$$0.01 \leq 60'003 \cdot \frac{\|b - \tilde{b}\|}{\|b\|} \quad \text{(exponent 3)}$$

$$0.01 \leq 60'003 \cdot 3$$

$$\frac{0.01}{60'003} \leq 3 \Rightarrow \underline{\underline{3 = 1.67 \cdot 10^{-7}}}$$

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c) $A \cdot x = b \Rightarrow x = \begin{pmatrix} 1 \\ 1 \\ 0.0001 \end{pmatrix} \approx 1$

$A \cdot \tilde{x} = \tilde{b} \Rightarrow x = \begin{pmatrix} \approx 1 \\ \approx 1 \\ \approx 0.0001 \end{pmatrix}$

$$\text{relativer Fehler} = \frac{\|\tilde{x} - x\|_\infty}{\|x\|_\infty} = 0.0021560$$