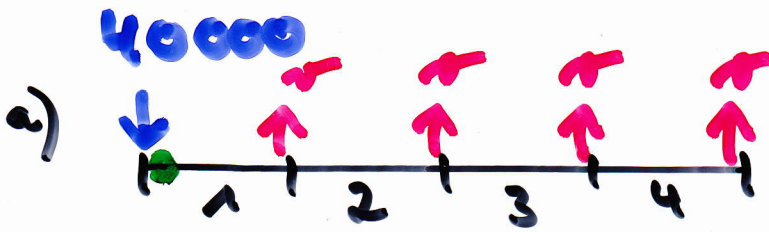
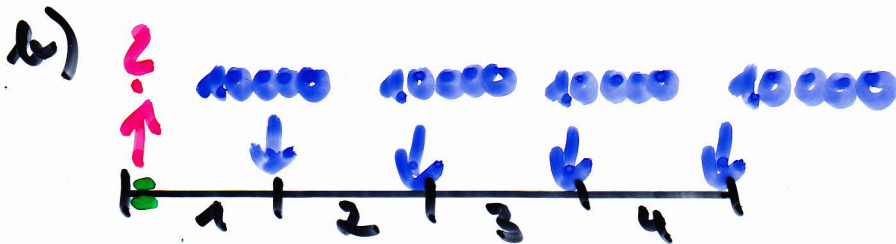


Aufgabe 6.1



$$40000 = \pi \cdot \frac{1,042^4 - 1}{0,042} \cdot \frac{1}{1,042^4}$$

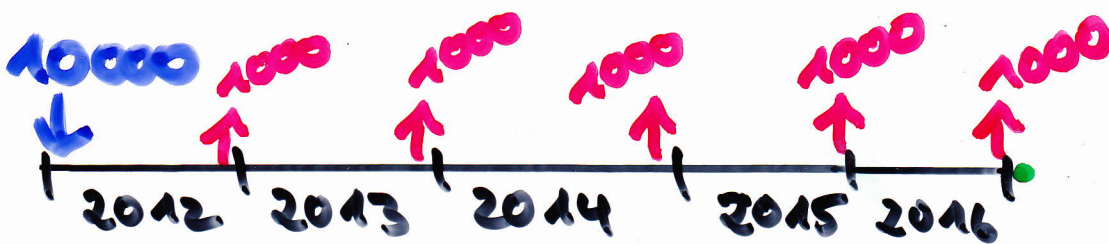
$$\pi = 11071,59$$



$$R_0 = 10000 \cdot \frac{1,042^4 - 1}{0,042} \cdot \frac{1}{1,042^4}$$

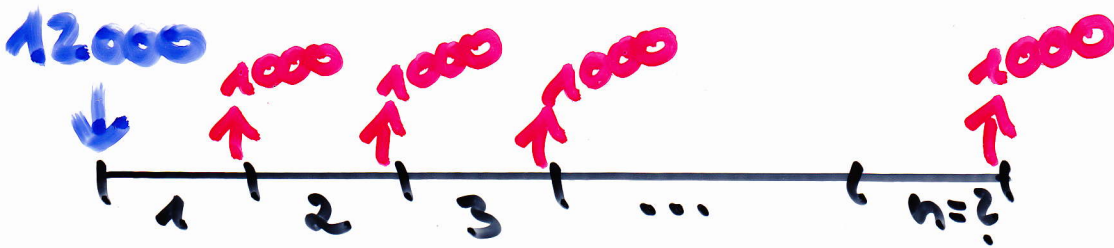
$$= 36128,51$$

Aufgabe 6.2



$$10000 \cdot 1,012^5 - 1000 \cdot \frac{1,012^5 - 1}{0,012} = 5493,13$$

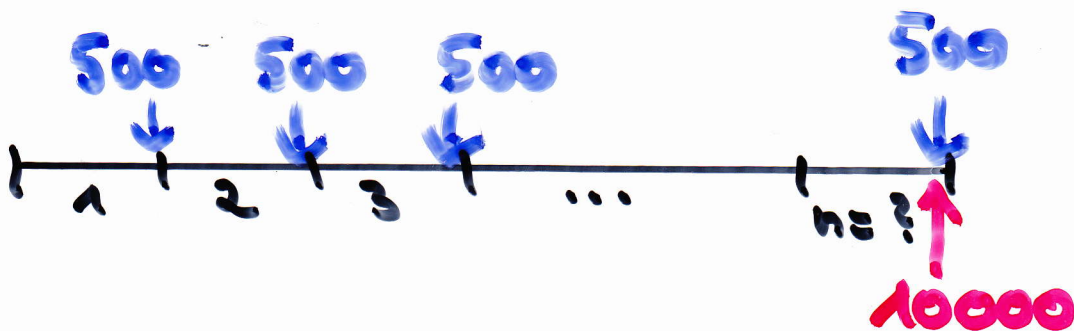
Aufgabe 6.3



$$n = - \frac{\ln \left[1 - \frac{12000}{1000} \cdot 0,012 \right]}{\ln 1,012} = 13,03$$

d.h. dreizehn volle Auszahlungen

Aufgabe 6.4

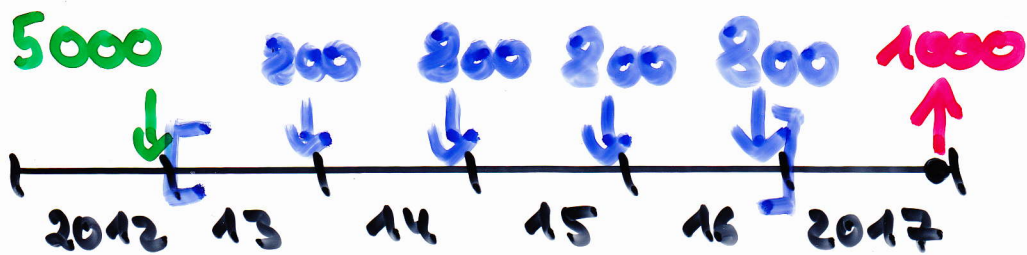


$$R_n = 10000$$

$$n = \frac{\ln \left[1 + \frac{10000}{500} \cdot 0,012 \right]}{\ln 1,012} = 18,03$$

d.h. nach neunzehn Jahren

Aufgabe 6.5



$$K_5 = 5000 \cdot 1,0325^5 + 200 \cdot \frac{1,0325^4 - 1}{0,0325} \cdot 1,0325 - 1000$$

$$K_5 = 8335,645$$

$$R_0 = 8335,645$$

$$n = - \frac{\ln \left[1 - \frac{8335,645}{1500} \cdot 0,0325 \right]}{\ln 1,0325} = 6,2$$

d.h. sechs volle Annuitätentilgungen in Höhe von 1500 €.