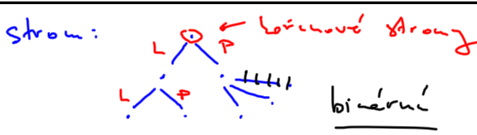


strom:  binární

$n=1$ 1

$n=2$ 2

$n=3$ 5

$b_3 = b_0 b_2 + b_1 b_1 + b_2 b_0$

2 1 2

5 15-15:56

$\{ \text{postupnosti} \} \leftrightarrow \{ \text{řady} \}$

$\downarrow 0, \dots, 0 \quad \downarrow x^k$

$a_0, a_1, \dots \leftrightarrow a_0 + a_1 x + a_2 x^2 + \dots$

$a_0, a_1, a_2, \dots \leftrightarrow a_0 + a_1 x + \frac{1}{2} a_2 x^2 + \frac{1}{3!} a_3 x^3 + \dots$

postupnost $1, 1, 1, \dots \mapsto 1 + x + x^2 + x^3 + \dots$

$= \frac{1-x}{1-x}$

$1, 1, 1, \dots \mapsto 1 + x + \frac{1}{2} x^2 + \frac{1}{3!} x^3 + \frac{1}{4!} x^4 + \dots$

$= e^x$

5 15-16:22

$a_n = 5a_{n-1} - 6a_{n-2} + [n=1]1$

pek: $n=0: a_0=0$

$\sum_{n=0}^{\infty} a_n x^n = 5a_{n-1} x^{n-1} \cdot x - 6a_{n-2} x^{n-2} \cdot x^2 + [n=1]x$

$A(x) = 5x \cdot A(x) - 6x^2 A(x) + x$

$A(x)(6x^2 - 5x + 1) = x$ $\Rightarrow \frac{x}{1-2x} + \frac{x}{1-3x}$

$A(x) = \frac{x}{6x^2 - 5x + 1}$

5 15-16:32

$\lim_{x \rightarrow 0} \frac{1 - \sqrt{1-4x}}{2x} = \lim_{x \rightarrow 0} \frac{1 + \frac{1}{2}(1-4x)^{1/2}}{2} = 1$

5 15-17:07

$n=1$ 1

$n=2$ 1

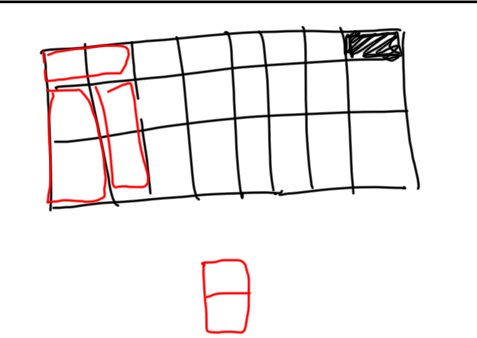
$n=3$ 3

$n=4$ 20-4=16

$t_n = \sum_{m=0}^{n-1} \frac{1}{m!} \sum_{\substack{\xi_1, \dots, \xi_m \\ \xi_1 + \dots + \xi_m = n-1}} \binom{n-1}{\xi_1, \dots, \xi_m} \xi_1 \dots \xi_m \dots t_{\xi_1} \dots t_{\xi_m}$

$\xi=3$ ~~$\frac{1}{3!} t_3$~~ ~~$\frac{3!}{3!} t_3$~~ ~~$\frac{3!}{3!} t_3$~~ $2 \frac{1}{2} \frac{3!}{3!} t_3 \cdot t_1 t_2$

5 15-17:18



5 15-17:34