game RPS

run shapley epsilon = 0.0

Number of iterations: 278

Time shapley : 0.31793212890625

Game value by Shapley :

{1: 0.0}

optimal policy for playerB by Shapley :

{1: {'pierre': 0.33333333333333337, 'ciseaux': 0.3333333333333333, 'papier': 0.33333333333333337}}

ecart entre new\_V et val de Shapley :

(0.0, 0.0)

run Littman

iteration : 4350

learnin rate at the end of the run : 0.3672823004980012

Time Littman : 4.171846866607666

Game value by Littman :

{1: 0.0}

optimal policy for playerA by Littman :

{1: {'pierre': 0.3333333333333426, 'ciseaux': 0.33333333333338067, 'papier': 0.33333333333327675}}

ecart entre new\_V et val de littman :

(0.0, 0.0)

ecart entre val de shapley et littman

(0.0, 0.0)

Test 10000000 game

total\_rewards

{0: 0.89877791116905159, 1: -0.89877791116905159}

winers : {0: 0.500015969671719, 1: 0.499984030328281} nombre fois arrive en état but 6668891

Petit analyse : les deux converges bien , Shapley bcp plus rapide , mais pour Littman il converge plus longtemps mais c’est un peu la nature de apprentissage par renforcement et aussi si on change les params comme learning rate ou changé installation de valeur de V de 1 à 0.1 par exemple in peux aussi converger aussi vite que Shapley

On peut voir clairement que choix equiprobable entre action est stratégie optimal sur 10\*\*7 fois de jouer les deux payer ont presque meme nombre fois gagner.

On peut voir aussi que somme de probe des action dans stratégie mixte calculer par les deux algorithme est égale à 1 mais les probabilités ne sont pas exactement égale , ce probe vient de fait que somme de 0.33333… + 0.333333 + 0.33333… n’est pas égale à 1

Game Soccer

Test avec 10 \*\* 6 iteration de Littman : et 10 \*\* 6 fois jouer et epsilon = 10 \*\* -13

run shapley for player 0 epsilon = 10\*\* -13

Number of iterations: 257

Time shapley : 348.1550440788269

Game value by Shapley for player 0 :

