

1) a)

$$i = 10\%$$

0 1

$$S \text{ € } \cdot 1,1^1 = 51,50 \text{ €}$$

$$K_1 = 51,50 \text{ €} - S \text{ €}$$

0	1	2	3
-1.000	+300	+200	+600

$272,722^2 \leftarrow \begin{matrix} : 1,1^1 \\ : 1,1^1 \\ = \cdot 1,1^{-1} \end{matrix}$

$165,2893 \leftarrow \begin{matrix} : 1,1^2 \\ : 1,1^2 \\ = \cdot 1,1^{-2} \end{matrix}$

$450,7889 \leftarrow \begin{matrix} : 1,1^3 \\ : 1,1^3 \\ = \cdot 1,1^{-3} \end{matrix}$

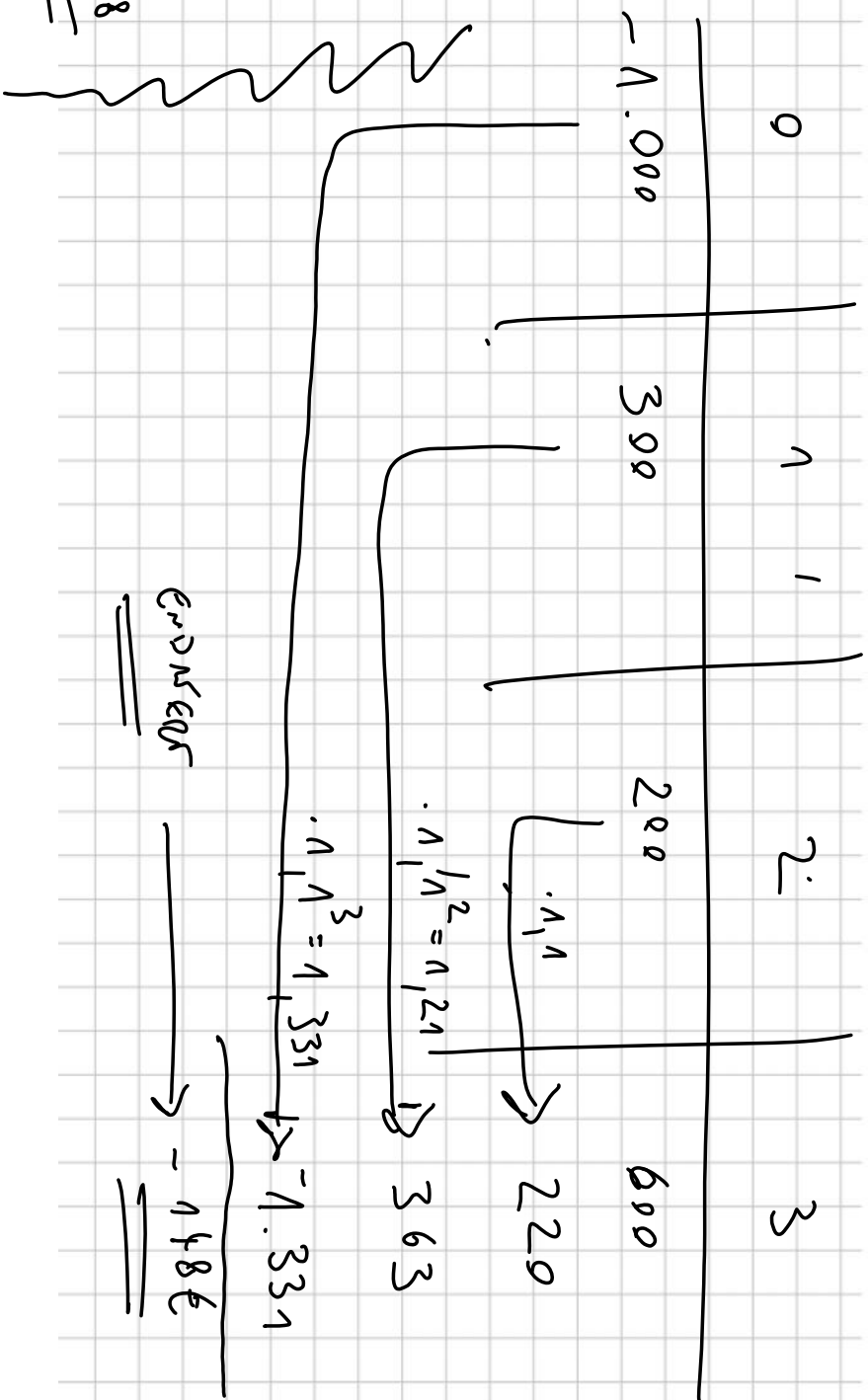
$\underline{\underline{-111,19}} \leftarrow \text{KAPITALKOSTEN}$

K

← Nullstelle →

$$C_m = C_0 \cdot (1+i)^m$$

$-111,99 \cdot (1+0,1)^3 = 148$



c)

$$A = \underbrace{C_0}_{C_m} \cdot q^m \cdot \frac{i}{q^m - 1}$$

$$A = C_m \cdot \frac{i}{q^m - 1}$$

$$q = 1 + i$$

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$$= -1111,19 \cdot (1 + 0,1)^3 \cdot \frac{0,1}{(1,1)^3 - 1}$$

$$= -1111,19 \cdot \underbrace{q^{4021}}_{KWF} = -441,71$$

$$= -148 \cdot \frac{0,1}{1,1^3 - 1} = -148 \cdot \underbrace{0,3021}_{PWF} = -44,71$$

2)

$$A = C_m \cdot \left( \frac{i}{q^m - 1} \right)$$

RVF ( $m \cdot i$ )

$$\begin{aligned} &\leq 20.000 \cdot \frac{0,08}{(1+0,08)^4 - 1} \\ &= 20.000 \cdot 0,22192 \\ &= \underline{\underline{4.438,42 \text{ €}}} \end{aligned}$$

29.000 €

1	2	3	4
4.438,42	4.438,42	4.438,42	4.438,42
		$\cdot 1,08$	4.793,49
		$\cdot 1,08^2$	5.176,97
		$\cdot 1,08^3$	5.591,13
			<u>29.000 €</u>