Problem Set 1

Answers:

\[ p = \frac{C_{ab}}{C_{uu}} = \frac{H-1 + \frac{C_{b}}{C_{p}}}{f_{u} \cdot H} = \frac{0.45-1 + 2.35}{0.1 \cdot 0.45} = 40 \]

b. \[ \frac{C_{b}}{C_{p}} = 1 + H (f_{u} \cdot p - 1) = 1 + 0.27 (0.1 \times 40 - 1) \approx 1.81 \]

c. \[ \frac{C_{L_p}}{C_{L_B}} = \frac{C_{B}}{C_{p}} = 1 + H (f_{u} \cdot p - 1) \]
\[ = 1 + 0.45 (0.32 \times 40 - 1) \]
\[ = 6.31 \]