{((2, 2), (1, 2), 2): -0.12811676214809659, ((2, 5), (2, 1), 2): -0.9999999999991644, ((1, 4), (4, 1), 1): 0.8100000000008357, ((1, 5), (2, 3), 1): 0.9000000000008356, ((3, 1), (4, 1), 2): -0.1110010586109487, ((3, 5), (1, 3), 1): 1.0000000000008356, ((1, 1), (1, 2), 2): -0.28369664457750043, ((3, 1), (1, 2), 2): -0.28369664457750043, ((1, 2), (3, 4), 2): -0.2879644503147147, ((1, 4), (4, 5), 1): 0.3467403433743573, ((1, 5), (4, 3), 1): 0.9000000000008356, ((2, 1), (4, 4), 1): 0.19663599639841253, ((3, 5), (3, 2), 1): 1.0000000000008356, ((3, 2), (4, 3), 1): 0.2552577797799595, ((2, 1), (2, 4), 2): -0.21848444044091667, ((4, 4), (4, 1), 2): -0.8999999999991645, ((2, 2), (1, 1), 2): -0.15475499999916448, ((4, 3), (4, 4), 2): -0.1700789992979419, ((2, 3), (2, 2), 2): -0.8999999999991645, ((1, 2), (1, 4), 2): -0.17245829911666027, ((1, 4), (2, 2), 1): 0.8100000000008357, ((4, 3), (2, 5), 2): -0.22973200180037598, ((1, 4), (4, 2), 1): 0.8100000000008357, ((2, 5), (1, 4), 2): -0.1128163949991645, ((3, 4), (3, 3), 2): -0.8099999999991645, ((2, 3), (3, 5), 2): -0.1700789992979419, ((4, 3), (3, 3), 1): 0.12032523024891992, ((4, 5), (1, 4), 1): 0.9000000000008356, ((2, 2), (2, 1), 1): 0.7290000000008356, ((4, 5), (2, 4), 1): 0.9000000000008356, ((3, 4), (2, 3), 1): 0.9000000000008356, ((1, 5), (4, 1), 2): -0.8999999999991645, ((1, 1), (2, 3), 1): 0.12864099356981903, ((2, 4), (1, 5), 2): -0.07721612477312259, ((4, 2), (3, 4), 2): -0.21848444044091667, ((2, 3), (4, 3), 2): -0.12535154999916448, ((2, 3), (3, 4), 1): 0.3199605003514469, ((1, 5), (1, 2), 2): -0.8099999999991645, ((2, 4), (1, 1), 2): -0.8999999999991645, ((2, 1), (4, 5), 2): -0.1552124692049107, ((1, 1), (1, 4), 2): -0.1966359963967415, ((1, 1), (4, 3), 2): -0.2553269801196668, ((2, 3), (4, 1), 1): 0.8100000000008357, ((3, 5), (2, 5), 2): -0.6560999999991646, ((3, 2), (3, 4), 2): -0.19162033235193757, ((1, 4), (3, 2), 2): -0.8999999999991645, ((2, 1), (1, 5), 2): -0.15307109936806415, ((2, 3), (4, 4), 2): -0.1700789992979419, ((2, 1), (1, 2), 2): -0.12333450956781361, ((4, 5), (2, 1), 2): -0.9999999999991644, ((2, 4), (2, 3), 1): 0.9000000000008356, ((3, 5), (1, 1), 2): -0.8999999999991645, ((3, 3), (4, 5), 2): -0.128640993568148, ((1, 5), (2, 2), 1): 0.9000000000008356, ((2, 4), (4, 4), 2): -0.1128163949991645, ((2, 5), (1, 3), 2): -0.7289999999991645, ((2, 4), (3, 3), 2): -0.8099999999991645, ((2, 4), (1, 4), 2): -0.10895908675947359, ((2, 3), (1, 1), 1): 0.8100000000008357, ((4, 1), (4, 4), 1): 0.15307109936973518, ((2, 4), (4, 3), 2): -0.7289999999991645, ((3, 3), (4, 1), 2): -0.8999999999991645, ((2, 5), (3, 1), 1): 1.0000000000008356, ((4, 1), (2, 2), 1): 0.1294659036152318, ((3, 1), (4, 3), 1): 0.17007899929961295, ((4, 4), (3, 5), 1): 0.1233345095694847, ((3, 1), (1, 1), 2): -0.15475499999916448, ((2, 2), (2, 5), 2): -0.1700789992979419, ((3, 3), (1, 4), 1): 0.8100000000008357, ((3, 4), (3, 2), 1): 0.9000000000008356, ((1, 2), (2, 4), 2): -0.21848444044091667, ((2, 4), (3, 5), 2): -0.18620167770999654, ((1, 2), (2, 1), 1): 0.11281639500083551, ((2, 5), (2, 4), 1): 1.0000000000008356, ((4, 2), (4, 1), 2): -0.8999999999991645, ((4, 2), (3, 5), 2): -0.17245829911666027, ((3, 4), (4, 2), 2): -0.8099999999991645, ((1, 3), (3, 2), 2): -0.8999999999991645, ((4, 5), (4, 3), 1): 0.9000000000008356, ((1, 1), (3, 1), 2): -0.9999999999991644, ((1, 3), (4, 5), 2): -0.15307109936806415, ((1, 4), (3, 3), 2): -0.8099999999991645, ((4, 3), (1, 1), 1): 0.7290000000008356, ((2, 3), (3, 1), 2): -0.9999999999991644, ((2, 5), (2, 1), 1): 1.0000000000008356, ((3, 2), (2, 4), 2): -0.21848444044091667, ((1, 5), (1, 3), 2): -0.7289999999991645, ((1, 2), (3, 1), 1): 0.6561000000008357, ((1, 2), (3, 4), 1): 0.1724582991183313, ((4, 2), (2, 3), 1): 0.17007899929961295, ((1, 5), (4, 3), 2): -0.7289999999991645, ((2, 1), (4, 4), 2): -0.1966359963967415, ((4, 3), (1, 4), 2): -0.22973200180037598, ((4, 1), (3, 2), 2): -0.38526704819196633, ((2, 3), (4, 2), 1): 0.8100000000008357, ((2, 1), (2, 5), 2): -0.17245829911666027, ((2, 5), (3, 3), 2): -0.8099999999991645, ((1, 2), (4, 3), 2): -0.2879644503147147, ((1, 4), (2, 2), 2): -0.8999999999991645, ((2, 4), (2, 3), 2): -0.8099999999991645, ((2, 2), (3, 4), 2): -0.21848444044091667, ((4, 1), (1, 4), 1): 0.1552124692065817, ((2, 1), (2, 3), 2): -0.2437340779534028, ((4, 3), (2, 5), 1): 0.21936067015965, ((1, 4), (3, 4), 1): 0.13927950000083555, ((3, 4), (4, 5), 2): -0.07721612477312259, ((4, 1), (4, 3), 1): 0.12864099356981903, ((2, 5), (4, 5), 2): -0.10153475549916445, ((2, 5), (1, 4), 1): 1.0000000000008356, ((3, 4), (1, 5), 1): 0.9000000000008356, ((1, 5), (1, 1), 2): -0.8999999999991645, ((3, 5), (3, 3), 2): -0.8099999999991645, ((3, 4), (2, 5), 2): -0.18620167770999654, ((3, 2), (1, 1), 1): 0.7290000000008356, ((4, 1), (3, 5), 1): 0.15307109936973518, ((3, 2), (2, 3), 2): -0.31996050034977574, ((4, 1), (3, 4), 2): -0.219360670157979, ((2, 3), (2, 4), 1): 0.24276048938056022, ((3, 2), (4, 5), 1): 0.21936067015965, ((3, 5), (2, 1), 1): 1.0000000000008356, ((1, 5), (4, 2), 1): 0.9000000000008356, ((1, 4), (1, 3), 1): 0.8100000000008357, ((4, 4), (1, 4), 2): -0.6560999999991646, ((1, 4), (3, 2), 1): 0.8100000000008357, ((1, 3), (2, 1), 1): 0.7290000000008356, ((2, 4), (3, 3), 1): 0.9000000000008356, ((3, 1), (2, 1), 1): 0.6561000000008357, ((4, 4), (1, 5), 2): -0.1675815099389133, ((1, 5), (4, 5), 1): 0.9000000000008356, ((3, 2), (1, 2), 2): -0.13927949999916447, ((3, 5), (1, 1), 1): 1.0000000000008356, ((4, 5), (3, 2), 1): 0.9000000000008356, ((3, 3), (1, 1), 2): -0.8999999999991645, ((2, 4), (4, 4), 1): 0.9000000000008356, ((4, 4), (3, 3), 2): -0.8099999999991645, ((2, 3), (3, 4), 2): -0.2552577797782884, ((2, 3), (1, 1), 2): -0.8999999999991645, ((4, 4), (1, 2), 1): 0.8100000000008357, ((3, 4), (4, 1), 2): -0.8999999999991645, ((1, 1), (1, 3), 2): -0.219360670157979, ((1, 2), (4, 4), 2): -0.1966359963967415, ((4, 3), (2, 4), 1): 0.21848444044258775, ((2, 5), (3, 1), 2): -0.9999999999991644, ((4, 4), (4, 3), 2): -0.7289999999991645, ((4, 5), (4, 3), 2): -0.7289999999991645, ((2, 3), (1, 4), 2): -0.0972656437777949, ((3, 1), (1, 1), 1): 0.6561000000008357, ((2, 2), (3, 5), 1): 0.21936067015965, ((1, 3), (4, 3), 1): 0.7290000000008356, ((3, 2), (4, 3), 2): -0.11223242700555261, ((3, 4), (2, 1), 2): -0.9999999999991644, ((3, 3), (1, 4), 2): -0.1700789992979419, ((1, 1), (3, 3), 1): 0.12864099356981903, ((3, 1), (2, 3), 1): 0.17007899929961295, ((2, 5), (1, 2), 1): 1.0000000000008356, ((2, 1), (4, 1), 1): 0.6561000000008357, ((2, 4), (3, 5), 1): 0.3852670481936374, ((3, 1), (1, 5), 2): -0.1552124692049107, ((4, 3), (2, 1), 2): -0.9999999999991644, ((2, 5), (4, 1), 1): 1.0000000000008356, ((2, 3), (3, 1), 1): 0.8100000000008357, ((3, 1), (3, 3), 2): -0.2437340779534028, ((4, 5), (2, 5), 1): 0.15475500000083553, ((2, 3), (1, 3), 2): -0.12032523024724888, ((3, 1), (3, 2), 1): 0.14385100401683137, ((4, 1), (3, 3), 1): 0.12864099356981903, ((3, 4), (1, 4), 1): 0.9000000000008356, ((1, 4), (2, 3), 2): -0.8099999999991645, ((4, 2), (1, 1), 1): 0.6561000000008357, ((4, 3), (4, 2), 1): 0.7290000000008356, ((3, 1), (1, 3), 1): 0.22973200180204703, ((4, 1), (1, 4), 2): -0.1974246031420975, ((4, 1), (1, 5), 1): 0.17697239675865487, ((4, 3), (1, 2), 2): -0.8099999999991645, ((3, 3), (2, 1), 1): 0.8100000000008357, ((1, 5), (2, 4), 2): -0.7289999999991645, ((2, 5), (2, 2), 1): 1.0000000000008356, ((1, 2), (2, 2), 1): 0.1089590867611446, ((1, 5), (1, 3), 1): 0.9000000000008356, ((3, 4), (3, 1), 2): -0.9999999999991644, ((3, 4), (1, 2), 2): -0.8099999999991645, ((4, 1), (2, 5), 2): -0.1974246031420975, ((3, 3), (3, 5), 2): -0.14293443729803507, ((1, 4), (1, 1), 2): -0.8999999999991645, ((2, 5), (3, 4), 1): 1.0000000000008356, ((4, 3), (1, 4), 1): 0.28796445031638573, ((1, 2), (2, 5), 1): 0.1724582991183313, ((1, 5), (3, 4), 1): 0.9000000000008356, ((2, 3), (4, 2), 2): -0.8099999999991645, ((1, 3), (2, 2), 1): 0.12535155000083553, ((3, 2), (3, 5), 1): 0.21848444044258775, ((2, 1), (2, 5), 1): 0.1724582991183313, ((1, 5), (2, 1), 1): 0.9000000000008356, ((4, 5), (1, 2), 1): 0.9000000000008356, ((2, 4), (3, 4), 1): 0.9000000000008356, ((3, 2), (2, 1), 2): -0.9999999999991644, ((4, 4), (2, 1), 2): -0.9999999999991644, ((4, 2), (4, 5), 1): 0.19663599639841253, ((3, 4), (4, 5), 1): 0.3852670481936374, ((1, 1), (4, 5), 1): 0.17697239675865487, ((3, 4), (1, 5), 2): -0.12946590361356075, ((1, 1), (4, 2), 1): 0.16758150994058438, ((1, 4), (1, 2), 1): 0.8100000000008357, ((1, 2), (4, 2), 1): 0.6561000000008357, ((4, 2), (2, 1), 1): 0.6561000000008357, ((3, 1), (2, 4), 1): 0.1724582991183313, ((2, 4), (4, 2), 2): -0.8099999999991645, ((3, 5), (3, 3), 1): 1.0000000000008356, ((1, 1), (2, 4), 2): -0.219360670157979, ((1, 3), (4, 4), 1): 0.28796445031638573, ((2, 2), (3, 2), 1): 0.7290000000008356, ((1, 2), (2, 3), 2): -0.31996050034977574, ((4, 1), (3, 1), 1): 0.09806317808511371, ((4, 1), (1, 3), 2): -0.2553269801196668, ((3, 3), (2, 3), 1): 0.8100000000008357, ((2, 3), (2, 4), 2): -0.18897666588669498, ((2, 1), (4, 3), 2): -0.219360670157979, ((1, 5), (3, 3), 2): -0.8099999999991645, ((2, 4), (3, 2), 1): 0.9000000000008356, ((3, 3), (1, 5), 1): 0.3467403433743573, ((4, 1), (1, 1), 2): -0.8999999999991645, ((4, 5), (1, 4), 2): -0.6560999999991646, ((1, 3), (1, 1), 2): -0.8999999999991645, ((2, 3), (3, 3), 1): 0.8100000000008357, ((3, 3), (3, 4), 1): 0.24276048938056022, ((1, 4), (1, 3), 2): -0.7289999999991645, ((3, 4), (3, 5), 2): -0.14385100401516035, ((3, 5), (1, 3), 2): -0.7289999999991645, ((4, 1), (2, 1), 2): -0.9999999999991644, ((1, 3), (1, 2), 1): 0.7290000000008356, ((4, 2), (1, 4), 1): 0.19663599639841253, ((1, 5), (3, 4), 2): -0.7289999999991645, ((1, 4), (3, 1), 1): 0.8100000000008357, ((3, 5), (4, 3), 2): -0.7289999999991645, ((3, 5), (1, 4), 2): -0.6560999999991646, ((4, 4), (1, 5), 1): 0.3467403433743573, ((3, 2), (4, 2), 1): 0.7290000000008356, ((3, 2), (3, 3), 1): 0.18897666588836598, ((2, 4), (2, 2), 2): -0.8999999999991645, ((4, 4), (3, 3), 1): 0.13927950000083555, ((3, 2), (1, 5), 1): 0.25532698012133787, ((1, 5), (2, 1), 2): -0.9999999999991644, ((3, 1), (3, 5), 1): 0.1724582991183313, ((1, 3), (3, 1), 2): -0.9999999999991644, ((4, 3), (1, 5), 2): -0.15307109936806415, ((3, 4), (4, 1), 1): 0.9000000000008356, ((1, 1), (4, 1), 1): 0.5904900000008355, ((1, 3), (1, 1), 1): 0.7290000000008356, ((2, 2), (4, 3), 2): -0.21848444044091667, ((3, 4), (1, 3), 1): 0.9000000000008356, ((3, 3), (4, 4), 2): -0.0972656437777949, ((4, 4), (2, 3), 2): -0.8099999999991645, ((3, 5), (3, 1), 2): -0.9999999999991644, ((4, 3), (3, 