22.09.2021.

1. уопштити ДП : 10 цифара 21 позиција

$\Rightarrow 21 = 2 \cdot 10 + 1$

↳ дар 3 мисс (не ваши за 20)

2. $\binom{5}{3}\binom{5}{4} + \binom{5}{4}\binom{5}{3} + \binom{5}{5}\binom{5}{2}$

3. број графова $2^{\binom{5}{2}}$ ↳ број потпуних ↳ има нпр страна

$N(S_a) = N(S_b) = \ldots = 2^{\binom{5-1}{2}}$ → изоловани 1

$N(S_aS_b) = \binom{5}{1} \cdot N = 2^{\binom{5-2}{2}}$ - изоловане 2

$N(S_aS_bS_c) = \ldots = 2^{\binom{5-3}{2}} = 2$ - изоловане 3

$N(S_aS_bS_cS_d) = 1 \quad N(S_aS_bS_cS_d S_e) = 1$

$N(S_a'S_b'S_c'S_d') = 2^{\binom{5}{2}} - \binom{5}{1}2^{\binom{4}{2}} + \binom{5}{2}2^{\binom{3}{2}} - \binom{5}{3}2^{\binom{2}{2}} + \binom{5}{4} - \binom{5}{5}$

4. $f_{n+2} + 4f_{n+1} + 4f_n = 7 \quad f_0 = 1 \quad f_1 = 2$

$t^2 + 4t + 4 = 0$ ← карактер. једн

$(t+2)^2 = 0 \Rightarrow t_1 = -2 = t_2$

$f_n^{(H)} = (An + B)(-2)^n$

$f_n^{(P)} = n^0 C \cdot 1^n = C$

$C + 4C + 4C = 7 \Rightarrow B = \frac{7}{9}$

$f_n^{(P)} = \frac{7}{9}$

$f_n = (An + B)(-2)^n + \frac{7}{9}$

$f_0 = 1 = B + \frac{7}{9} \Rightarrow B = \frac{2}{9}$

$f_1 = 2 = \left(A + \frac{2}{9}\right)(-2) + \frac{7}{9} = -2A - \frac{4}{9} + \frac{7}{9} = -2A + \frac{3}{9} = -2A + \frac{1}{3}$

$\Rightarrow -2A = \frac{5}{3} \Rightarrow A = -\frac{5}{6}$

$f_n = \left(-\frac{5}{6}n + \frac{2}{9}\right)(-2)^n + \frac{7}{9}$