$a_0 = \cdots$

$a_n = f(n, a_{n-1}, \mathbf{p})$

$a_n = f(n, a_{n-1}, a_{n-2}, \ldots, a_{n-k}, \mathbf{p})$

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$\lim_{\varepsilon \to 0} \frac{(1+\varepsilon)^p - 1}{\varepsilon} = p$

$|x| < 1$

$(1+x)^n = 1 + x \cdot n + \cdots$

***

$a_0 = 1$

$a_n = \frac{x^n}{n!} = f(n, a_{n-1}; \mathbf{p}) = a_{n-1} \cdot \frac{x}{n}$

$\frac{x^n}{n!} = \frac{x^{n-1} \cdot x}{(n-1)! \cdot n} = \frac{x^{n-1}}{(n-1)!} \cdot \frac{x}{n}$

***

$$D_5 = \begin{vmatrix} b & c & 0 & 0 & 0 \\ a & b & c & 0 & 0 \\ 0 & a & b & c & 0 \\ 0 & 0 & a & b & c \\ 0 & 0 & 0 & a & b \end{vmatrix} = b \cdot \begin{vmatrix} b & c & 0 & 0 \\ a & b & c & 0 \\ 0 & a & b & c \\ 0 & 0 & a & b \end{vmatrix} - c \cdot \begin{vmatrix} a & c & 0 & 0 \\ 0 & b & c & 0 \\ 0 & a & b & c \\ 0 & 0 & a & b \end{vmatrix} =$$

$$= b \cdot D_4 - c \cdot \begin{vmatrix} a & c & 0 & 0 \\ 0 & b & c & 0 \\ 0 & a & b & c \\ 0 & 0 & a & b \end{vmatrix} = b \cdot D_4 - c \cdot a \cdot \begin{vmatrix} b & c & 0 \\ a & b & c \\ 0 & a & b \end{vmatrix} = b \cdot D_4 - c \cdot a \cdot D_3$$

$D_1 = b$

$$D_2 = \begin{vmatrix} b & c \\ a & b \end{vmatrix} = b^2 - ac$$

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