

CSE 3521 HOMEWORK 3

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1. (a) Completed.
- (b) When you increase the discount, the utilities increase for all of the non-terminal states. When you decrease the discount, the utilities all decrease for the non-terminal states. An increased discount increases the state utility which, in a gridworld with multiple terminal states, reduces the emphasis on taking the closest exit. A decreased discount and utility for non-terminal states emphasizes taking the nearest exit.
- (c) When you decrease the noise, the agent's policy takes precedent over the built-in stochastic element of the agent's behavior. The agent heads on a direct path to the goal relatively quickly. Increasing the noise increases the amount of random, stochastic behavior present in the policy, and the agent hops back and forth erratically until eventually ending up in the goal state.