a) $C_{10} = 40\,000 \cdot (1 + 0{,}0375)^{10}$

$\simeq 57\,801.76$

b) $10730.4 = C_0 \cdot (1 + 0{,}0525)^7$

$\Leftrightarrow \quad 10730.4 \simeq C_0 \cdot 1{,}43072$

$\Leftrightarrow \quad C_0 \simeq \dfrac{10730.4}{1{,}43072} \simeq 7500$

c) $14751{,}05 = 12\,000 \cdot (1 + i)^6$

$\Leftrightarrow \quad (1+i)^6 = \dfrac{14\,751{,}05}{12\,000} \simeq 1{,}22925$

$\Leftrightarrow \quad 1+i \simeq \sqrt[6]{1{,}22925} \quad \Leftrightarrow \quad 1+i \simeq 1{,}034999$

$\Leftrightarrow \quad i \simeq 0{,}035$ Le taux : $\sim 3{,}5\,\%$

d) $364248{,}25 = 100\,000\,(1+0{,}09)^n$

$\Leftrightarrow \quad (1{,}09)^n = \dfrac{364\,248{,}25}{100\,000} = 3{,}6424825$

$\Leftrightarrow \quad 1{,}09^n = 3{,}6424825 \Leftrightarrow n = \log_{1{,}09} 3{,}6424825$

$2^x = u \quad \Leftrightarrow \quad \log_2 u = x$

$\Rightarrow \quad n = \dfrac{\ln(3{,}6424825)}{\ln(1{,}09)} \simeq 15$

Il faudrait 15 ans.