

Value Iteration:

```
● berry487@csel-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpVI.py -2 0.9
```

# of iterations: 22

State	State Value	Policy
[1,1]	-7.320	right
[2,1]	-5.668	right
[3,1]	-3.678	right
[4,1]	-1.682	up
[1,2]	-6.446	up
[3,2]	-1.505	right
[1,3]	-4.563	right
[2,3]	-2.184	right
[3,3]	0.291	right

```
● berry487@csel-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpVI.py -0.2 0.9
```

# of iterations: 23

State	State Value	Policy
[1,1]	-0.305	up
[2,1]	-0.217	right
[3,1]	0.031	up
[4,1]	-0.283	left
[1,2]	-0.081	up
[3,2]	0.383	up
[1,3]	0.186	right
[2,3]	0.523	right
[3,3]	0.873	right

```
● berry487@csel-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpVI.py -0.01 0.9
```

# of iterations: 23

State	State Value	Policy
[1,1]	0.501	up
[2,1]	0.429	right
[3,1]	0.502	up
[4,1]	0.277	left
[1,2]	0.594	up
[3,2]	0.623	up
[1,3]	0.690	right
[2,3]	0.812	right
[3,3]	0.939	right

Policy Iteration:

```
● berry487@cse1-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpPI.py -2 0.9
```

# of iterations: 3

State	State Value	Policy
[1,1]	-7.320	right
[2,1]	-5.668	right
[3,1]	-3.678	right
[4,1]	-1.682	up
[1,2]	-6.447	up
[3,2]	-1.505	right
[1,3]	-4.563	right
[2,3]	-2.184	right
[3,3]	0.291	right

```
● berry487@cse1-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpPI.py -0.2 0.9
```

# of iterations: 4

State	State Value	Policy
[1,1]	-0.305	up
[2,1]	-0.217	right
[3,1]	0.031	up
[4,1]	-0.283	left
[1,2]	-0.081	up
[3,2]	0.383	up
[1,3]	0.186	right
[2,3]	0.523	right
[3,3]	0.873	right

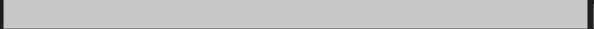
```
● berry487@cse1-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpPI.py -0.01 0.9
```

# of iterations: 5

State	State Value	Policy
[1,1]	0.501	up
[2,1]	0.429	right
[3,1]	0.502	up
[4,1]	0.277	left
[1,2]	0.594	up
[3,2]	0.623	up
[1,3]	0.690	right
[2,3]	0.812	right
[3,3]	0.939	right

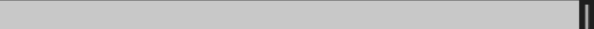
Monte Carlo:

```
• berry487@cse1-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpMC.py -2 0.9 0.1
```

Progress: |  | 100.0% Complete

State	Action Values	Policy
[1,1]	up: -10.168, down: -09.213, left: -09.763, right: -07.898	right
[2,1]	up: -07.647, down: -07.516, left: -08.866, right: -05.995	right
[3,1]	up: -03.946, down: -05.616, left: -06.931, right: -03.889	right
[4,1]	up: -01.733, down: -03.909, left: -04.961, right: -03.446	up
[1,2]	up: -07.057, down: -09.573, left: -09.510, right: -11.720	up
[3,2]	up: -02.060, down: -04.912, left: -03.620, right: -01.559	right
[1,3]	up: -11.646, down: -09.526, left: -11.382, right: -04.993	right
[2,3]	up: -04.323, down: -05.250, left: -06.315, right: -02.542	right
[3,3]	up: -01.953, down: -03.188, left: -04.182, right: +00.228	right

```
• berry487@cse1-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpMC.py -0.2 0.9 0.1
```

Progress: |  | 100.0% Complete

State	Action Values	Policy
[1,1]	up: -00.404, down: -00.562, left: -00.559, right: -00.506	up
[2,1]	up: -00.490, down: -00.486, left: -00.562, right: -00.325	right
[3,1]	up: -00.062, down: -00.330, left: -00.428, right: -00.471	up
[4,1]	up: -00.885, down: -00.535, left: -00.380, right: -00.606	left
[1,2]	up: -00.172, down: -00.534, left: -00.370, right: -00.381	up
[3,2]	up: +00.334, down: -00.317, left: +00.071, right: -00.774	up
[1,3]	up: -00.095, down: -00.300, left: -00.137, right: +00.109	right
[2,3]	up: +00.207, down: +00.195, left: -00.055, right: +00.468	right
[3,3]	up: +00.549, down: +00.163, left: +00.217, right: +00.859	right

```
• berry487@cse1-remote-lnx-09:/home/berry487/5512/hw3 $ python3 mdpMC.py -0.01 0.9 0.1
```

Progress: |  | 100.0% Complete

State	Action Values	Policy
[1,1]	up: +00.461, down: +00.394, left: +00.410, right: +00.356	up
[2,1]	up: +00.347, down: +00.346, left: +00.387, right: +00.369	left
[3,1]	up: +00.441, down: +00.351, left: +00.355, right: +00.213	up
[4,1]	up: -00.745, down: +00.183, left: +00.218, right: +00.045	left
[1,2]	up: +00.557, down: +00.417, left: +00.483, right: +00.485	up
[3,2]	up: +00.597, down: +00.252, left: +00.508, right: -00.682	up
[1,3]	up: +00.585, down: +00.514, left: +00.565, right: +00.657	right
[2,3]	up: +00.690, down: +00.691, left: +00.597, right: +00.786	right
[3,3]	up: +00.817, down: +00.559, left: +00.682, right: +00.930	right