$f: \mathbb{R} \to \mathbb{R}, \mathbb{C} \rightsquigarrow$ Taylorova řada

$f(x) = f(x_0) + f'(x_0)(x-x_0) + \frac{1}{2} f''(x_0)(x-x_0)^2 + \dots$

$x = x_0 + h$

$\boxed{(1 + x + x^2 + \dots + x^k)(1-x) = 1 - x^{k+1}}$ / lim $k \to \infty$

$F(x) = 1 + x + x^2 + \dots \rightsquigarrow (1, 1, 1, 1, \dots)$

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

$\frac{1}{1-\lambda x} = 1 + \lambda x + \lambda^2 x^2 + \dots$

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$a_0 + a_1 x + a_2 x^2 + \dots \qquad x := y^3$

$a_0 + a_1 y^3 + a_2 y^6 + \dots$

$(a_0, a_1, a_2, \dots) \mapsto (a_0, 0, 0, a_1, 0, 0, a_2, \dots)$

$\int (a_0 + a_1 x + \dots)\, dx = a_0 x + \frac{1}{2} a_1 x^2 + \dots$

$\frac{1}{(1-x)^3} = \binom{2}{2} + \binom{3}{2} x + \binom{4}{2} x^2 + \dots$

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$x_{n+1} = a x_n \qquad x_0, x_1 = a x_0, x_n = a^n x_0, \dots$

$[M=3]\ F(x) \quad + (c_0, c_1, \dots) \sim F(x)$

$- (0, c_0, c_1, \dots) \sim x F(x)$

$- (0, 0, c_0, \dots) \sim x^2 F(x)$

$x_{n+2} = x_n + x_{n+1} \quad 0 \times 0 \longrightarrow$ samé nuly

$x_0 = 0 \quad x_1 = 1$

$\boxed{F(x) = a \lambda_1^n + a \lambda_2^n}$

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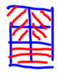

$\hat{B}(x) = \sum_{n \geq 0} a_n \boxed{b_n x^n}$ např. $b_n = \frac{1}{n!}$

$e^x = \sum \frac{x^n}{n!}$

$\hat{A}(x) = \sum a_n \frac{x^n}{n!}$

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