

Problem Set 5

1. $c := 0.1$ $e := 0.02$

$$c \cdot p \cdot (1 - p) = e \cdot p$$

$$\begin{bmatrix} 0 \\ (c - e) \\ c \end{bmatrix} \quad p := \frac{c - e}{c} \quad p = 0.8$$

$$c \cdot 0.8 \cdot (1 - 0.8) = 0.016$$

Col(p^*) = 0.016; N.B. $e \cdot p^* = 0.02 \cdot (0.8) = 0.016$ as check

2. Let $R = e/c$

$$0.6 = 1 - \frac{1}{R}$$

2.5 $R := 2.5$ $R^{-1} = 0.4$

3.

$$0 = K_1 - N_1 - 0.5 \cdot N_2$$

$$0 = 1000 - N_1 - 0.5 \cdot 100$$

950. $N_1 = 950$

4. Learn how to use Table 5.1(b), page 113, in Gotelli's text.