

$$1) \quad K_0 = 12.000 \quad p = 6\%$$

$$t_1 = 31.08. - 31.12. = 4 \text{ Monate} = 120$$

$$n = 2001 - 2010 = 10$$

$$t_2 = 1.1. - 13.7. = 6 \text{ Monate} + 13 \text{ Tage} = 193$$

$$K_n = 12.000 \cdot \left(1 + 0,06 \cdot \frac{4}{12}\right) \cdot (1,06^{10}) \cdot \left(1 + 0,06 \cdot \frac{193}{360}\right)$$

$$K_n = 22.625,07$$

$$3) \quad K_0 = 42.000 \quad ; \quad K_n = 51.453,68 \quad ; \quad p = 3\%$$

$$t_1 = 190 \quad t_2 = 120$$

$$51.453,5 = 42.000 \cdot \left(1 + 0,03 \cdot \frac{19}{36}\right) \cdot (1,03)^n \cdot \left(1 + 0,03 \cdot \frac{12}{36}\right)$$

$$1,194 = 1,03^n$$

$$n = 6 \text{ Jahre}$$

$$n = \frac{\log_{1,03} 1,194}{\log 1,03} = \frac{\log 1,194}{\log 1,03}$$

$$\begin{aligned}
 4) \quad & 6.3. - 31.12. = t_1 = 301 & p = 3,5\% \\
 & 1.1. - 21.6. = t_2 = 171 & K_n = 81.632,50 \\
 & n = 17
 \end{aligned}$$

$$81.632,5 = K_0 \cdot \left(1 + 0,035 \cdot \frac{301}{360}\right) \cdot (1,035)^{12} \cdot \left(1 + 0,035 \cdot \frac{171}{360}\right)$$

$$K_0 = \cancel{43.460} \quad 43.470$$

$$\begin{aligned}
 5) \quad & t_1 = 190 \quad t_2 = ? \quad n = 6 \quad K_0 = 2000 \quad K_n = 2845 \\
 & p = 5\%
 \end{aligned}$$

$$2845 = 2000 \cdot \left(1 + 0,01 \cdot \frac{19}{36}\right) \cdot (1,05)^6 \cdot \left(1 + 0,01 \cdot \frac{t_2}{360}\right)$$

$$t_2 = 246,24 \Rightarrow 247 \text{ Tage}$$

$$\Rightarrow \text{as. 8.9.2025}$$