ASEN 5264 - DMU
Homework #2

Bijan Jourabchi

Problem 1:

a) R (reward function) maps each state and action to a reward. In other words, for a given state S and action A, the reward function tells what reward we will get from taking that action. The state-action value function (Q) represents the expected return when starting in state S and taking action A. In other words, Q can quantify our expected reward if we were to continuing with greedy policies.

b)
$$Q(S, A) = R(S, A) + \gamma \sum_{S'} T(S' \mid S, A) V(S')$$

Problem 2:

Problem 3: