Compound Annual Growth Rates - CAGR

Data

$K_0 := 100$ Initial Value

$t := 2$ Lifetime [years]

$K_t := 144$ Final value

$m := 12$ Number of compoundings per year, if any

Results

$i_e := \frac{K_t - K_0}{K_0 \cdot t} = 22.00\,\%$ CAGR, if growth takes place at the end of lifetime

$i := \left(\frac{K_t}{K_0}\right)^{\frac{1}{t}} - 1 = 20.00\,\%$ CAGR, if growth takes place at the end of each year

$i_m := m \cdot \left[\left(\frac{K_t}{K_0}\right)^{\frac{1}{m \cdot t}} - 1\right] = 18.37\,\%$ CAGR, if growth takes place at the end of each 1/m years

$i_s := \frac{\ln\left(\frac{K_t}{K_0}\right)}{t} = 18.23\,\%$ CAGR, if growth is continuous