5), 2): -0.1700789992979419, ((3, 4), (4, 4), 2): -0.10895908675947359, ((4, 2), (1, 2), 2): -0.8099999999991645, ((3, 1), (2, 3), 2): -0.28369664457750043, ((4, 5), (4, 2), 1): 0.9000000000008356, ((2, 1), (1, 1), 2): -0.1110010586109487, ((2, 5), (2, 3), 2): -0.8099999999991645, ((2, 4), (2, 5), 2): -0.14385100401516035, ((3, 1), (1, 5), 1): 0.19742460314376856, ((2, 5), (1, 5), 2): -0.09806317808344267, ((4, 3), (2, 1), 1): 0.7290000000008356, ((1, 1), (3, 4), 2): -0.2553269801196668, ((4, 1), (4, 2), 2): -0.28369664457750043, ((2, 2), (1, 3), 1): 0.2552577797799595, ((3, 1), (3, 3), 1): 0.14293443729970606, ((1, 3), (4, 1), 1): 0.7290000000008356, ((4, 3), (3, 5), 1): 0.21848444044258775, ((3, 1), (2, 5), 2): -0.1966359963967415, ((1, 1), (1, 2), 1): 0.1294659036152318, ((2, 3), (2, 5), 1): 0.24373407795507385, ((4, 1), (3, 3), 2): -0.28369664457750043, ((3, 3), (3, 5), 1): 0.24373407795507385, ((2, 5), (1, 1), 2): -0.8999999999991645, ((4, 3), (3, 4), 1): 0.11223242700722365, ((1, 3), (2, 5), 1): 0.21848444044258775, ((3, 2), (4, 4), 1): 0.21848444044258775, ((4, 1), (1, 5), 2): -0.1769723967569838, ((3, 2), (2, 5), 2): -0.17245829911666027, ((3, 3), (2, 1), 2): -0.9999999999991644, ((1, 4), (4, 1), 2): -0.8999999999991645, ((2, 4), (2, 5), 1): 0.3152184939767644, ((2, 3), (3, 2), 1): 0.8100000000008357, ((2, 5), (2, 2), 2): -0.8999999999991645, ((3, 5), (3, 4), 1): 1.0000000000008356, ((4, 3), (2, 3), 1): 0.12535155000083553, ((3, 4), (1, 2), 1): 0.9000000000008356, ((3, 5), (2, 5), 1): 1.0000000000008356, ((4, 2), (4, 4), 1): 0.1724582991183313, ((1, 4), (4, 5), 2): -0.1675815099389133, ((4, 2), (3, 3), 1): 0.09726564377946594, ((1, 4), (4, 3), 2): -0.7289999999991645, ((2, 1), (2, 4), 1): 0.17007899929961295, ((3, 2), (3, 5), 2): -0.1700789992979419, ((2, 5), (4, 2), 2): -0.8099999999991645, ((2, 3), (2, 2), 1): 0.8100000000008357, ((2, 1), (3, 5), 1): 0.19663599639841253, ((3, 1), (4, 2), 1): 0.1862016777116676, ((1, 1), (2, 5), 1): 0.15307109936973518, ((1, 2), (3, 3), 1): 0.17007899929961295, ((1, 3), (2, 3), 1): 0.12032523024891992, ((1, 2), (4, 2), 2): -0.8099999999991645, ((4, 2), (4, 1), 1): 0.6561000000008357, ((4, 2), (2, 1), 2): -0.9999999999991644, ((3, 5), (2, 4), 2): -0.7289999999991645, ((1, 3), (1, 5), 2): -0.128640993568148, ((3, 5), (4, 2), 1): 1.0000000000008356, ((2, 4), (4, 1), 2): -0.8999999999991645, ((1, 3), (2, 2), 2): -0.8999999999991645, ((1, 2), (2, 3), 1): 0.09726564377946594, ((3, 1), (4, 5), 1): 0.19663599639841253, ((4, 2), (3, 4), 1): 0.17007899929961295, ((1, 5), (3, 1), 2): -0.9999999999991644, ((2, 4), (4, 5), 2): -0.12946590361356075, ((1, 5), (1, 2), 1): 0.9000000000008356, ((2, 1), (4, 3), 1): 0.22973200180204703, ((3, 1), (2, 2), 2): -0.38526704819196633, ((2, 4), (3, 2), 2): -0.8999999999991645, ((3, 5), (4, 4), 1): 1.0000000000008356, ((4, 5), (1, 5), 1): 0.9000000000008356, ((4, 1), (1, 2), 2): -0.3467403433726861, ((3, 2), (1, 4), 2): -0.17245829911666027, ((3, 3), (1, 2), 2): -0.8099999999991645, ((2, 3), (3, 3), 2): -0.8099999999991645, ((4, 5), (3, 3), 1): 0.9000000000008356, ((3, 3), (4, 2), 1): 0.8100000000008357, ((2, 2), (4, 2), 2): -0.13927949999916447, ((2, 2), (3, 1), 1): 0.7290000000008356, ((1, 3), (1, 2), 2): -0.8099999999991645, ((4, 5), (4, 1), 2): -0.8999999999991645, ((3, 1), (1, 4), 1): 0.19663599639841253, ((4, 2), (1, 4), 2): -0.1966359963967415, ((2, 1), (1, 5), 1): 0.19663599639841253, ((1, 4), (3, 1), 2): -0.9999999999991644, ((2, 3), (4, 4), 1): 0.8100000000008357, ((4, 1), (4, 2), 1): 0.1294659036152318, ((4, 4), (4, 5), 1): 0.2836966445791715, ((3, 3), (4, 5), 1): 0.2836966445791715, ((3, 1), (1, 2), 1): 0.6561000000008357, ((3, 3), (2, 5), 1): 0.2836966445791715, ((2, 1), (3, 3), 2): -0.28369664457750043, ((4, 4), (2, 5), 2): -0.6560999999991646, ((4, 2), (3, 2), 1): 0.1089590867611446, ((2, 5), (3, 3), 1): 1.0000000000008356, ((4, 3), (4, 1), 1): 0.7290000000008356, ((3, 3), (4, 1), 1): 0.8100000000008357, ((1, 4), (1, 5), 2): -0.12946590361356075, ((2, 4), (1, 2), 2): -0.8099999999991645, ((3, 3), (4, 4), 1): 0.3199605003514469, ((1, 2), (4, 1), 2): -0.8999999999991645, ((3, 3), (2, 4), 1): 0.3199605003514469, ((2, 1), (3, 1), 1): 0.6561000000008357, ((4, 3), (4, 5), 1): 0.21936067015965, ((2, 2), (2, 5), 1): 0.21848444044258775, ((2, 2), (4, 5), 1): 0.25532698012133787, ((1, 1), (1, 5), 1): 0.1552124692065817, ((2, 4), (2, 1), 1): 0.9000000000008356, ((3, 4), (3, 2), 2): -0.8999999999991645, ((4, 1), (2, 4), 2): -0.2553269801196668, ((1, 2), (2, 1), 2): -0.9999999999991644, ((1, 5), (1, 4), 1): 0.9000000000008356, ((4, 1), (2, 4), 1): 0.15307109936973518, ((1, 3), (4, 1), 2): -0.8999999999991645, ((3, 2), (3, 1), 1): 0.7290000000008356, ((1, 3), (3, 2), 1): 0.7290000000008356, ((4, 4), (1, 3), 1): 0.8100000000008357, ((3, 5), (4, 5), 1): 1.0000000000008356, ((1, 4), (3, 3), 1): 0.8100000000008357, ((1, 2), (1, 3), 1): 0.17007899929961295, ((4, 4), (3, 4), 1): 0.12811676214976764, ((3, 2), (2, 4), 1): 0.21848444044258775, ((3, 5), (3, 4), 2): -0.7289999999991645, ((1, 1), (2, 1), 1): 0.09806317808511371, ((4, 5), (3, 2), 2): -0.8999999999991645, ((3, 2), (4, 1), 1): 0.7290000000008356, ((3, 2), (2, 1), 1): 0.7290000000008356, ((3, 3), (1, 3), 2): -0.12535154999916448, ((2, 3), (3, 5), 1): 0.2836966445791715, ((1, 3), (3, 4), 1): 0.21848444044258775, ((1, 4), (4, 3), 1): 0.8100000000008357, ((3, 5), (2, 2), 1): 1.0000000000008356, ((4, 4), (4, 3), 1): 0.8100000000008357, ((2, 1), (1, 3), 1): 0.17007899929961295, ((4, 2), (2, 5), 2): -0.1966359963967415, ((2, 1), (3, 5), 2): -0.1966359963967415, ((4, 5), (3, 1), 1): 0.9000000000008356, ((4, 1), (1, 1), 1): 0.5904900000008355, ((1, 4), (3, 4), 2): -0.7289999999991645, ((2, 2), (4, 4), 1): 0.28796445031638573, ((4, 1), (4, 3), 2): -0.219360670157979, ((1, 2), (3, 3), 2): -0.8099999999991645, ((2, 4), (3, 1), 2): -0.9999999999991644, ((2, 1), (4, 2), 2): -0.28369664457750043, ((3, 5), (2, 4), 1): 1.0000000000008356, ((3, 1), (4, 4), 1): 0.1724582991183313, ((1, 3), (1, 5), 1): 0.21936067015965, ((1, 4), (2, 5), 2): -0.18620167770999654, ((4, 5), (3, 5), 2): -0.6560999999991646, ((2, 3), (2, 1), 1): 0.8100000000008357, ((2, 5), (4, 4), 1): 1.0000000000008356, ((3, 1), (4, 5), 2): -0.15307109936806415, ((1, 3), (2, 4), 2): -0.2552577797782884, ((2, 2), (1, 4), 2): -0.1700789992979419, ((1, 5), (3, 1), 1): 0.9000000000008356, ((2, 1), (3, 4), 1): 0.1724582991183313, ((3, 5), (1, 5), 2): -0.10153475549916445, ((4, 5), (1, 5), 2): -0.5904899999991645, ((3, 2), (4, 5), 2): -0.128640993568148, ((3, 2), (1, 4), 1): 0.28796445031638573, ((2, 3), (1, 5), 1): 0.2836966445791715, ((1, 5), (4, 2), 2): -0.8099999999991645, ((4, 5), (3, 3), 2): -0.8099999999991645, ((1, 1), (3, 5), 2): -0.1974246031420975, ((2, 2), (4, 2), 1): 0.7290000000008356, ((4, 4), (1, 4), 1): 0.8100000000008357, ((2, 2), (3, 3), 2): -0.31996050034977574, ((4, 5), (4, 1), 1): 0.9000000000008356, ((4, 4), (3, 1), 1): 0.8100000000008357, ((1, 2), (3, 5), 2): -0.1966359963967415, ((4, 4), (2, 3), 1): 0.8100000000008357, ((4, 2), (1, 5), 1): 0.19742460314376856, ((1, 5), (4, 1), 1): 0.9000000000008356, ((3, 4), (2, 4), 1): 0.9000000000008356, ((1, 2), (3, 2), 1): 0.11281639500083551, ((1, 1), (2, 5), 2): -0.1966359963967415, ((2, 3), (4, 1), 2): -0.8999999999991645, ((4, 4), (4, 5), 2): -0.12946590361356075, ((3, 3), (2, 5), 2): -0.1700789992979419, ((1, 3), (4, 2), 2): -0.8099999999991645, ((4, 2), (2, 4), 1): 0.1724582991183313, ((3, 5), (2, 3), 1): 1.0000000000008356, ((1, 1), (1, 3), 1): 0.12864099356981903, ((4, 2), (3, 2), 2): -0.8999999999991645, ((1, 1), (4, 2), 2): -0.3467403433726861, ((1, 2), (4, 4), 1): 0.19663599639841253, ((4, 4), (2, 2), 2): -0.8999999999991645, ((4, 2), (4, 4), 2): -0.17245829911666027, ((1, 2), (4, 1), 1): 0.6561000000008357, ((3, 5), (4, 2), 2): -0.8099999999991645, ((1, 4), (2, 4), 2): -0.7289999999991645, ((2, 2), (3, 5), 2): -0.17245829911666027, ((2, 1), (3, 1), 2): -0.9999999999991644, ((1, 1), (4, 4), 2): -0.1974246031420975, ((3, 4), (2, 2), 2): -0.8999999999991645, ((2, 2), (4, 5), 2): -0.15307109936806415, ((1, 1), (3, 3), 2): -0.3467403433726861, ((2, 4), (2, 1), 2): -0.9999999999991644, ((2, 5), (1, 2), 2): -0.8099999999991645, ((2, 1), (2, 2), 1): 0.14385100401683137, ((1, 5), (2, 3), 2): -0.8099999999991645, ((4, 2), (2, 2), 2): -0.8999999999991645, ((4, 5), (4, 4), 1): 0.9000000000008356, ((1, 5), (1, 4), 2): -0.6560999999991646, ((2, 5), (4, 1), 2): -0.8999999999991645, ((3, 4), (1, 1), 2): -0.8999999999991645, ((3, 2), (3, 1), 2): -0.9999999999991644, ((3, 5), (3, 2), 2): -0.8999999999991645, ((4, 5), (2, 5), 2): -0.6560999999991646, ((2, 3), (1, 3), 1): 0.8100000000008357, ((3, 5), (4, 5), 2): -0.09806317808344267, ((1, 2), (1, 1), 1): 0.6561000000008357, ((3, 4), (1, 4), 2): -0.1128163949991645, ((4, 2), (1, 1), 2): -0.8999999999991645, ((2, 5), (4, 3), 2): -0.7289999999991645, ((1, 2), (1, 4), 1): 0.1724582991183313, ((4, 3), (1, 5), 1): 0.25532698012133787, ((1, 4), (4, 2), 2): -0.8099999999991645, ((4, 5), (2, 2), 2): -0.8999999999991645, ((1, 2), (4, 5), 2): -0.1552124692049107, ((4, 5), (1, 1), 1): 0.9000000000008356, ((1, 1), (3, 1), 1): 0.1015347555008355, ((3, 4), (3, 1), 1): 0.9000000000008356, ((3, 3), (3, 2), 1): 0.8100000000008357, ((4, 3), (3, 3), 2): -0.8099999999991645, ((1, 4), (1, 1), 1): 0.8100000000008357, ((1, 5), (4, 4), 2): -0.6560999999991646, ((2, 5), (3, 4), 2): -0.7289999999991645, ((3, 3), (1, 3), 1): 0.8100000000008357, ((2, 2), (2, 1), 2): -0.9999999999991644, ((1, 3), (3, 4), 2): -0.7289999999991645, ((1, 3), (3, 5), 1): 0.21936067015965, ((1, 2), (2, 5), 2): -0.17245829911666027, ((1, 5), (3, 5), 2): -0.6560999999991646, ((1, 1), (2, 3), 2): -0.28369664457750043, ((4, 2), (1, 3), 2): -0.2879644503147147, ((3, 1), (1, 4), 2): -0.1966359963967415, ((2, 1), (1, 3), 2): -0.21848444044091667, ((2, 3), (4, 3), 1): 0.8100000000008357, ((4, 5), (4, 4), 2): -0.6560999999991646, ((2, 1), (4, 5), 1): 0.19742460314376856, ((3, 2), (1, 3), 1): 0.7290000000008356, ((1, 4), (4, 4), 1): 0.8100000000008357, ((4, 4), (2, 1), 1): 0.8100000000008357, ((2, 3), (1, 2), 2): -0.13927949999916447, ((4, 5), (1, 3), 1): 0.9000000000008356, ((2, 4), (3, 1), 1): 0.9000000000008356, ((3, 2), (3, 4), 1): 0.19162033235360862, ((1, 3), (3, 3), 2): -0.8099999999991645, ((4, 4), (3, 2), 1): 0.8100000000008357, ((1, 4), (2, 5), 1): 0.1233345095694847, ((1, 3), (4, 4), 2): -0.22973200180037598, ((2, 4), (1, 3), 2): -0.12535154999916448, ((2, 1), (1, 2), 1): 0.1862016777116676, ((2, 5), (4, 4), 2): -0.6560999999991646, ((4, 5), (2, 1), 1): 