Part A

\[
\begin{align*}
q) & \quad N_0 = £237,000 \quad \left\{ \begin{array}{l}
N = \frac{278,295.21}{237,000} \\
278,295.21 = 237,000 \times (m)^3
\end{array} \right. \\
& \quad m = \left( \frac{278,295.21}{237,000} \right)^{\frac{1}{3}} = 1.0550 \cdot \text{multiplier} \\
\text{\%age~is} \quad 0.550 \rightarrow 5.5\%.
\end{align*}
\]
Part B

Value of house after 2 years =

\[
N = N_0 \times (1 + m)^2
\]

\[
= 237,000 \times (1.055)^2
\]

House value = £263,786.93 after 2 years

Initial deposit = 23% → 0.23 \times 237,000

= £54,510

6% amount borrowed = 237,000 - 54,510 = £182,490

Year 1:

\[
\text{172,490} - 10,000 = £162,490
\]

\[
\text{162,490} \times 1.04 = £169,389.60p - \text{End Y1}
\]

Y2: Start.

\[
£169,389.60p - £10,000 = £159,389.60p
\]

Y2: Finish

\[
£159,389.60p \times 1.04 = £166,166.18
\]

\[
\text{Proportion Owned} = \frac{\text{amount paid}}{\text{total value}} \times 100
\]

Amount paid = \[(263,786.93 - 166,166.18) \times 100 \]

\[
\frac{\text{263,786.93}}{263,786.93}
\]

= 33.2168...

= 33%.