Exercise 5.3

Since we know that
\[ \ddot{a}_{50:10} = 1 + a_{50:10} - v^{10}_{10} p_{50}, \]
then it follows that
\[
v^{10} = \frac{1 + a_{50:10} - \ddot{a}_{50:10}}{10 p_{50}}
= \frac{1 + 7.8277 - 8.2066}{0.9195}
= 0.6754758.
\]

Thus, \( i = (0.6754658)^{-1/10} - 1 = 0.0400136 = 4.00136\% . \)