0.9000000000008356, ((1, 3), (2, 4), 1): 0.11223242700722365, ((4, 4), (1, 1), 2): -0.8999999999991645, ((3, 2), (2, 3), 1): 0.2552577797799595, ((4, 1), (1, 3), 1): 0.15307109936973518, ((3, 3), (2, 2), 2): -0.8999999999991645, ((3, 5), (1, 5), 1): 1.0000000000008356, ((1, 5), (3, 2), 1): 0.9000000000008356, ((3, 3), (1, 5), 2): -0.128640993568148, ((1, 2), (1, 3), 2): -0.21848444044091667, ((2, 3), (1, 5), 2): -0.128640993568148, ((3, 4), (4, 3), 1): 0.9000000000008356, ((4, 1), (4, 4), 2): -0.1966359963967415, ((1, 1), (3, 5), 1): 0.1552124692065817, ((3, 4), (3, 5), 1): 0.3152184939767644, ((4, 1), (2, 2), 2): -0.8999999999991645, ((2, 2), (3, 3), 1): 0.2552577797799595, ((4, 2), (3, 3), 2): -0.31996050034977574, ((3, 5), (4, 3), 1): 1.0000000000008356, ((1, 2), (3, 5), 1): 0.19663599639841253, ((3, 2), (4, 2), 2): -0.12811676214809659, ((3, 5), (1, 4), 1): 1.0000000000008356, ((3, 4), (2, 4), 2): -0.7289999999991645, ((4, 3), (1, 3), 1): 0.7290000000008356, ((3, 1), (3, 4), 1): 0.17007899929961295, ((4, 5), (2, 3), 2): -0.8099999999991645, ((2, 5), (2, 4), 2): -0.7289999999991645, ((1, 3), (4, 2), 1): 0.7290000000008356, ((2, 1), (3, 2), 2): -0.38526704819196633, ((3, 1), (4, 2), 2): -0.12333450956781361, ((3, 5), (2, 3), 2): -0.8099999999991645, ((2, 5), (3, 5), 2): -0.6560999999991646, ((4, 5), (1, 3), 2): -0.7289999999991645, ((3, 1), (3, 5), 2): -0.17245829911666027, ((4, 4), (1, 3), 2): -0.7289999999991645, ((1, 4), (1, 2), 2): -0.8099999999991645, ((2, 2), (3, 4), 1): 0.21848444044258775, ((2, 2), (4, 3), 1): 0.7290000000008356, ((4, 5), (3, 4), 2): -0.7289999999991645, ((4, 5), (1, 1), 2): -0.8999999999991645, ((2, 4), (1, 5), 1): 0.3852670481936374, ((4, 1), (1, 2), 1): 0.16758150994058438, ((4, 4), (1, 2), 2): -0.8099999999991645, ((2, 4), (1, 1), 1): 0.9000000000008356, ((4, 3), (1, 1), 2): -0.8999999999991645, ((1, 1), (4, 4), 1): 0.1552124692065817, ((2, 2), (2, 3), 1): 0.18897666588836598, ((3, 4), (4, 4), 1): 0.9000000000008356, ((4, 2), (1, 2), 1): 0.6561000000008357, ((2, 1), (1, 1), 1): 0.6561000000008357, ((2, 1), (2, 2), 2): -0.3152184939750933, ((4, 2), (2, 2), 1): 0.11281639500083551, ((2, 3), (4, 5), 2): -0.128640993568148, ((1, 2), (3, 1), 2): -0.9999999999991644, ((2, 5), (1, 5), 1): 1.0000000000008356, ((1, 3), (2, 3), 2): -0.8099999999991645, ((1, 1), (3, 4), 1): 0.15307109936973518, ((3, 1), (2, 4), 2): -0.219360670157979, ((2, 2), (1, 3), 2): -0.11223242700555261, ((1, 4), (3, 5), 1): 0.2836966445791715, ((4, 2), (2, 3), 2): -0.8099999999991645, ((4, 1), (3, 2), 1): 0.0772161247747936, ((3, 1), (2, 5), 1): 0.19663599639841253, ((2, 3), (2, 5), 2): -0.14293443729803507, ((1, 2), (1, 1), 2): -0.8999999999991645, ((2, 2), (2, 4), 2): -0.19162033235193757, ((2, 5), (1, 1), 1): 1.0000000000008356, ((1, 4), (2, 1), 2): -0.9999999999991644, ((4, 3), (3, 4), 2): -0.2552577797782884, ((2, 5), (4, 3), 1): 1.0000000000008356, ((1, 2), (4, 3), 1): 0.22973200180204703, ((2, 4), (4, 3), 1): 0.9000000000008356, ((1, 5), (2, 5), 1): 0.11100105861261977, ((2, 1), (2, 3), 1): 0.14293443729970606, ((1, 2), (1, 5), 1): 0.19663599639841253, ((2, 3), (3, 2), 2): -0.8999999999991645, ((1, 2), (4, 5), 1): 0.19742460314376856, ((2, 5), (4, 5), 1): 1.0000000000008356, ((4, 3), (2, 3), 2): -0.8099999999991645, ((3, 3), (3, 2), 2): -0.8999999999991645, ((1, 1), (3, 2), 1): 0.1294659036152318, ((1, 5), (1, 1), 1): 0.9000000000008356, ((3, 5), (1, 2), 1): 1.0000000000008356, ((1, 5), (4, 4), 1): 0.9000000000008356, ((3, 1), (4, 3), 2): -0.21848444044091667, ((4, 4), (2, 4), 2): -0.7289999999991645, ((4, 5), (2, 2), 1): 0.9000000000008356, ((3, 4), (2, 5), 1): 0.3852670481936374, ((1, 5), (3, 5), 1): 0.15475500000083553, ((3, 2), (1, 1), 2): -0.8999999999991645, ((4, 2), (1, 3), 1): 0.22973200180204703, ((2, 2), (1, 1), 1): 0.7290000000008356, ((2, 5), (4, 2), 1): 1.0000000000008356, ((3, 2), (1, 3), 2): -0.21848444044091667, ((4, 2), (3, 1), 2): -0.9999999999991644, ((1, 4), (4, 4), 2): -0.6560999999991646, ((4, 3), (3, 1), 1): 0.7290000000008356, ((3, 5), (2, 1), 2): -0.9999999999991644, ((4, 3), (2, 2), 1): 0.7290000000008356, ((2, 3), (1, 2), 1): 0.8100000000008357, ((4, 4), (3, 5), 2): -0.18620167770999654, ((1, 3), (3, 3), 1): 0.12535155000083553, ((1, 3), (2, 1), 2): -0.9999999999991644, ((2, 4), (4, 1), 1): 0.9000000000008356, ((2, 4), (1, 3), 1): 0.9000000000008356, ((4, 1), (4, 5), 2): -0.1552124692049107, ((4, 4), (4, 2), 2): -0.8099999999991645, ((3, 1), (2, 1), 2): -0.9999999999991644, ((4, 4), (1, 1), 1): 0.8100000000008357, ((1, 5), (4, 5), 2): -0.5904899999991645, ((2, 4), (4, 5), 1): 0.9000000000008356, ((3, 3), (2, 2), 1): 0.8100000000008357, ((4, 1), (2, 3), 2): -0.3467403433726861, ((3, 2), (1, 2), 1): 0.7290000000008356, ((1, 5), (3, 2), 2): -0.8999999999991645, ((2, 2), (4, 1), 1): 0.7290000000008356, ((3, 3), (1, 1), 1): 0.8100000000008357, ((3, 5), (4, 4), 2): -0.1128163949991645, ((2, 1), (1, 4), 2): -0.17245829911666027, ((3, 3), (1, 2), 1): 0.8100000000008357, ((4, 5), (2, 4), 2): -0.7289999999991645, ((1, 3), (1, 4), 2): -0.1700789992979419, ((2, 5), (3, 2), 2): -0.8999999999991645, ((3, 3), (4, 2), 2): -0.13927949999916447, ((4, 3), (2, 4), 2): -0.7289999999991645, ((2, 2), (1, 5), 2): -0.128640993568148, ((2, 2), (3, 1), 2): -0.9999999999991644, ((2, 3), (1, 4), 1): 0.3199605003514469, ((3, 4), (4, 3), 2): -0.12535154999916448, ((1, 3), (4, 3), 2): -0.7289999999991645, ((3, 4), (2, 1), 1): 0.9000000000008356, ((4, 3), (3, 2), 2): -0.8999999999991645, ((4, 3), (1, 3), 2): -0.7289999999991645, ((3, 2), (4, 4), 2): -0.1700789992979419, ((3, 1), (3, 4), 2): -0.21848444044091667, ((4, 5), (2, 3), 1): 0.9000000000008356, ((3, 2), (2, 2), 1): 0.7290000000008356, ((2, 1), (3, 3), 1): 0.17007899929961295, ((2, 1), (3, 2), 1): 0.1862016777116676, ((3, 1), (2, 2), 1): 0.1862016777116676, ((4, 4), (2, 5), 1): 0.2836966445791715, ((3, 4), (4, 2), 1): 0.9000000000008356, ((3, 2), (2, 5), 1): 0.21936067015965, ((3, 5), (4, 1), 1): 1.0000000000008356, ((4, 3), (4, 1), 2): -0.8999999999991645, ((1, 4), (1, 5), 1): 0.2836966445791715, ((4, 5), (3, 4), 1): 0.15475500000083553, ((3, 1), (3, 2), 2): -0.3152184939750933, ((2, 4), (1, 2), 1): 0.9000000000008356, ((2, 5), (2, 3), 1): 1.0000000000008356, ((1, 4), (2, 3), 1): 0.13927950000083555, ((3, 3), (2, 4), 2): -0.2552577797782884, ((4, 5), (4, 2), 2): -0.8099999999991645, ((4, 3), (4, 2), 2): -0.8099999999991645, ((1, 1), (2, 2), 2): -0.38526704819196633, ((4, 3), (4, 5), 2): -0.128640993568148, ((2, 2), (2, 3), 2): -0.24276048937888917, ((4, 3), (1, 2), 1): 0.7290000000008356, ((1, 1), (1, 5), 2): -0.1552124692049107, ((2, 2), (1, 2), 1): 0.7290000000008356, ((1, 5), (2, 4), 1): 0.15475500000083553, ((3, 1), (4, 1), 1): 0.6561000000008357, ((1, 2), (2, 2), 2): -0.8999999999991645, ((2, 3), (4, 5), 1): 0.3467403433743573, ((4, 4), (3, 4), 2): -0.7289999999991645, ((4, 1), (2, 5), 1): 0.1552124692065817, ((3, 1), (1, 3), 2): -0.219360670157979, ((4, 2), (3, 5), 1): 0.1724582991183313, ((1, 4), (3, 5), 2): -0.6560999999991646, ((1, 1), (2, 1), 2): -0.9999999999991644, ((2, 1), (4, 1), 2): -0.15475499999916448, ((2, 2), (2, 4), 1): 0.19162033235360862, ((1, 4), (2, 1), 1): 0.8100000000008357, ((4, 3), (4, 4), 1): 0.21848444044258775, ((4, 4), (3, 2), 2): -0.8999999999991645, ((4, 4), (3, 1), 2): -0.9999999999991644, ((1, 5), (2, 5), 2): -0.6560999999991646, ((2, 4), (3, 4), 2): -0.7289999999991645, ((3, 3), (4, 3), 1): 0.8100000000008357, ((1, 2), (1, 5), 2): -0.15307109936806415, ((4, 2), (4, 5), 2): -0.15307109936806415, ((1, 1), (4, 5), 2): -0.1769723967569838, ((3, 4), (3, 3), 1): 0.9000000000008356, ((1, 1), (3, 2), 2): -0.8999999999991645, ((3, 2), (4, 1), 2): -0.15475499999916448, ((2, 4), (4, 2), 1): 0.9000000000008356, ((4, 4), (2, 4), 1): 0.13927950000083555, ((1, 1), (2, 4), 1): 0.12864099356981903, ((3, 4), (2, 3), 2): -0.8099999999991645, ((2, 2), (3, 2), 2): -0.8999999999991645, ((3, 5), (2, 2), 2): -0.8999999999991645, ((4, 1), (3, 1), 2): -0.9999999999991644, ((3, 3), (2, 3), 2): -0.8099999999991645, ((1, 5), (3, 3), 1): 0.9000000000008356, ((1, 1), (1, 4), 1): 0.15307109936973518, ((2, 4), (2, 2), 1): 0.9000000000008356, ((4, 2), (3, 1), 1): 0.11281639500083551, ((4, 5), (1, 2), 2): -0.8099999999991645, ((4, 3), (3, 1), 2): -0.9999999999991644, ((1, 1), (4, 3), 1): 0.15307109936973518, ((2, 2), (4, 4), 2): -0.17245829911666027, ((4, 3), (2, 2), 2): -0.8999999999991645, ((4, 2), (4, 3), 1): 0.17007899929961295, ((3, 3), (3, 4), 2): -0.18897666588669498, ((2, 1), (4, 2), 1): 0.6561000000008357, ((4, 1), (2, 1), 1): 0.1015347555008355, ((4, 4), (2, 2), 1): 0.8100000000008357, ((1, 3), (1, 4), 1): 0.21848444044258775, ((3, 1), (4, 4), 2): -0.17245829911666027, ((4, 5), (3, 5), 1): 0.11100105861261977, ((2, 3), (2, 1), 2): -0.9999999999991644, ((4, 1), (4, 5), 1): 0.1552124692065817, ((3, 3), (3, 1), 1): 0.8100000000008357, ((4, 4), (4, 1), 1): 0.8100000000008357, ((4, 4), (4, 2), 1): 0.8100000000008357, ((2, 2), (1, 4), 1): 0.21848444044258775, ((4, 1), (3, 4), 1): 0.12864099356981903, ((3, 2), (3, 3), 2): -0.24276048937888917, ((2, 1), (3, 4), 2): -0.219360670157979, ((4, 1), (2, 3), 1): 0.12864099356981903, ((2, 2), (4, 1), 2): -0.8999999999991645, ((1, 5), (2, 2), 2): -0.8999999999991645, ((2, 5), (1, 3), 1): 1.0000000000008356, ((3, 2), (1, 5), 2): -0.15307109936806415, ((1, 3), (4, 5), 1): 0.25532698012133787, ((2, 1), (1, 4), 1): 0.1724582991183313, ((2, 4), (1, 4), 1): 0.9000000000008356, ((1, 3), (3, 1), 1): 0.7290000000008356, ((2, 5), (3, 2), 1): 1.0000000000008356, ((4, 2), (2, 5), 1): 0.19663599639841253, ((1, 1), (4, 1), 2): -0.8999999999991645, ((3, 5), (1, 2), 2): -0.8099999999991645, ((3, 4), (1, 3), 2): -0.7289999999991645, ((2, 2), (1, 5), 1): 0.21936067015965, ((3, 3), (4, 3), 2): -0.12032523024724888, ((1, 3), (3, 5), 2): -0.22973200180037598, ((3, 5), (3, 1), 1): 1.0000000000008356, ((4, 2), (1, 5), 2): -0.1552124692049107, ((4, 3), (3, 2), 1): 0.12535155000083553, ((1, 2), (3, 2), 2): -0.8999999999991645, ((4, 2), (4, 3), 2): -0.21848444044091667, ((4, 1), (3, 5), 2): -0.1966359963967415, ((1, 2), (2, 4), 1): 0.17007899929961295, ((3, 4), (1, 1), 1): 0.9000000000008356, ((3, 2), (2, 2), 2): -0.8999999999991645, ((4, 2), (2, 4), 2): -0.2879644503147147, ((3, 5), (4, 1), 2): -0.8999999999991645, ((3, 3), (3, 1), 2): -0.9999999999991644, ((2, 5), (3, 5), 1): 1.0000000000008356, ((1, 3), (2, 5), 2): -0.1700789992979419, ((1, 4), (2, 4), 1): 0.12811676214976764, ((1, 1), (2, 2), 1): 0.0772161247747936, ((4, 5), (3, 1), 2): -0.9999999999991644, ((3, 4), (2, 2), 1): 0.9000000000008356}

