

$$\beta_1 - \beta_0 \in \mathbb{N} + 1$$

$$x \underline{1} - \underline{4+x} \underline{1} + 2\gamma = 0 \begin{cases} \gamma_0 = 1 + \frac{1}{2}x + \frac{1}{12}x^2 & \beta_0 = 0 \\ \gamma_1 = x^5 \sum_n^{\mathbb{N}} x^n \frac{3 \cdot 4 \cdot 5}{(3+n)(4+n)(5+n)} & \beta_1 = 5 \end{cases}$$

$$x^2 \underline{1} + 2x \underline{x-2} \underline{1} + 2 \underline{2-3x} \gamma = 0 \begin{cases} \gamma_0 = x - 2x^2 + 2x^3 & \beta_0 = \\ \gamma_1 = 6 \sum_n^{\mathbb{N}} x^{n+4} \frac{(-2)^n}{(n+3)!} & \beta_1 = \end{cases}$$

$$x^2 \underline{1+2x} \underline{1} + 2x \underline{1+6x} \underline{1} - 2\gamma = 0 \begin{cases} \gamma_0 = x^{-2} - 6x^{-1} + 24 & \beta_0 = \\ \gamma_1 = \frac{x}{20} \sum_n^{\mathbb{N}} (-2x)^n (n+4)(n+5) & \beta_1 = \end{cases}$$

$$x^2 \underline{1} + x \underline{2+3x} \underline{1} - 2\gamma = 0 \begin{cases} \gamma_0 = x^{-2} - 3x^{-1} + 9/2 & \beta_0 = \\ \gamma_1 = 6x \sum_n^{\mathbb{N}} \frac{(-3x)^n}{(n+2)!} & \beta_1 = \end{cases}$$

$$x \underline{1} - \underline{3+x} \underline{1} + 2\gamma = 0 \begin{cases} \gamma_0 = 1 + \frac{2}{3}x + \frac{1}{6}x^2 & \beta_0 = \\ \gamma_1 = 24 \sum_n^{\mathbb{N}} x^{n+4} \frac{n+1}{(n+4)!} & \beta_1 = \end{cases}$$

$$x \underline{1+x} \underline{1} + \underline{x+5} \underline{1} - 4\gamma = 0 \begin{cases} \gamma_0 = x^{-4} + 4x^{-3} + 5x^{-2} & \beta_0 = \\ \gamma_1 = 1 + \frac{4}{5}x + \frac{1}{5}x^2 & \beta_1 = \end{cases}$$

$$x^2 \underline{1} + x^2 \underline{1} - 2\gamma = 0 \begin{cases} \gamma_0 = x^{-1} - \frac{1}{2} & \beta_0 = \\ \gamma_1 = 6 \sum_n^{\mathbb{N}} x^{n+2} \frac{-1^n (n+1)}{(n+3)!} & \beta_1 = \end{cases}$$

$$x \underline{1-x} \underline{1} - 3 \underline{1} + 2\gamma = 0 \begin{cases} \gamma_0 = 1 + \frac{2}{3}x + \frac{1}{3}x^2 & \beta_0 = \\ \gamma_1 = \sum_n^{\mathbb{N}} x^{n+4} (n+1) & \beta_1 = \end{cases}$$

$$x \underline{1} + \underline{4+3x} \underline{1} + 3\gamma = 0 \begin{cases} \gamma_0 = x^{-3} - 3x^{-2} + \frac{9}{2}x^{-1} & \beta_0 = \\ \gamma_1 = 6 \sum_n^{\mathbb{N}} x^n \frac{(-3)^n}{(n+3)!} & \beta_1 = \end{cases}$$

$$\begin{aligned}
x \underline{\eta} - 2 \underline{x+2} \underline{\eta} + 4 \eta = 0 & \begin{cases} \gamma_0 = 1 + x + \frac{1}{3}x^2 & \beta_0 = \\ \gamma_1 = x^5 \sum_n^{\mathbb{N}} x^{\lambda} \frac{2^n 60}{(n+3)(n+4)(n+5)} & \beta_1 = \end{cases} \\
x \underline{\eta} + \underline{3+2x} \underline{\eta} + 4 \eta = 0 & \begin{cases} \gamma_0 = x^{-2} & \beta_0 = \\ \gamma_1 = 2 \sum_n^{\mathbb{N}} x^{\lambda} \frac{(-2)^n}{n+2} & \beta_1 = \end{cases} \\
x \underline{x+3} \underline{\eta} - 9 \underline{\eta} - 6 \eta = 0 & \begin{cases} \gamma_0 = 1 - \frac{2}{3}x + \frac{1}{3}x^2 - \frac{4}{27}x^3 & \beta_0 = \\ \gamma_1 = \frac{1}{5} \sum_n^{\mathbb{N}} x^{n+4} \frac{n+5}{(-3)^n} & \beta_1 = \end{cases} \\
x \underline{1-2x} \underline{\eta} - 2 \underline{2+x} \underline{\eta} + 8 \eta = 0 & \begin{cases} \gamma_0 = 1 + 2x + 2x^2 & \beta_0 = \\ \gamma_1 = \frac{1}{12} \sum_n^{\mathbb{N}} x^{n+5} 2^n (n+1)(n+2)(n+6) & \beta_1 = \end{cases} \\
x \underline{\eta} + \underline{x^3-1} \underline{\eta} + x^2 \eta = 0 & \begin{cases} \gamma_0 = \sum_m^{\mathbb{N}} x^{3m} \frac{(-1/3)^m}{m!} & \beta_0 = \\ \gamma_1 = \sum_m^{\mathbb{N}} x^{3m+2} \frac{(-1/3)^m}{(5/3)_m} & \beta_1 = \end{cases} \\
x^2 \underline{4x-1} \underline{\eta} + x \underline{5x+1} \underline{\eta} + 3 \eta = 0 & \begin{cases} \gamma_0 = x^{-1} - 1 & \beta_0 = \\ \gamma_1 = 12x^3 \sum_n^{\mathbb{N}} x^{\lambda} 4^n (13/4)_n (n+3)(n+4) & \beta_1 = \end{cases}
\end{aligned}$$