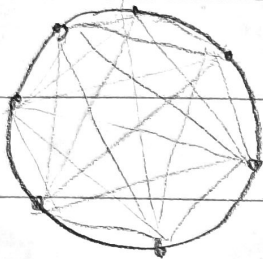


08.02.2021.

1. $\{-1, 0, 1\}$ $5 \times 5 \Rightarrow$ збирова иду од -5 до 5
(укупно 11 збирова)
5 редова, 5 колона, 2 дијагонале

$$12 \text{ збирова} = 11 + 1$$

2.



број итежица $\binom{n}{2} = \frac{n(n-1)}{2}$ \checkmark сигурно 2 итежа збира

- итаку одређују итежи итаке од n
 \Rightarrow итака ита $\binom{n}{4}$

3. $A = \{0, 1, 2\} \Rightarrow$ укупан др. збир 3^n

$$S_0 \rightarrow \text{кема } 0 : N(S_0) = 2^n = N(S_1) = N(S_2)$$

$$S_0, S_1 \rightarrow \text{кема } 0 \text{ и } 1 : N(S_0 S_1) = 1 = N(S_0 S_2) = N(S_1 S_2)$$

$$S_0, S_1, S_2 \rightarrow \text{кема } 0, 1 \text{ и } 2 : N(S_0 S_1 S_2) = 0$$

$$\Rightarrow N(S_0' S_1' S_2') = 3^n - 3 \cdot 2^n + 3 - 0$$

4. $f_n = 6f_{n-1} + 9f_{n-2} = 3$, $n \geq 2$ $f_0 = 1$ $f_1 = 3$

$$t^2 - 6t + 9 = 0$$

$$(t-3)^2 = 0 \Rightarrow t = 3$$

$$f_n^{(p)} = n^2 \cdot C \cdot t^n = C$$

$$f_n^{(u)} = (An + B) \cdot 3^n$$

$$C - 6C + 9C = 3$$

$$4C = 3 \Rightarrow C = \frac{3}{4}$$

$$f_n^{(p)} = \frac{3}{4}$$

$$f_n = (An + B) \cdot 3^n + \frac{3}{4}$$

$$f_0 = 1 = B + \frac{3}{4} \Rightarrow B = \frac{1}{4}$$

$$f_1 = 3 = 3A + \frac{3}{4} + \frac{3}{4} = 3A + \frac{3}{2} \Rightarrow 1 = A + \frac{1}{2} \Rightarrow A = \frac{1}{2}$$

$$f_n = \left(\frac{1}{2}n + \frac{1}{4}\right) \cdot 3^n + \frac{3}{4}$$