optimal policy by Shapley pour player 0:

{((2, 2), (1, 2), 2): {'W': 0.2834725664299268, 'E': 0.0, 'stand': 0.7165274335700732, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (3, 3), 1): {'W': 0.13292756787009863, 'E': 0.8670724321299014, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 5), 2): {'W': 0.0, 'E': 0.11040571557358962, 'stand': 0.7694418987067746, 'S': 0.0, 'N': 0.12015238571963585}, ((4, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (1, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 2): {'W': 0.0, 'E': 0.3345694854250365, 'stand': 0.0, 'S': 0.0, 'N': 0.6654305145749635}, ((1, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (1, 2), 2): {'E': 0.7670530563176892, 'stand': 0.1703661297132204, 'S': 0.0, 'N': 0.06258081396909043}, ((4, 5), (2, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (1, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 4), 2): {'W': 0.8526910852552859, 'E': 0.0, 'stand': 0.14730891474471408, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (4, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 5), 1): {'W': 0.20313690156069286, 'E': 0.45604654888816537, 'stand': 0.3408165495511418, 'N': 0.0}, ((3, 1), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (4, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (4, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 4), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (2, 3), 2): {'E': 0.3552779123794503, 'stand': 0.0, 'S': 0.6447220876205497, 'N': 0.0}, ((4, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (4, 5), 2): {'W': 0.0, 'E': 0.11040571557358962, 'stand': 0.7694418987067746, 'S': 0.12015238571963585, 'N': 0.0}, ((4, 1), (4, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 5), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3493961641926502, 'S': 0.6506038358073498, 'N': 0.0}, ((3, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (4, 3), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (1, 4), 2): {'W': 0.0, 'E': 0.39996321855781963, 'stand': 0.5158441684467474, 'S': 0.0, 'N': 0.0841926129954329}, ((3, 1), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 3), 2): {'W': 0.0, 'E': 0.6254649417730187, 'stand': 0.30480927403245206, 'S': 0.0697257841945292, 'N': 0.0}, ((3, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 2): {'E': 0.3552779123794503, 'stand': 0.0, 'S': 0.0, 'N': 0.6447220876205497}, ((4, 5), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 3), 2): {'W': 0.5003073438490172, 'E': 0.0, 'stand': 0.4996926561509828, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3774070987828242, 'S': 0.0, 'N': 0.6225929012171758}, ((4, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 5), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 1): {'W': 0.0890383334929441, 'E': 0.9109616665070559, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (2, 5), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 2): {'W': 0.0, 'E': 0.27105932532313626, 'stand': 0.15301831540597277, 'S': 0.0, 'N': 0.575922359270891}, ((1, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 2): {'W': 0.7115889841930676, 'E': 0.0, 'stand': 0.0, 'S': 0.28841101580693246, 'N': 0.0}, ((2, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (3, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 1), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3493961641926502, 'S': 0.0, 'N': 0.6506038358073498}, ((1, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (3, 5), 2): {'W': 0.6094039867835114, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.3905960132164886}, ((3, 5), (1, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3167932173737933, 'S': 0.0, 'N': 0.6832067826262067}, ((2, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 1), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 4), 2): {'W': 0.0, 'E': 0.39996321855781963, 'stand': 0.5158441684467474, 'S': 0.0841926129954329, 'N': 0.0}, ((4, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 4), 2): {'W': 0.8526910852552859, 'E': 0.0, 'stand': 0.14730891474471408, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 5), 2): {'W': 0.6094039867835114, 'E': 0.0, 'stand': 0.0, 'S': 0.3905960132164886, 'N': 0.0}, ((3, 1), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 1): {'W': 0.0, 'E': 0.035197460540043614, 'stand': 0.43942899980059963, 'S': 0.0, 'N': 0.5253735396593567}, ((1, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (2, 5), 1): {'W': 0.0, 'E': 0.1913445621291615, 'stand': 0.0, 'S': 0.8086554378708385, 'N': 0.0}, ((4, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 1): {'W': 0.0, 'E': 0.1913445621291615, 'stand': 0.0, 'S': 0.0, 'N': 0.8086554378708385}, ((2, 5), (1, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 4), 1): {'W': 0.11405536072897754, 'E': 0.3697075102567122, 'stand': 0.5162371290143102, 'N': 0.0}, ((1, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.5, 'S': 0.5, 'N': 0.0}, ((2, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 3), 1): {'W': 0.15854335511477835, 'E': 0.25295078631377255, 'stand': 0.5885058585714491, 'N': 0.0}, ((1, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (2, 3), 1): {'W': 0.13292756787009863, 'E': 0.8670724321299014, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 2), (2, 3), 1): {'W': 0.15854335511477835, 'E': 0.25295078631377255, 'stand': 0.5885058585714491, 'S': 0.0}, ((3, 1), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (1, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (4, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 2), 1): {'W': 0.0890383334929441, 'E': 0.9109616665070559, 'stand': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 3), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (2, 4), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 4), 1): {'W': 0.29168136318104354, 'E': 0.7083186368189565, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 3), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 5), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (1, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (1, 5), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (4, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (3, 3), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (3, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 5), (4, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (3, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3774070987828242, 'S': 0.6225929012171758, 'N': 0.0}, ((1, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (4, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (1, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (4, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 5), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (4, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (2, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (4, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (1, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 1): {'W': 0.0, 'E': 0.16589621450047998, 'stand': 0.0, 'S': 0.0, 'N': 0.83410378549952}, ((1, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (2, 5), 1): {'W': 0.20313690156069286, 'E': 0.45604654888816537, 'stand': 0.3408165495511418, 'S': 0.0}, ((1, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (2, 4), 1): {'W': 0.11405536072897754, 'E': 0.3697075102567122, 'stand': 0.5162371290143102, 'S': 0.0}, ((4, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.5, 'S': 0.0, 'N': 0.5}, ((4, 1), (2, 2), 2): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 2), 2): {'W': 0.2834725664299268, 'E': 0.0, 'stand': 0.7165274335700732, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (4, 2), 2): {'E': 0.7670530563176892, 'stand': 0.1703661297132204, 'S': 0.06258081396909043, 'N': 0.0}, ((3, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (1, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3167932173737933, 'S': 0.6832067826262067, 'N': 0.0}, ((3, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.5, 'S': 0.5, 'N': 0.0}, ((4, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (3, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 2): {'W': 0.0, 'E': 0.6254649417730187, 'stand': 0.30480927403245206, 'S': 0.0, 'N': 0.0697257841945292}, ((1, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (3, 2), 1): {'E': 0.20903306721800644, 'stand': 0.7617894099163023, 'N': 0.029177522865691263}, ((3, 1), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 5), 2): {'W': 0.0, 'E': 0.27105932532313626, 'stand': 0.15301831540597277, 'S': 0.575922359270891, 'N': 0.0}, ((1, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (2, 4), 2): {'W': 0.0, 'E': 0.3345694854250365, 'stand': 0.0, 'S': 0.6654305145749635, 'N': 0.0}, ((2, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (2, 3), 1): {'W': 0.0, 'E': 0.035197460540043614, 'stand': 0.43942899980059963, 'S': 0.5253735396593567, 'N': 0.0}, ((1, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (1, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (4, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (2, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (4, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (1, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (4, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.5, 'S': 0.0, 'N': 0.5}, ((2, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 3), 2): {'W': 0.6589135588818902, 'E': 0.0, 'stand': 0.0, 'S': 0.3410864411181098, 'N': 0.0}, ((4, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (2, 5), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (2, 4), 1): {'W': 0.0, 'E': 0.16589621450047998, 'stand': 0.0, 'S': 0.83410378549952, 'N': 0.0}, ((1, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 5), (2, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (4, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 1), 2): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (1, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 3), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 4), 2): {'W': 0.7115889841930676, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.28841101580693246}, ((2, 1), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (3, 3), 2): {'W': 0.6589135588818902, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.3410864411181098}, ((2, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (4, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (1, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 2): {'W': 0.5003073438490172, 'E': 0.0, 'stand': 0.4996926561509828, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 4), 1): {'W': 0.29168136318104354, 'E': 0.7083186368189565, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 2), 1): {'E': 0.20903306721800644, 'stand': 0.7617894099163023, 'S': 0.029177522865691263}, ((4, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}}

