# Assignment 1

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## Theory

#### Problem 1

Update for Sarsa

$$Q(S,A) = Q(S,A) + \alpha[R + \gamma Q(S,A) - Q(S,A)]$$
 (1)

Update for Q-Learning

$$Q(S,A) = Q(S,A) + \alpha[R + \gamma maxQ(S,A) - Q(S,A)] \tag{2}$$

### Problem 2

## Code

 $\mathbf{Sarsa}\lambda$ 

Q-Learning  $TD\lambda$  with RBF