

$$PV = 100.000$$

$$i = 7\%$$

$$A \rightarrow FV_1 = 100.000 \cdot \left(1 + \frac{0,07}{4}\right)^4 = \underline{107.185,90}$$

$$B \rightarrow FV_1 = 100.000 \cdot \left(1 + \frac{0,07}{12}\right)^{12} = \underline{107.229,01}$$

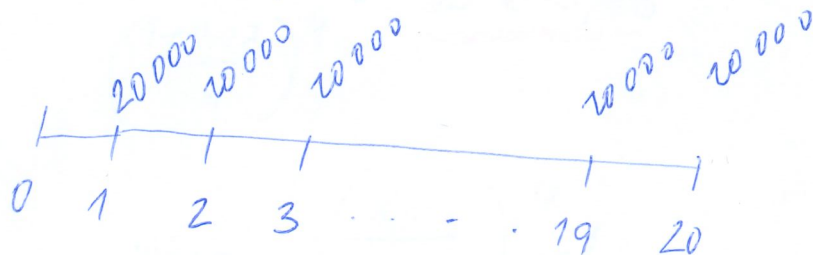
$$5,89 \rightarrow \underline{5,89\% \text{ EAR}_1}$$

$$5,89 \rightarrow \left(1 + \frac{0,0589}{4}\right)^4 - 1 = \underline{6,02\% \text{ EAR}_4}$$

$$5,89 \rightarrow \left(1 + \frac{0,0589}{12}\right)^{12} - 1 = \underline{6,05\% \text{ EAR}_{12}}$$

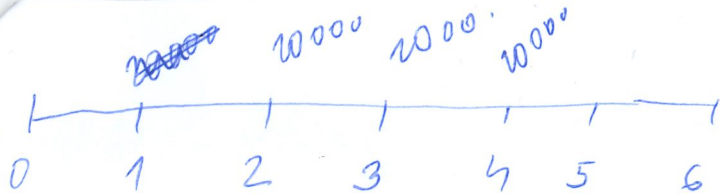
$$\text{EAR}_4 = \left(1 + \frac{0,08}{4}\right)^4 - 1 = \underline{8,24\%}$$

$$\text{EAR}_{12} = \left(1 + \frac{0,08}{12}\right)^{12} - 1 = \underline{8,29\%}$$



$$FV = 20.000 \cdot \frac{\left(1 + 0,07\right)^{20} - 1}{0,07} = \underline{219.909,8464}$$

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$$20.000 \cdot (1+0,09)^4$$

$$20.000 \cdot (1+0,09)^3$$

$$20.000 \cdot (1+0,09)^2$$

$$FV = 20.000 \cdot (1+0,09)^2 \cdot \frac{(1+0,09)^3 - 1}{0,09} = \underline{\underline{47.894,2122}}$$

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$$FV = 45.000 \rightarrow PV = \frac{45000}{(1+0,06)^5} = \underline{\underline{56.044,36}}$$

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$$PV = \frac{100.000}{\left(\frac{1+0,07}{4}\right)^4} = \underline{\underline{93.295,85}}$$

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$$PV = \frac{100.000}{1+0,05} \cdot \frac{\left(\frac{1}{1+0,05}\right)^{10} - 1}{\frac{1}{1+0,05} - 1} = \underline{\underline{442.143,5}}$$

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$$PV = \frac{30.000}{4} \cdot \frac{\left(\frac{1}{1+0,06}\right)^{20} - 1}{\frac{1}{1+0,06} - 1} = \underline{\underline{543.496,06}}$$

$$PV_B = 500.000$$

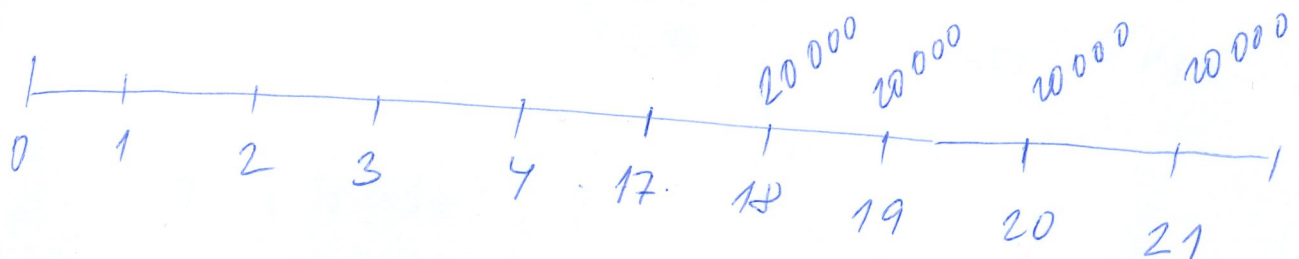
VS.

$$100.000 = 35.000 \cdot \left(1 + \frac{0,05}{12}\right)^{m}$$

$$2,85714 = \left(1 + \frac{0,05}{12}\right)^{m}$$

$$\ln 2,85714 = m \cdot \ln 1,00416667$$

$$m = \underline{252,42 \text{ MONTHS}} \rightarrow 21,04 \text{ YEARS}$$



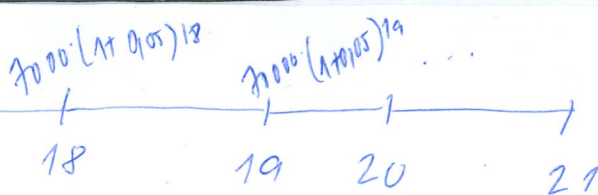
$$PV_{18} = 20.000 \cdot \frac{\left(\frac{1}{1+0,05}\right)^4 - 1}{\frac{1}{1+0,05} - 1} = \boxed{74.464}$$

$$PV_{17} = \frac{74.464}{1+0,05} = \boxed{70.919,0} \rightarrow FV_{17}$$

$$A \cdot \frac{(1+0,05)^{17} - 1}{0,05} = 70.919,0$$

$$\underline{A = 2.744,50}$$

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$$PV_{17} = \frac{7000 \cdot (1+0,05)^{18}}{1+0,06} + \frac{7000 \cdot (1+0,05)^{19}}{(1+0,06)^2} + \frac{7000 \cdot (1+0,05)^{20}}{(1+0,06)^3} + \frac{7000 \cdot (1+0,05)^{21}}{(1+0,06)^4}$$

$$PV_{17} = \frac{7000 \cdot (1+0,05)^{18}}{1+0,06} \cdot \frac{\left(\frac{1+0,05}{1+0,06}\right)^{-1} - 1}{\frac{1+0,05}{1+0,06} - 1} = 62.677,12494$$

$\Rightarrow FV_{17}$

$$FV_{17} = \frac{A \cdot (1+0,06)^{17} - 1}{0,06}$$

$$62672,12494 = A \cdot \frac{(1+0,06)^{17} - 1}{0,06}$$

$$A = \underline{2221,576}$$