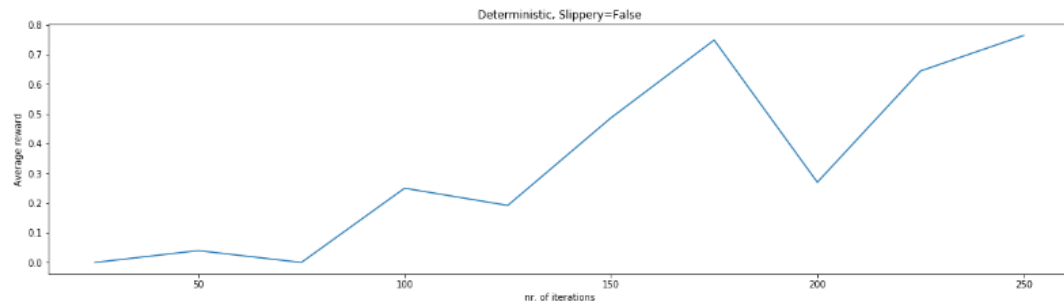


a)

```
Average reward for 25 episodes is 0.0
Average reward for 50 episodes is 0.04
Average reward for 75 episodes is 0.0
Average reward for 100 episodes is 0.25
Average reward for 125 episodes is 0.192
Average reward for 150 episodes is 0.4866666666666667
Average reward for 175 episodes is 0.7485714285714286
Average reward for 200 episodes is 0.27
Average reward for 225 episodes is 0.6444444444444445
Average reward for 250 episodes is 0.764
```

```
Out[303]: <function matplotlib.pyplot.show(*args, **kw)>
```



qtable after training

```
[[0. 0.59049 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0.6561 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 0.729 0. ]
 [0. 0. 0.81 0. ]
 [0. 0.9 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 0. 0. ]
 [0. 0. 1. 0. ]
 [0. 0. 0. 0. ]]
```

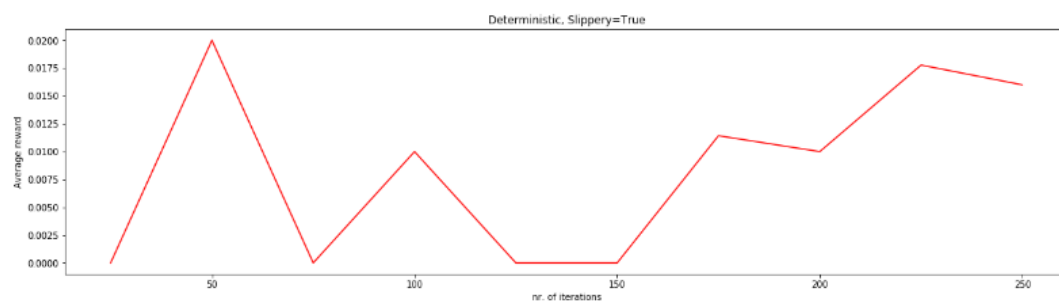
Average reward for 250 episodes is 0.816

One qtable after 250 episodes

b)

```
Average reward for 25 episodes is 0.0
Average reward for 50 episodes is 0.02
Average reward for 75 episodes is 0.0
Average reward for 100 episodes is 0.01
Average reward for 125 episodes is 0.0
Average reward for 150 episodes is 0.0
Average reward for 175 episodes is 0.011428571428571429
Average reward for 200 episodes is 0.01
Average reward for 225 episodes is 0.017777777777777778
Average reward for 250 episodes is 0.016
```

```
Out[306]: <function matplotlib.pyplot.show(*args, **kw)>
```



c)

```
Average reward for 25 episodes is 0.0  
Average reward for 50 episodes is 0.04  
Average reward for 75 episodes is 0.0  
Average reward for 100 episodes is 0.07  
Average reward for 125 episodes is 0.104  
Average reward for 150 episodes is 0.006666666666666667  
Average reward for 175 episodes is 0.49142857142857144  
Average reward for 200 episodes is 0.735  
Average reward for 225 episodes is 0.5911111111111111  
Average reward for 250 episodes is 0.688
```

```
Out[305]: <function matplotlib.pyplot.show(*args, **kw)>
```

