

Performance of POW-QMIX with Different Alpha Parameters in Matrix Experiments

```
payoff_values = [[ 8, -120, -120],
                 [-120,  0,  0],
                 [-120,  0,  0]]
```

(a) Payoff Matrix

```
weights
tensor([[1., 0., 0.],
        [0., 0., 0.],
        [0., 0., 0.]])
qr
tensor([[ 7.99094, -118.87904, -118.92965],
        [-119.28863,  0.07563,  0.07735],
        [-119.26910,  0.09698,  0.09058]])
Qtot
tensor([[8.00000, 4.98479, 5.08439],
        [5.53112, 2.57487, 2.66962],
        [5.48603, 2.53198, 2.62652]])
Qi
tensor([[ 0.51580, -0.09452, -0.10572],
        [ 0.58066, -0.13759, -0.11364]])
```

(b) Reconstructed Joint and Individual Values
Alpha = 0

```
weights
tensor([[1.00000, 0.10000, 0.10000],
        [0.10000, 0.10000, 0.10000],
        [0.10000, 0.10000, 1.00000]])
qr
tensor([[ 3.34509, -120.12776, -120.10280],
        [-119.64796, -0.02074, -0.09590],
        [-119.68114, -0.10457,  3.35196]])
Qtot
tensor([[-26.49328, -26.49246, -26.49242],
        [-26.49241, -1.22054, -0.45353],
        [-26.49237, -0.54135,  0.23331]])
Qi
tensor([[-21.26166,  0.15220,  0.22226],
        [-17.93683,  0.16158,  0.22885]])
```

(c) Reconstructed Joint and Individual Values
Alpha = 0.1