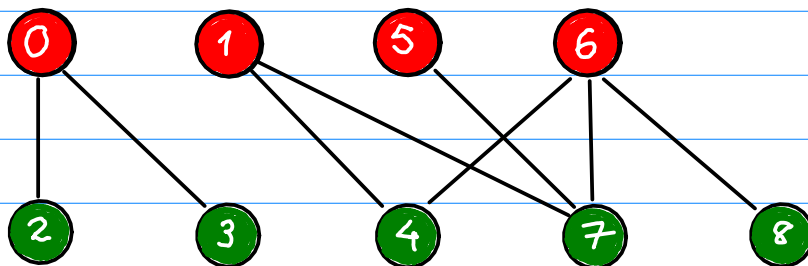


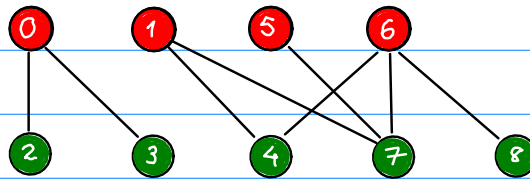
IF672cc 2019.2 - PROVA 2 - 21/11/2019

Q1

Passo	Fila	Cores								
		0	1	2	3	4	5	6	7	8
0	\emptyset	U	U	U	U	U	U	U	U	U
1	0	R	U	U	U	U	U	U	U	U
2	2,3	R	U	G	G	U	U	U	U	U
3	3	R	U	G	G	U	U	U	U	U
4	\emptyset	R	U	G	G	U	U	U	U	U
5	1	R	R	G	G	U	U	U	U	U
6	4,7	R	R	G	G	G	U	U	G	U
7	7,6	R	R	G	G	G	U	R	G	U
8	6,5	R	R	G	G	G	R	R	G	U
9	5,8	R	R	G	G	G	R	R	G	G
10	8	R	R	G	G	G	R	R	G	G
11	\emptyset	R	R	G	G	G	R	R	G	G



