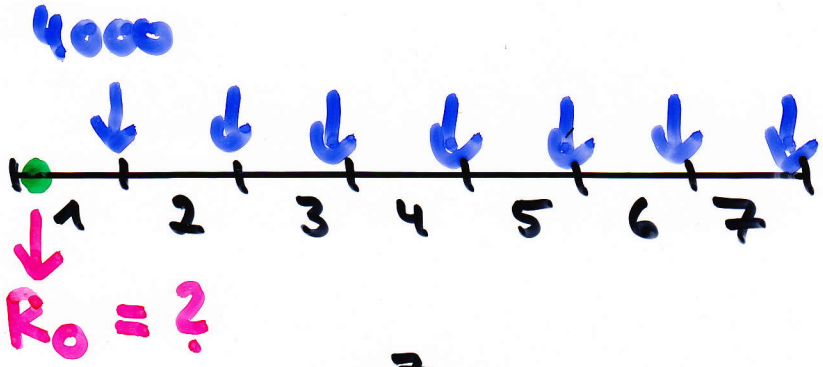
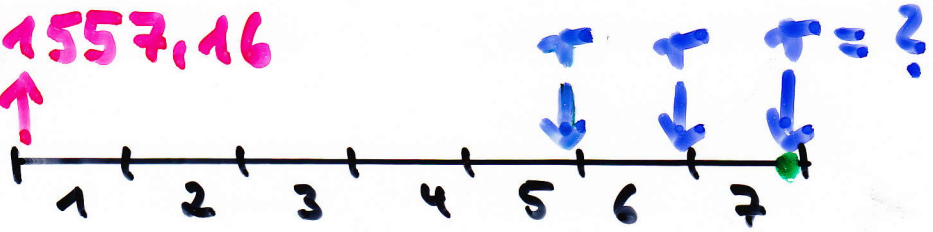
Aufgabe

a)



$$R_0 = 4000 \cdot \frac{1{,}07^7 - 1}{0{,}07} \cdot \frac{1}{1{,}07^7} = 21\,557{,}16$$

b)

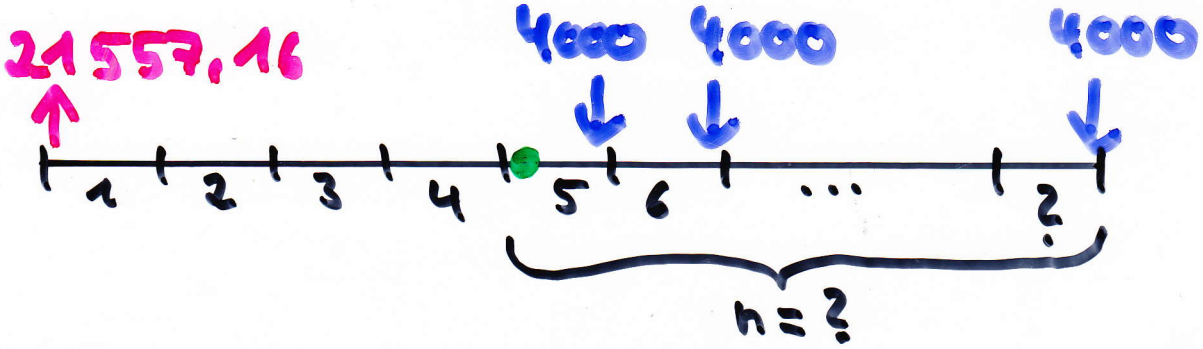


Schulden = Rückzahlungen

$$21557{,}16 \cdot 1{,}07^7 = r \cdot \frac{1{,}07^3 - 1}{0{,}07}$$

$$r = 10\,767{,}39$$

c)



1. $R_0 = 21557{,}16 \cdot 1{,}07^4 = 28257{,}04$

$$n = -\frac{\ln\left[1 - (28257{,}04 / 4000) \cdot 0{,}07\right]}{\ln 1{,}07}$$

$$n = 10{,}083$$

2. $$K_{10} = 28257{,}04 \cdot 1{,}07^{10} - 4000 \cdot \frac{1{,}07^{10} - 1}{0{,}07}$$

$K_{10} = 320,08$

$K_{10} \cdot 1,07 = 342,48$