ecart entre new\_V et val de Shapley :

(8.37108160567368e-14, 6.350456271952964e-11)

run shapley for player 1 epsilon = 10 \*\* -13

Number of iterations: 257

Time shapley : 357.0931279659271

Game value by Shapley pour player 1 :

{((2, 2), (1, 2), 2): 0.12811676214975865, ((2, 5), (2, 1), 2): 1.0000000000008265, ((1, 4), (4, 1), 1): -0.8099999999991735, ((1, 5), (2, 3), 1): -0.8999999999991735, ((3, 1), (4, 1), 2): 0.11100105861261074, ((3, 5), (1, 3), 1): -0.9999999999991734, ((1, 1), (1, 2), 2): 0.2836966445791625, ((3, 1), (1, 2), 2): 0.2836966445791625, ((1, 2), (3, 4), 2): 0.28796445031637674, ((1, 4), (4, 5), 1): -0.3467403433726951, ((1, 5), (4, 3), 1): -0.8999999999991735, ((2, 1), (4, 4), 1): -0.1966359963967505, ((3, 5), (3, 2), 1): -0.9999999999991734, ((3, 2), (4, 3), 1): -0.2552577797782974, ((2, 1), (2, 4), 2): 0.21848444044257878, ((4, 4), (4, 1), 2): 0.9000000000008266, ((2, 2), (1, 1), 2): 0.15475500000082648, ((4, 3), (4, 4), 2): 0.170078999299604, ((2, 3), (2, 2), 2): 0.9000000000008266, ((1, 2), (1, 4), 2): 0.17245829911832233, ((1, 4), (2, 2), 1): -0.8099999999991735, ((4, 3), (2, 5), 2): 0.2297320018020381, ((1, 4), (4, 2), 1): -0.8099999999991735, ((2, 5), (1, 4), 2): 0.11281639500082657, ((3, 4), (3, 3), 2): 0.8100000000008267, ((2, 3), (3, 5), 2): 0.170078999299604, ((4, 3), (3, 3), 1): -0.12032523024725786, ((4, 5), (1, 4), 1): -0.8999999999991735, ((2, 2), (2, 1), 1): -0.7289999999991735, ((4, 5), (2, 4), 1): -0.8999999999991735, ((3, 4), (2, 3), 1): -0.8999999999991735, ((1, 5), (4, 1), 2): 0.9000000000008266, ((1, 1), (2, 3), 1): -0.12864099356815697, ((2, 4), (1, 5), 2): 0.07721612477478462, ((4, 2), (3, 4), 2): 0.21848444044257878, ((2, 3), (4, 3), 2): 0.1253515500008265, ((2, 3), (3, 4), 1): -0.31996050034978474, ((1, 5), (1, 2), 2): 0.8100000000008267, ((2, 4), (1, 1), 2): 0.9000000000008266, ((2, 1), (4, 5), 2): 0.15521246920657275, ((1, 1), (1, 4), 2): 0.19663599639840357, ((1, 1), (4, 3), 2): 0.2553269801213289, ((2, 3), (4, 1), 1): -0.8099999999991735, ((3, 5), (2, 5), 2): 0.6561000000008267, ((3, 2), (3, 4), 2): 0.19162033235359965, ((1, 4), (3, 2), 2): 0.9000000000008266, ((2, 1), (1, 5), 2): 0.15307109936972624, ((2, 3), (4, 4), 2): 0.170078999299604, ((2, 1), (1, 2), 2): 0.12333450956947568, ((4, 5), (2, 1), 2): 1.0000000000008265, ((2, 4), (2, 3), 1): -0.8999999999991735, ((3, 5), (1, 1), 2): 0.9000000000008266, ((3, 3), (4, 5), 2): 0.12864099356981004, ((1, 5), (2, 2), 1): -0.8999999999991735, ((2, 4), (4, 4), 2): 0.11281639500082657, ((2, 5), (1, 3), 2): 0.7290000000008267, ((2, 4), (3, 3), 2): 0.8100000000008267, ((2, 4), (1, 4), 2): 0.10895908676113567, ((2, 3), (1, 1), 1): -0.8099999999991735, ((4, 1), (4, 4), 1): -0.15307109936807312, ((2, 4), (4, 3), 2): 0.7290000000008267, ((3, 3), (4, 1), 2): 0.9000000000008266, ((2, 5), (3, 1), 1): -0.9999999999991734, ((4, 1), (2, 2), 1): -0.12946590361356974, ((3, 1), (4, 3), 1): -0.1700789992979509, ((4, 4), (3, 5), 1): -0.1233345095678226, ((3, 1), (1, 1), 2): 0.15475500000082648, ((2, 2), (2, 5), 2): 0.170078999299604, ((3, 3), (1, 4), 1): -0.8099999999991735, ((3, 4), (3, 2), 1): -0.8999999999991735, ((1, 2), (2, 4), 2): 0.21848444044257878, ((2, 4), (3, 5), 2): 0.18620167771165866, ((1, 2), (2, 1), 1): -0.11281639499917347, ((2, 5), (2, 4), 1): -0.9999999999991734, ((4, 2), (4, 1), 2): 0.9000000000008266, ((4, 2), (3, 5), 2): 0.17245829911832233, ((3, 4), (4, 2), 2): 0.8100000000008267, ((1, 3), (3, 2), 2): 0.9000000000008266, ((4, 5), (4, 3), 1): -0.8999999999991735, ((1, 1), (3, 1), 2): 1.0000000000008265, ((1, 3), (4, 5), 2): 0.15307109936972624, ((1, 4), (3, 3), 2): 0.8100000000008267, ((4, 3), (1, 1), 1): -0.7289999999991735, ((2, 3), (3, 1), 2): 1.0000000000008265, ((2, 5), (2, 1), 1): -0.9999999999991734, ((3, 2), (2, 4), 2): 0.21848444044257878, ((1, 5), (1, 3), 2): 0.7290000000008267, ((1, 2), (3, 1), 1): -0.6560999999991736, ((1, 2), (3, 4), 1): -0.17245829911666924, ((4, 2), (2, 3), 1): -0.1700789992979509, ((1, 5), (4, 3), 2): 0.7290000000008267, ((2, 1), (4, 4), 2): 0.19663599639840357, ((4, 3), (1, 4), 2): 0.2297320018020381, ((4, 1), (3, 2), 2): 0.3852670481936284, ((2, 3), (4, 2), 1): -0.8099999999991735, ((2, 1), (2, 5), 2): 0.17245829911832233, ((2, 5), (3, 3), 2): 0.8100000000008267, ((1, 2), (4, 3), 2): 0.28796445031637674, ((1, 4), (2, 2), 2): 0.9000000000008266, ((2, 4), (2, 3), 2): 0.8100000000008267, ((2, 2), (3, 4), 2): 0.21848444044257878, ((4, 1), (1, 4), 1): -0.15521246920491968, ((2, 1), (2, 3), 2): 0.24373407795506488, ((4, 3), (2, 5), 1): -0.21936067015798794, ((1, 4), (3, 4), 1): -0.13927949999917347, ((3, 4), (4, 5), 2): 0.07721612477478462, ((4, 1), (4, 3), 1): -0.12864099356815697, ((2, 5), (4, 5), 2): 0.10153475550082654, ((2, 5), (1, 4), 1): -0.9999999999991734, ((3, 4), (1, 5), 1): -0.8999999999991735, ((1, 5), (1, 1), 2): 0.9000000000008266, ((3, 5), (3, 3), 2): 0.8100000000008267, ((3, 4), (2, 5), 2): 0.18620167771165866, ((3, 2), (1, 1), 1): -0.7289999999991735, ((4, 1), (3, 5), 1): -0.15307109936807312, ((3, 2), (2, 3), 2): 0.3199605003514379, ((4, 1), (3, 4), 2): 0.21936067015964106, ((2, 3), (2, 4), 1): -0.2427604893788982, ((3, 2), (4, 5), 1): -0.21936067015798794, ((3, 5), (2, 1), 1): -0.9999999999991734, ((1, 5), (4, 2), 1): -0.8999999999991735, ((1, 4), (1, 3), 1): -0.8099999999991735, ((4, 4), (1, 4), 2): 0.6561000000008267, ((1, 4), (3, 2), 1): -0.8099999999991735, ((1, 3), (2, 1), 1): -0.7289999999991735, ((2, 4), (3, 3), 1): -0.8999999999991735, ((3, 1), (2, 1), 1): -0.6560999999991736, ((4, 4), (1, 5), 2): 0.1675815099405754, ((1, 5), (4, 5), 1): -0.8999999999991735, ((3, 2), (1, 2), 2): 0.13927950000082656, ((3, 5), (1, 1), 1): -0.9999999999991734, ((4, 5), (3, 2), 1): -0.8999999999991735, ((3, 3), (1, 1), 2): 0.9000000000008266, ((2, 4), (4, 4), 1): -0.8999999999991735, ((4, 4), (3, 3), 2): 0.8100000000008267, ((2, 3), (3, 4), 2): 0.25525777977995046, ((2, 3), (1, 1), 2): 0.9000000000008266, ((4, 4), (1, 2), 1): -0.8099999999991735, ((3, 4), (4, 1), 2): 0.9000000000008266, ((1, 1), (1, 3), 2): 0.21936067015964106, ((1, 2), (4, 4), 2): 0.19663599639840357, ((4, 3), (2, 4), 1): -0.21848444044092571, ((2, 5), (3, 1), 2): 1.0000000000008265, ((4, 4), (4, 3), 2): 0.7290000000008267, ((4, 5), (4, 3), 2): 0.7290000000008267, ((2, 3), (1, 4), 2): 0.09726564377945697, ((3, 1), (1, 1), 1): -0.6560999999991736, ((2, 2), (3, 5), 1): -0.21936067015798794, ((1, 3), (4, 3), 1): -0.7289999999991735, ((3, 2), (4, 3), 2): 0.11223242700721468, ((3, 4), (2, 1), 2): 1.0000000000008265, ((3, 3), (1, 4), 2): 0.170078999299604, ((1, 1), (3, 3), 1): -0.12864099356815697, ((3, 1), (2, 3), 1): -0.1700789992979509, ((2, 5), (1, 2), 1): -0.9999999999991734, ((2, 1), (4, 1), 1): -0.6560999999991736, ((2, 4), (3, 5), 1): -0.3852670481919753, ((3, 1), (1, 5), 2): 0.15521246920657275, ((4, 3), (2, 1), 2): 1.0000000000008265, ((2, 5), (4, 1), 1): -0.9999999999991734, ((2, 3), (3, 1), 1): -0.8099999999991735, ((3, 1), (3, 3), 2): 0.24373407795506488, ((4, 5), (2, 5), 1): -0.15475499999917341, ((2, 3), (1, 3), 2): 0.12032523024891092, ((3, 1), (3, 2), 1): -0.14385100401516931, ((4, 1), (3, 3), 1): -0.12864099356815697, ((3, 4), (1, 4), 1): -0.8999999999991735, ((1, 4), (2, 3), 2): 0.8100000000008267, ((4, 2), (1, 1), 1): -0.6560999999991736, ((4, 3), (4, 2), 1): -0.7289999999991735, ((3, 1), (1, 3), 1): -0.22973200180038497, ((4, 1), (1, 4), 2): 0.1974246031437596, ((4, 1), (1, 5), 1): -0.17697239675699278, ((4, 3), (1, 2), 2): 0.8100000000008267, ((3, 3), (2, 1), 1): -0.8099999999991735, ((1, 5), (2, 4), 2): 0.7290000000008267, ((2, 5), (2, 2), 1): -0.9999999999991734, ((1, 2), (2, 2), 1): -0.10895908675948257, ((1, 5), (1, 3), 1): -0.8999999999991735, ((3, 4), (3, 1), 2): 1.0000000000008265, ((3, 4), (1, 2), 2): 0.8100000000008267, ((4, 1), (2, 5), 2): 0.1974246031437596, ((3, 3), (3, 5), 2): 0.14293443729969713, ((1, 4), (1, 1), 2): 0.9000000000008266, ((2, 5), (3, 4), 1): -0.9999999999991734, ((4, 3), (1, 4), 1): -0.2879644503147236, ((1, 2), (2, 5), 1): -0.17245829911666924, ((1, 5), (3, 4), 