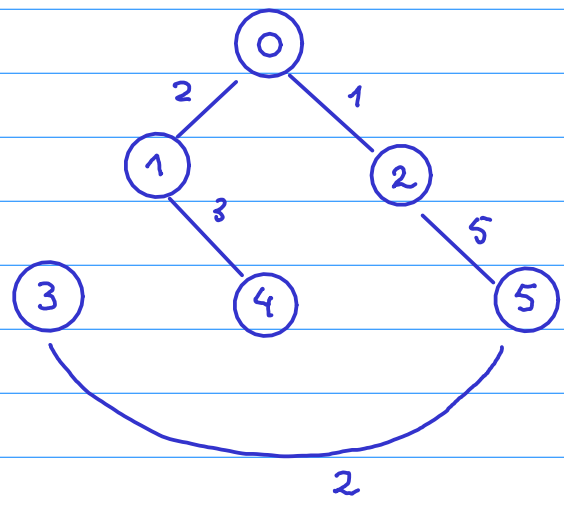
Q2



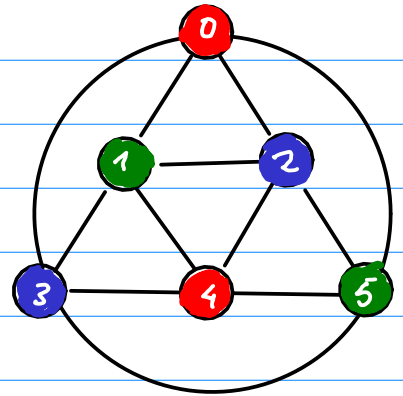
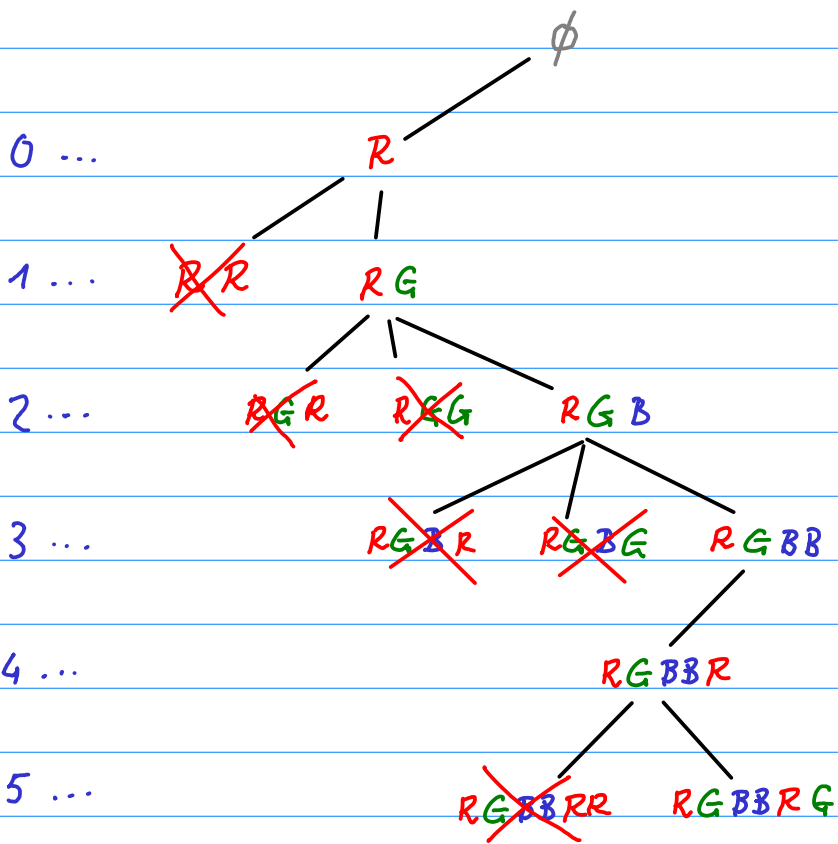
Aresta (u,v)	r _u r _v		F									UF								
	r _u	r _v	0	1	2	3	4	5	6	7	8	0	1	2	3	4	5	6	7	8
Início			⊥	⊥	⊥	⊥	⊥	⊥	⊥	⊥	⊥	0	1	2	3	4	5	6	7	8
0-2	0	2	2	⊥	0	⊥	⊥	⊥	⊥	⊥	⊥									
0-3	0	3	2	⊥	0	0	⊥	⊥	⊥	⊥	⊥			2						
1-4	1	4	2	4	0	0	1	⊥	⊥	⊥	⊥									
1-7	1	7	2	4	0	0	1	⊥	⊥	1	⊥								4	7
4-6	4	6	2	4	0	0	1	⊥	4	1	⊥			1						
5-7	5	4	2	4	0	0	1	7	4	1	⊥					1				
6-7	1	4	2	4	0	0	1	7	4	1	⊥									
6-8	1	8	2	4	0	0	1	7	4	1	6	0		1		2		4		

Q3

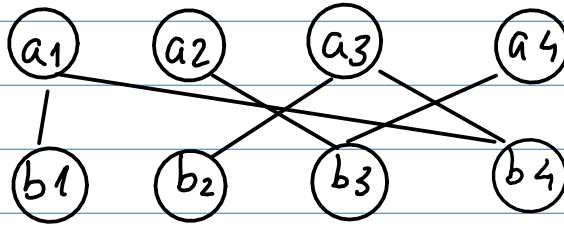
Iteração	Dist / Prec					
	0	1	2	3	4	5
0	0 -	∞ -	∞ -	∞ -	∞ -	∞ -
1	0 -	2,0	1,0	10,0	∞ -	7,0
2	0 -	2,0	1,0	10,0	6,2	6,2
3	0 -	2,0	1,0	10,0	5,1	6,2
4	0 -	2,0	1,0	9,4	5,1	6,2
5	0 -	2,0	1,0	8,5	5,1	6,2



Q4



Q5



(a) $S(0, j) = S(i, 0) = 0$

0,2 pt

(b) $S(i, j) = S(i-1, j)$

0,2 pt

(c) $S(i, j) = S(i, j-1)$

0,2 pt

(d) $S(i, j) = 1 + S(i-1, j-1)$

0,2 pt

(e) $S(i, j) = \max \begin{cases} S(i-1, j) \\ S(i, j-1) \\ e(i, j) + S(i-1, j-1) \end{cases}$

0,2 pt

onde $e(i, j) = \begin{cases} 1, & \text{se } (i, j) \in E \\ 0, & \text{se } (i, j) \notin E \end{cases}$

(f) Programação Dinâmica

0,2 pt

(g)

		b				
		0	1	2	3	4
a	0	0	0	0	0	0
	1	0	1	1	1	1
	2	0	1	1	2	2
	3	0	1	2	2	3
	4	0	1	2	3	3

0,8 pt