



bank account
 || actual money you
 have (should you
 leave bank)

$f(t) \neq f(t) = \begin{cases} 100 \cdot (1 + 10\% \cdot t) & 0 \leq t \leq 1 \leftarrow \\ 110 \cdot (1 + 10\% (t-1)) & 1 \leq t \leq 2 \leftarrow \\ 121 \cdot (1 + 10\% (t-2)) & 2 \leq t \leq 3 \leftarrow \\ \vdots & \end{cases}$

when t not integer

compound interest $f(t) = 100 \cdot (1+i)^t$ $t \geq 0 \leftarrow$
 $= 100 e^{t \ln(1+i)}$