Your grade: 100%

Your latest: **100%** • Your highest: **100%**

To pass you need at least 80%. We keep your highest score.

Next item →

1. What is the incremental rule (sample average) for action values? 1 / 1 point

- (●) $Q_{n+1} = Q_n + \frac{1}{n}[R_n - Q_n]$
- ( ) $Q_{n+1} = Q_n + \frac{1}{n}[Q_n]$
- ( ) $Q_{n+1} = Q_n - \frac{1}{n}[R_n - Q_n]$
- ( ) $Q_{n+1} = Q_n + \frac{1}{n}[R_n + Q_n]$

Correct
Correct! At each time step the agent moves its prediction in the direction of the error by the step size (here 1/n).

2. Equation 2.5 (from the SB textbook, 2nd edition) is a key update rule we will use throughout the Specialization. We discussed this equation extensively in video. This exercise will give you a better hands-on feel for how it works. The blue line is the target that we might estimate with equation 2.5. The red line is our estimate plotted over time. 1 / 1 point

$$q_{n+1} = q_n + \alpha_n[R_n - q_n]$$

Given the estimate update in red, what do you think was the value of the step size parameter we used to update the estimate on each time step?