Quiz 5: Q-Learning
Quiz 5: Q-Learning

2/2 points (ungraded)

Part 1

Which of the following equations is the Q-value iteration update:

- ⊙ $Q_{k+1}(s,a) \leftarrow \sum_{s'} T(s,a,s')\left[R(s,a,s') + \gamma \max_{a'} Q_k(s',a')\right]$ ✔

- ○ $Q_{k+1}(s,a) \leftarrow \max_{s'} T(s,a,s')\left[R(s,a,s') + \gamma \sum_{a'} Q_k(s',a')\right]$

- ○ $Q_{k+1}(s,a) \leftarrow \sum_{s'} T(s,a,s')\left[R(s,a,s') + \gamma Q_k(s,a)\right]$

- ○ $Q_{k+1}(s,a) \leftarrow \max_{s'} T(s,a,s')\left[R(s,a,s') + \gamma Q_k(s,a)\right]$

Part 2

Let's consider the Q-learning update after having experience (s, a, s', r):

$$Q(s,a) \leftarrow (1-\alpha)Q(s,a) + \alpha\left[r + \gamma \max_{a'} Q(s',a')\right]$$

Which of the following statements are true:

- ☑ If $\alpha = 1$ no averaging will happen --- instead simply the value from the sample will be used.

- ☑ If $\alpha = 0$ then the sample will not influence the update.

- ☐ None of the above.

✔

Submit

✔ Correct (2/2 points)