$$p(t) = \frac{p_0}{1+\frac{t}{t_0}} \qquad p'(t) = -\frac{p_0}{\left(1+\frac{t}{t_0}\right)^2}\cdot\frac{1}{t_0} = -\frac{p_0}{t_0}\left(1+\frac{t}{t_0}\right)^{-2}$$

$$p_c'(t) = \frac{p_{i+N} - p_{i-N}}{2N\tau} \qquad \Delta_{anp} = \frac{M_3(N\tau)^2}{6} \qquad \Delta_{Bbl4} = \frac{\Delta P}{N\tau}$$

$$\Delta = \Delta_{anp} + \Delta_{Bbl4} = \frac{M_3(N\tau)^2}{6} + \frac{\Delta P}{N\tau}$$

$$\frac{\partial\Delta}{\partial N} = \frac{M_3\tau^2 N}{3} - \frac{\Delta P}{N^2\tau}$$

$$\frac{\partial\Delta}{\partial N}(N_0) = \frac{M_3\tau^2 N_0}{3} - \frac{\Delta P}{N_0^2\tau} = 0 \Rightarrow N_0^3 = \frac{3\Delta P}{\tau^3 M_3}$$

$$N_0 = \frac{1}{\tau}\sqrt[3]{\frac{3\Delta P}{M_3}}$$

$$\tau = 1 \quad \Delta P = 0{,}3 \quad M_k = \frac{P_0 k!}{t_0^k} \quad M_3 = \frac{6P_0}{t_0^3} \quad t_0 = 1000 \quad P_0 = 200$$

$$N_0 = \frac{1}{\tau}\sqrt[3]{\frac{3\Delta P}{6P_0}t_0^3} = \frac{t_0}{\tau}\sqrt[3]{\frac{\Delta P}{2P_0}}$$

$$N_0 = \frac{1000}{1}\cdot\sqrt[3]{\frac{0{,}3}{2\cdot 200}} = 1000\sqrt[3]{\frac{0{,}3}{400}} \approx 90$$

$$\underline{\underline{N_0 = 90}}$$