1): -0.8999999999991735, ((2, 3), (4, 2), 2): 0.8100000000008267, ((1, 3), (2, 2), 1): -0.12535154999917347, ((3, 2), (3, 5), 1): -0.21848444044092571, ((2, 1), (2, 5), 1): -0.17245829911666924, ((1, 5), (2, 1), 1): -0.8999999999991735, ((4, 5), (1, 2), 1): -0.8999999999991735, ((2, 4), (3, 4), 1): -0.8999999999991735, ((3, 2), (2, 1), 2): 1.0000000000008265, ((4, 4), (2, 1), 2): 1.0000000000008265, ((4, 2), (4, 5), 1): -0.1966359963967505, ((3, 4), (4, 5), 1): -0.3852670481919753, ((1, 1), (4, 5), 1): -0.17697239675699278, ((3, 4), (1, 5), 2): 0.12946590361522284, ((1, 1), (4, 2), 1): -0.16758150993892235, ((1, 4), (1, 2), 1): -0.8099999999991735, ((1, 2), (4, 2), 1): -0.6560999999991736, ((4, 2), (2, 1), 1): -0.6560999999991736, ((3, 1), (2, 4), 1): -0.17245829911666924, ((2, 4), (4, 2), 2): 0.8100000000008267, ((3, 5), (3, 3), 1): -0.9999999999991734, ((1, 1), (2, 4), 2): 0.21936067015964106, ((1, 3), (4, 4), 1): -0.2879644503147236, ((2, 2), (3, 2), 1): -0.7289999999991735, ((1, 2), (2, 3), 2): 0.3199605003514379, ((4, 1), (3, 1), 1): -0.09806317808345169, ((4, 1), (1, 3), 2): 0.2553269801213289, ((3, 3), (2, 3), 1): -0.8099999999991735, ((2, 3), (2, 4), 2): 0.18897666588835704, ((2, 1), (4, 3), 2): 0.21936067015964106, ((1, 5), (3, 3), 2): 0.8100000000008267, ((2, 4), (3, 2), 1): -0.8999999999991735, ((3, 3), (1, 5), 1): -0.3467403433726951, ((4, 1), (1, 1), 2): 0.9000000000008266, ((4, 5), (1, 4), 2): 0.6561000000008267, ((1, 3), (1, 1), 2): 0.9000000000008266, ((2, 3), (3, 3), 1): -0.8099999999991735, ((3, 3), (3, 4), 1): -0.2427604893788982, ((1, 4), (1, 3), 2): 0.7290000000008267, ((3, 4), (3, 5), 2): 0.1438510040168224, ((3, 5), (1, 3), 2): 0.7290000000008267, ((4, 1), (2, 1), 2): 1.0000000000008265, ((1, 3), (1, 2), 1): -0.7289999999991735, ((4, 2), (1, 4), 1): -0.1966359963967505, ((1, 5), (3, 4), 2): 0.7290000000008267, ((1, 4), (3, 1), 1): -0.8099999999991735, ((3, 5), (4, 3), 2): 0.7290000000008267, ((3, 5), (1, 4), 2): 0.6561000000008267, ((4, 4), (1, 5), 1): -0.3467403433726951, ((3, 2), (4, 2), 1): -0.7289999999991735, ((3, 2), (3, 3), 1): -0.18897666588670395, ((2, 4), (2, 2), 2): 0.9000000000008266, ((4, 4), (3, 3), 1): -0.13927949999917347, ((3, 2), (1, 5), 1): -0.25532698011967586, ((1, 5), (2, 1), 2): 1.0000000000008265, ((3, 1), (3, 5), 1): -0.17245829911666924, ((1, 3), (3, 1), 2): 1.0000000000008265, ((4, 3), (1, 5), 2): 0.15307109936972624, ((3, 4), (4, 1), 1): -0.8999999999991735, ((1, 1), (4, 1), 1): -0.5904899999991736, ((1, 3), (1, 1), 1): -0.7289999999991735, ((2, 2), (4, 3), 2): 0.21848444044257878, ((3, 4), (1, 3), 1): -0.8999999999991735, ((3, 3), (4, 4), 2): 0.09726564377945697, ((4, 4), (2, 3), 2): 0.8100000000008267, ((3, 5), (3, 1), 2): 1.0000000000008265, ((4, 3), (3, 5), 2): 0.170078999299604, ((3, 4), (4, 4), 2): 0.10895908676113567, ((4, 2), (1, 2), 2): 0.8100000000008267, ((3, 1), (2, 3), 2): 0.2836966445791625, ((4, 5), (4, 2), 1): -0.8999999999991735, ((2, 1), (1, 1), 2): 0.11100105861261074, ((2, 5), (2, 3), 2): 0.8100000000008267, ((2, 4), (2, 5), 2): 0.1438510040168224, ((3, 1), (1, 5), 1): -0.1974246031421065, ((2, 5), (1, 5), 2): 0.09806317808510473, ((4, 3), (2, 1), 1): -0.7289999999991735, ((1, 1), (3, 4), 2): 0.2553269801213289, ((4, 1), (4, 2), 2): 0.2836966445791625, ((2, 2), (1, 3), 1): -0.2552577797782974, ((3, 1), (3, 3), 1): -0.14293443729804403, ((1, 3), (4, 1), 1): -0.7289999999991735, ((4, 3), (3, 5), 1): -0.21848444044092571, ((3, 1), (2, 5), 2): 0.19663599639840357, ((1, 1), (1, 2), 1): -0.12946590361356974, ((2, 3), (2, 5), 1): -0.24373407795341176, ((4, 1), (3, 3), 2): 0.2836966445791625, ((3, 3), (3, 5), 1): -0.24373407795341176, ((2, 5), (1, 1), 2): 0.9000000000008266, ((4, 3), (3, 4), 1): -0.1122324270055616, ((1, 3), (2, 5), 1): -0.21848444044092571, ((3, 2), (4, 4), 1): -0.21848444044092571, ((4, 1), (1, 5), 2): 0.17697239675864584, ((3, 2), (2, 5), 2): 0.17245829911832233, ((3, 3), (2, 1), 2): 1.0000000000008265, ((1, 4), (4, 1), 2): 0.9000000000008266, ((2, 4), (2, 5), 1): -0.31521849397510227, ((2, 3), (3, 2), 1): -0.8099999999991735, ((2, 5), (2, 2), 2): 0.9000000000008266, ((3, 5), (3, 4), 1): -0.9999999999991734, ((4, 3), (2, 3), 1): -0.12535154999917347, ((3, 4), (1, 2), 1): -0.8999999999991735, ((3, 5), (2, 5), 1): -0.9999999999991734, ((4, 2), (4, 4), 1): -0.17245829911666924, ((1, 4), (4, 5), 2): 0.1675815099405754, ((4, 2), (3, 3), 1): -0.09726564377780389, ((1, 4), (4, 3), 2): 0.7290000000008267, ((2, 1), (2, 4), 1): -0.1700789992979509, ((3, 2), (3, 5), 2): 0.170078999299604, ((2, 5), (4, 2), 2): 0.8100000000008267, ((2, 3), (2, 2), 1): -0.8099999999991735, ((2, 1), (3, 5), 1): -0.1966359963967505, ((3, 1), (4, 2), 1): -0.18620167771000554, ((1, 1), (2, 5), 1): -0.15307109936807312, ((1, 2), (3, 3), 1): -0.1700789992979509, ((1, 3), (2, 3), 1): -0.12032523024725786, ((1, 2), (4, 2), 2): 0.8100000000008267, ((4, 2), (4, 1), 1): -0.6560999999991736, ((4, 2), (2, 1), 2): 1.0000000000008265, ((3, 5), (2, 4), 2): 0.7290000000008267, ((1, 3), (1, 5), 2): 0.12864099356981004, ((3, 5), (4, 2), 1): -0.9999999999991734, ((2, 4), (4, 1), 2): 0.9000000000008266, ((1, 3), (2, 2), 2): 0.9000000000008266, ((1, 2), (2, 3), 1): -0.09726564377780389, ((3, 1), (4, 5), 1): -0.1966359963967505, ((4, 2), (3, 4), 1): -0.1700789992979509, ((1, 5), (3, 1), 2): 1.0000000000008265, ((2, 4), (4, 5), 2): 0.12946590361522284, ((1, 5), (1, 2), 1): -0.8999999999991735, ((2, 1), (4, 3), 1): -0.22973200180038497, ((3, 1), (2, 2), 2): 0.3852670481936284, ((2, 4), (3, 2), 2): 0.9000000000008266, ((3, 5), (4, 4), 1): -0.9999999999991734, ((4, 5), (1, 5), 1): -0.8999999999991735, ((4, 1), (1, 2), 2): 0.3467403433743483, ((3, 2), (1, 4), 2): 0.17245829911832233, ((3, 3), (1, 2), 2): 0.8100000000008267, ((2, 3), (3, 3), 2): 0.8100000000008267, ((4, 5), (3, 3), 1): -0.8999999999991735, ((3, 3), (4, 2), 1): -0.8099999999991735, ((2, 2), (4, 2), 2): 0.13927950000082656, ((2, 2), (3, 1), 1): -0.7289999999991735, ((1, 3), (1, 2), 2): 0.8100000000008267, ((4, 5), (4, 1), 2): 0.9000000000008266, ((3, 1), (1, 4), 1): -0.1966359963967505, ((4, 2), (1, 4), 2): 0.19663599639840357, ((2, 1), (1, 5), 1): -0.1966359963967505, ((1, 4), (3, 1), 2): 1.0000000000008265, ((2, 3), (4, 4), 1): -0.8099999999991735, ((4, 1), (4, 2), 1): -0.12946590361356974, ((4, 4), (4, 5), 1): -0.2836966445775094, ((3, 3), (4, 5), 1): -0.2836966445775094, ((3, 1), (1, 2), 1): -0.6560999999991736, ((3, 3), (2, 5), 1): -0.2836966445775094, ((2, 1), (3, 3), 2): 0.2836966445791625, ((4, 4), (2, 5), 2): 0.6561000000008267, ((4, 2), (3, 2), 1): -0.10895908675948257, ((2, 5), (3, 3), 1): -0.9999999999991734, ((4, 3), (4, 1), 1): -0.7289999999991735, ((3, 3), (4, 1), 1): -0.8099999999991735, ((1, 4), (1, 5), 2): 0.12946590361522284, ((2, 4), (1, 2), 2): 0.8100000000008267, ((3, 3), (4, 4), 1): -0.31996050034978474, ((1, 2), (4, 1), 2): 0.9000000000008266, ((3, 3), (2, 4), 1): -0.31996050034978474, ((2, 1), (3, 1), 1): -0.6560999999991736, ((4, 3), (4, 5), 1): -0.21936067015798794, ((2, 2), (2, 5), 1): -0.21848444044092571, ((2, 2), (4, 5), 1): -0.25532698011967586, ((1, 1), (1, 5), 1): -0.15521246920491968, ((2, 4), (2, 1), 1): -0.8999999999991735, ((3, 4), (3, 2), 2): 0.9000000000008266, ((4, 1), (2, 4), 2): 0.2553269801213289, ((1, 2), (2, 1), 2): 1.0000000000008265, ((1, 5), (1, 4), 1): -0.8999999999991735, ((4, 1), (2, 4), 1): -0.15307109936807312, ((1, 3), (4, 1), 2): 0.9000000000008266, ((3, 2), (3, 1), 1): -0.7289999999991735, ((1, 3), (3, 2), 1): -0.7289999999991735, ((4, 4), (1, 3), 1): -0.8099999999991735, ((3, 5), (4, 5), 1): -0.9999999999991734, ((1, 4), (3, 3), 1): -0.8099999999991735, ((1, 2), (1, 3), 1): -0.1700789992979509, ((4, 4), (3, 4), 1): -0.12811676214810555, ((3, 2), (2, 4), 1): -0.21848444044092571, ((3, 5), (3, 4), 2): 0.7290000000008267, ((1, 1), (2, 1), 1): -0.09806317808345169, ((4, 5), (3, 2), 2): 0.9000000000008266, ((3, 2), (4, 1), 1): -0.7289999999991735, ((3, 2), (2, 1), 1): -0.7289999999991735, ((3, 3), (1, 3), 2): 0.1253515500008265, ((2, 3), (3, 5), 1): -0.2836966445775094, ((1, 3), (3, 