

Struktur I

1.

$$(x \geq 16) \text{ and } \neg (x < 17 \vee x > 19) \text{ and } (x \leq 20)$$

\Leftrightarrow

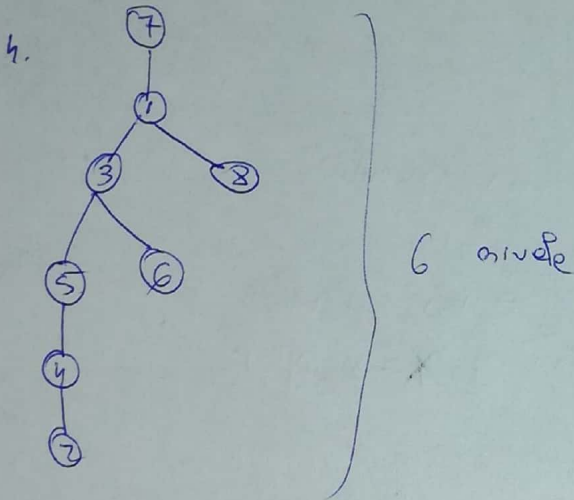
$$(x \geq 16) \text{ and } x \geq 17 \text{ and } x \leq 19 \text{ and } (x \leq 20)$$

(b)

2. $\{5, 4, 3, 1, 2\}, \{5, 4, 3, 2, 1\}$

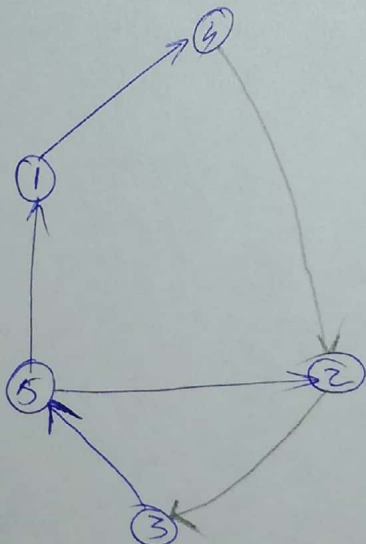
(c)

3. (a)



(c)

5.



(b)

Subiectul IV

1.

a) 2

b) 28 29

$$x_n = \frac{1 + (-2)^{n-1}}{3}$$

2. 4 10

3.

for(i=0; i<5; i++)

for(j=0; j<6; j++)

a[i][j] = 4*i + j + 1

c)

#include <iostream>

using namespace std;

int main()

{
int m, nr, x, y, r;
cin >> x; nr = 0;

for(int i = m; i > 0; i--)

{ x = 0; y = 1;

for(int j = 1; j <= i; j++)

{ r = 2*x - y; x = y; y = r; }

if(y > 0) nr++;

}

cout << nr;

return 0;

}

d)

exteste m

nr ← 0

i ← m

cat timp i ≥ 1 executa

x ← y; y ← 1

pentru j ← 1; executa

r ← 2*x - y; ~~x~~ ← y; y ← r

□

doar y > 0 atunci

nr ← nr + 1

□

i ← i - 1

□

scrie nr