

CSSE 413: Worksheet for calculating the utility of a state

Please calculate the utility of state <3,3>, given the following value matrix and using 0.9 for γ .

3	-0.04	-0.04	-0.04	+1
2	-0.04	W	-0.04	-1
1	Start	-0.04	-0.04	-0.04
	1	2	3	4

Here is the formula for calculating utility:

$$U(s) = R(s) + \gamma \max_{a \in A(s)} \sum_{s'} P(s' | s, a) U(s')$$