$$\frac{1}{\pi} = \frac{\sqrt{8}}{99^2} \sum_{n=0}^{\infty} \frac{(4n)!}{(4^n n!)^4} \frac{1103 + 26390n}{99^{4n}}$$

$$a_{n+1} = C_n a_n$$

$$C_n = \frac{(4n+1)(4n+2)(4n+3)}{4^3 (n+1)^3} \left(\frac{1}{99^4} + \frac{26390}{99^4 (1103 + 26390n)} \right)$$

$$a_0 = \frac{\sqrt{8}}{99^2} \frac{(4.0)!}{(4^0 0!)^4} \frac{1103 + 26390.0}{99^{4.0}} = \frac{\sqrt{8}}{99^2} \cdot 1103 \approx 0,318309878$$

$$a_1 = \frac{\sqrt{8}}{99^2} \frac{(4.1)!}{(4^1 1!)^4} \frac{1103 + 26390}{99^4} = \frac{\sqrt{8}}{99^2} \frac{2.3.\cancel{4}}{4^{\cancel{4}3}} \frac{27493}{99^4} = \frac{\sqrt{8}}{99^2} \cdot \frac{6}{4^3} \cdot \frac{27493}{99^4}$$

$$\approx 0,000000008$$

$$a_1 = C_0 . a_0 = \frac{(4.0+1)(4.0+2)(4.0+3)}{4^3 . 1^3} \left(\frac{1}{99^4} + \frac{26390}{99^4 . 1103} \right) . a_0 = \frac{6}{4^3} \left(\frac{1}{99^4} + \frac{26390}{99^4 . 1103} \right) . a_0 .$$

$$\frac{6}{4^3} \left(\frac{1103 + 26390}{99^4 . \cancel{1103}} \right) \frac{\sqrt{8}}{99^2} . \cancel{1103} = \frac{\sqrt{8}}{99^2} \frac{6}{4^3} . \frac{27493}{99^4} \approx 0,000000008$$