y = 10, u(c) = 100 log(c), \bar{u} = 20, R_i = 1.1, R_l = 1.08, \beta = 0.7,

The random variable \alpha has 3 possible realizations: 0.10, 0.20, 0.40.

\text{Prob}(\alpha = 0.10) = \frac{1}{6}, \text{Prob}(\alpha = 0.20) = \frac{2}{3}, \text{Prob}(\alpha = 0.40) = \frac{1}{6}.

1. What is the probability that a given consumer, consumer j, becomes patient?
2. Consumer j has found out that she is patient. What are her updated values of \text{Prob}(\alpha = 0.10), \text{Prob}(\alpha = 0.20), \text{Prob}(\alpha = 0.40)?
3. Write down the bank’s problem in the unified system.
4. Write down the bank’s problem in the separated system.