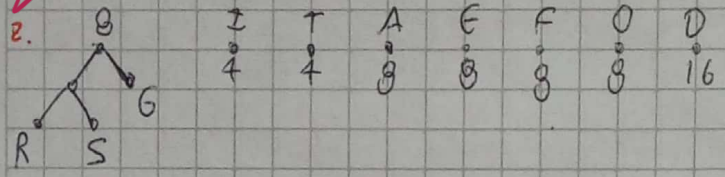
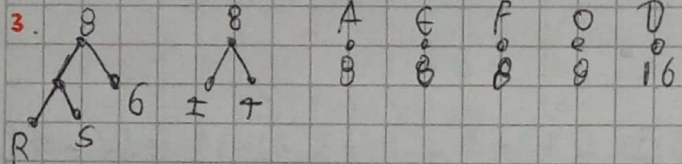


3.



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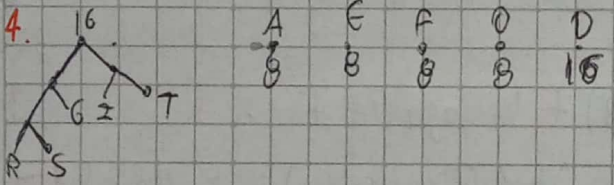

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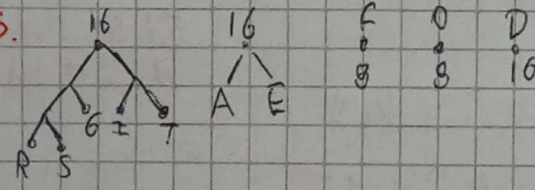

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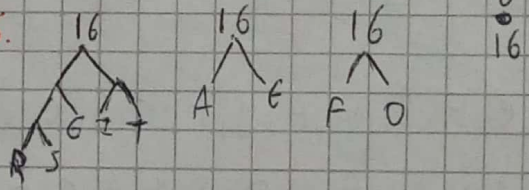
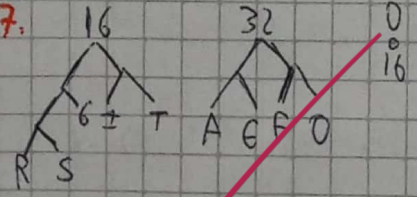


7.



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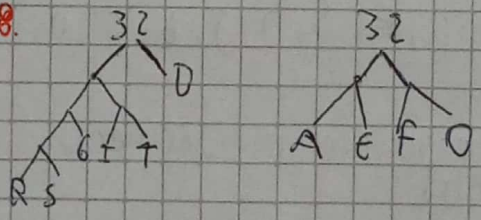

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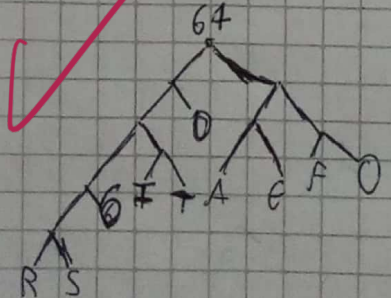

- R → 00000
- S → 00001
- G → 0001
- I → 0010
- T → 0011
- A → 100
- E → 101
- F → 110
- O → 111
- D → 01

→ TEORIA DE GRAFOS: 0011, 101, 111, 00000, 0010, 100, 01, 101...

...0001, 00000, 100, 110, 111, 00001

b)

	P_i	L_i		R_i	L_i
A	1/8	3	I	1/16	4
D	1/4	2	O	1/8	3
E	1/8	3	R	1/32	5
F	1/8	3	S	1/32	5
G	1/16	4	T	1/16	4

- Longitud esperada: $\sum P_i L_i = \frac{3}{8} + \frac{1}{2} + \frac{3}{8} + \frac{3}{8} + \frac{1}{4} + \frac{1}{4} + \frac{3}{8} + \frac{5}{32} + \frac{5}{32} + 1/4 = 49/16$

$= 3.0625$

- Entropía: $-\sum P_i \log_2 P_i = 4(1/8 \log_2 1/8) + 1/4 \log_2 1/4 + \ldots$

$\ldots + 3(1/16 \log_2 1/16) + 2(1/32 \log_2 1/32) = 3.0625$

Si se cumple la igualdad.

③

Preorder: a, b, e, k, l, m, f, g, n, r, s, c, d, h, o, i, j, p, q

Inorder: k, e, l, m, b, f, r, n, s, g, a, c, o, h, d, i, p, j, q

Posorder: k, l, m, e, f, r, s, n, g, b, c, q, h, i, p, q, j, d, a

④

a) Me diría que no tengo que revisar necesariamente todos los vértices y va a parar antes.

b) $S = \{a\}$

- $L(b) = \min\{L(b), L(a) + w(a,b)\} = 4$
- $L(c) = \min[L(c), L(a) + w(a,c) = 3$

a-d: 6

a-e: 7

a-f: 11

a-g: 12

a-z: 16