4), 1): -0.21848444044092571, ((1, 4), (4, 3), 1): -0.8099999999991735, ((3, 5), (2, 2), 1): -0.9999999999991734, ((4, 4), (4, 3), 1): -0.8099999999991735, ((2, 1), (1, 3), 1): -0.1700789992979509, ((4, 2), (2, 5), 2): 0.19663599639840357, ((2, 1), (3, 5), 2): 0.19663599639840357, ((4, 5), (3, 1), 1): -0.8999999999991735, ((4, 1), (1, 1), 1): -0.5904899999991736, ((1, 4), (3, 4), 2): 0.7290000000008267, ((2, 2), (4, 4), 1): -0.2879644503147236, ((4, 1), (4, 3), 2): 0.21936067015964106, ((1, 2), (3, 3), 2): 0.8100000000008267, ((2, 4), (3, 1), 2): 1.0000000000008265, ((2, 1), (4, 2), 2): 0.2836966445791625, ((3, 5), (2, 4), 1): -0.9999999999991734, ((3, 1), (4, 4), 1): -0.17245829911666924, ((1, 3), (1, 5), 1): -0.21936067015798794, ((1, 4), (2, 5), 2): 0.18620167771165866, ((4, 5), (3, 5), 2): 0.6561000000008267, ((2, 3), (2, 1), 1): -0.8099999999991735, ((2, 5), (4, 4), 1): -0.9999999999991734, ((3, 1), (4, 5), 2): 0.15307109936972624, ((1, 3), (2, 4), 2): 0.25525777977995046, ((2, 2), (1, 4), 2): 0.170078999299604, ((1, 5), (3, 1), 1): -0.8999999999991735, ((2, 1), (3, 4), 1): -0.17245829911666924, ((3, 5), (1, 5), 2): 0.10153475550082654, ((4, 5), (1, 5), 2): 0.5904900000008266, ((3, 2), (4, 5), 2): 0.12864099356981004, ((3, 2), (1, 4), 1): -0.2879644503147236, ((2, 3), (1, 5), 1): -0.2836966445775094, ((1, 5), (4, 2), 2): 0.8100000000008267, ((4, 5), (3, 3), 2): 0.8100000000008267, ((1, 1), (3, 5), 2): 0.1974246031437596, ((2, 2), (4, 2), 1): -0.7289999999991735, ((4, 4), (1, 4), 1): -0.8099999999991735, ((2, 2), (3, 3), 2): 0.3199605003514379, ((4, 5), (4, 1), 1): -0.8999999999991735, ((4, 4), (3, 1), 1): -0.8099999999991735, ((1, 2), (3, 5), 2): 0.19663599639840357, ((4, 4), (2, 3), 1): -0.8099999999991735, ((4, 2), (1, 5), 1): -0.1974246031421065, ((1, 5), (4, 1), 1): -0.8999999999991735, ((3, 4), (2, 4), 1): -0.8999999999991735, ((1, 2), (3, 2), 1): -0.11281639499917347, ((1, 1), (2, 5), 2): 0.19663599639840357, ((2, 3), (4, 1), 2): 0.9000000000008266, ((4, 4), (4, 5), 2): 0.12946590361522284, ((3, 3), (2, 5), 2): 0.170078999299604, ((1, 3), (4, 2), 2): 0.8100000000008267, ((4, 2), (2, 4), 1): -0.17245829911666924, ((3, 5), (2, 3), 1): -0.9999999999991734, ((1, 1), (1, 3), 1): -0.12864099356815697, ((4, 2), (3, 2), 2): 0.9000000000008266, ((1, 1), (4, 2), 2): 0.3467403433743483, ((1, 2), (4, 4), 1): -0.1966359963967505, ((4, 4), (2, 2), 2): 0.9000000000008266, ((4, 2), (4, 4), 2): 0.17245829911832233, ((1, 2), (4, 1), 1): -0.6560999999991736, ((3, 5), (4, 2), 2): 0.8100000000008267, ((1, 4), (2, 4), 2): 0.7290000000008267, ((2, 2), (3, 5), 2): 0.17245829911832233, ((2, 1), (3, 1), 2): 1.0000000000008265, ((1, 1), (4, 4), 2): 0.1974246031437596, ((3, 4), (2, 2), 2): 0.9000000000008266, ((2, 2), (4, 5), 2): 0.15307109936972624, ((1, 1), (3, 3), 2): 0.3467403433743483, ((2, 4), (2, 1), 2): 1.0000000000008265, ((2, 5), (1, 2), 2): 0.8100000000008267, ((2, 1), (2, 2), 1): -0.14385100401516931, ((1, 5), (2, 3), 2): 0.8100000000008267, ((4, 2), (2, 2), 2): 0.9000000000008266, ((4, 5), (4, 4), 1): -0.8999999999991735, ((1, 5), (1, 4), 2): 0.6561000000008267, ((2, 5), (4, 1), 2): 0.9000000000008266, ((3, 4), (1, 1), 2): 0.9000000000008266, ((3, 2), (3, 1), 2): 1.0000000000008265, ((3, 5), (3, 2), 2): 0.9000000000008266, ((4, 5), (2, 5), 2): 0.6561000000008267, ((2, 3), (1, 3), 1): -0.8099999999991735, ((3, 5), (4, 5), 2): 0.09806317808510473, ((1, 2), (1, 1), 1): -0.6560999999991736, ((3, 4), (1, 4), 2): 0.11281639500082657, ((4, 2), (1, 1), 2): 0.9000000000008266, ((2, 5), (4, 3), 2): 0.7290000000008267, ((1, 2), (1, 4), 1): -0.17245829911666924, ((4, 3), (1, 5), 1): -0.25532698011967586, ((1, 4), (4, 2), 2): 0.8100000000008267, ((4, 5), (2, 2), 2): 0.9000000000008266, ((1, 2), (4, 5), 2): 0.15521246920657275, ((4, 5), (1, 1), 1): -0.8999999999991735, ((1, 1), (3, 1), 1): -0.1015347554991735, ((3, 4), (3, 1), 1): -0.8999999999991735, ((3, 3), (3, 2), 1): -0.8099999999991735, ((4, 3), (3, 3), 2): 0.8100000000008267, ((1, 4), (1, 1), 1): -0.8099999999991735, ((1, 5), (4, 4), 2): 0.6561000000008267, ((2, 5), (3, 4), 2): 0.7290000000008267, ((3, 3), (1, 3), 1): -0.8099999999991735, ((2, 2), (2, 1), 2): 1.0000000000008265, ((1, 3), (3, 4), 2): 0.7290000000008267, ((1, 3), (3, 5), 1): -0.21936067015798794, ((1, 2), (2, 5), 2): 0.17245829911832233, ((1, 5), (3, 5), 2): 0.6561000000008267, ((1, 1), (2, 3), 2): 0.2836966445791625, ((4, 2), (1, 3), 2): 0.28796445031637674, ((3, 1), (1, 4), 2): 0.19663599639840357, ((2, 1), (1, 3), 2): 0.21848444044257878, ((2, 3), (4, 3), 1): -0.8099999999991735, ((4, 5), (4, 4), 2): 0.6561000000008267, ((2, 1), (4, 5), 1): -0.1974246031421065, ((3, 2), (1, 3), 1): -0.7289999999991735, ((1, 4), (4, 4), 1): -0.8099999999991735, ((4, 4), (2, 1), 1): -0.8099999999991735, ((2, 3), (1, 2), 2): 0.13927950000082656, ((4, 5), (1, 3), 1): -0.8999999999991735, ((2, 4), (3, 1), 1): -0.8999999999991735, ((3, 2), (3, 4), 1): -0.19162033235194653, ((1, 3), (3, 3), 2): 0.8100000000008267, ((4, 4), (3, 2), 1): -0.8099999999991735, ((1, 4), (2, 5), 1): -0.1233345095678226, ((1, 3), (4, 4), 2): 0.2297320018020381, ((2, 4), (1, 3), 2): 0.1253515500008265, ((2, 1), (1, 2), 1): -0.18620167771000554, ((2, 5), (4, 4), 2): 0.6561000000008267, ((4, 5), (2, 1), 1): -0.8999999999991735, ((1, 3), (2, 4), 1): -0.1122324270055616, ((4, 4), (1, 1), 2): 0.9000000000008266, ((3, 2), (2, 3), 1): -0.2552577797782974, ((4, 1), (1, 3), 1): -0.15307109936807312, ((3, 3), (2, 2), 2): 0.9000000000008266, ((3, 5), (1, 5), 1): -0.9999999999991734, ((1, 5), (3, 2), 1): -0.8999999999991735, ((3, 3), (1, 5), 2): 0.12864099356981004, ((1, 2), (1, 3), 2): 0.21848444044257878, ((2, 3), (1, 5), 2): 0.12864099356981004, ((3, 4), (4, 3), 1): -0.8999999999991735, ((4, 1), (4, 4), 2): 0.19663599639840357, ((1, 1), (3, 5), 1): -0.15521246920491968, ((3, 4), (3, 5), 1): -0.31521849397510227, ((4, 1), (2, 2), 2): 0.9000000000008266, ((2, 2), (3, 3), 1): -0.2552577797782974, ((4, 2), (3, 3), 2): 0.3199605003514379, ((3, 5), (4, 3), 1): -0.9999999999991734, ((1, 2), (3, 5), 1): -0.1966359963967505, ((3, 2), (4, 2), 2): 0.12811676214975865, ((3, 5), (1, 4), 1): -0.9999999999991734, ((3, 4), (2, 4), 2): 0.7290000000008267, ((4, 3), (1, 3), 1): -0.7289999999991735, ((3, 1), (3, 4), 1): -0.1700789992979509, ((4, 5), (2, 3), 2): 0.8100000000008267, ((2, 5), (2, 4), 2): 0.7290000000008267, ((1, 3), (4, 2), 1): -0.7289999999991735, ((2, 1), (3, 2), 2): 0.3852670481936284, ((3, 1), (4, 2), 2): 0.12333450956947568, ((3, 5), (2, 3), 2): 0.8100000000008267, ((2, 5), (3, 5), 2): 0.6561000000008267, ((4, 5), (1, 3), 2): 0.7290000000008267, ((3, 1), (3, 5), 2): 0.17245829911832233, ((4, 4), (1, 3), 2): 0.7290000000008267, ((1, 4), (1, 2), 2): 0.8100000000008267, ((2, 2), (3, 4), 1): -0.21848444044092571, ((2, 2), (4, 3), 1): -0.7289999999991735, ((4, 5), (3, 4), 2): 0.7290000000008267, ((4, 5), (1, 1), 2): 0.9000000000008266, ((2, 4), (1, 5), 1): -0.3852670481919753, ((4, 1), (1, 2), 1): -0.16758150993892235, ((4, 4), (1, 2), 2): 0.8100000000008267, ((2, 4), (1, 1), 1): -0.8999999999991735, ((4, 3), (1, 1), 2): 0.9000000000008266, ((1, 1), (4, 4), 1): -0.15521246920491968, ((2, 2), (2, 3), 1): -0.18897666588670395, ((3, 4), (4, 4), 1): -0.8999999999991735, ((4, 2), (1, 2), 1): -0.6560999999991736, ((2, 1), (1, 1), 1): -0.6560999999991736, ((2, 1), (2, 2), 2): 0.3152184939767554, ((4, 2), (2, 2), 1): -0.11281639499917347, ((2, 3), (4, 5), 2): 0.12864099356981004, ((1, 2), (3, 1), 2): 1.0000000000008265, ((2, 5), (1, 5), 1): -0.9999999999991734, ((1, 3), (2, 3), 2): 0.8100000000008267, ((1, 1), (3, 4), 1): -0.15307109936807312, ((3, 1), (2, 4), 2): 0.21936067015964106, ((2, 2), (1, 3), 2): 0.11223242700721468, ((1, 4), (3, 5), 1): -0.2836966445775094, ((4, 2), (2, 3), 2): 0.8100000000008267, ((4, 1), (3, 2), 1): -0.07721612477313156, ((3, 1), (2, 5), 1): -0.1966359963967505, ((2, 3), (2, 5), 2): 0.14293443729969713, ((1, 2), (1, 1), 2): 0.9000000000008266, ((2, 2), (2, 4), 2): 0.19162033235359965, ((2, 5), (1, 1), 1): -0.9999999999991734, ((1, 4), (2, 1), 2): 1.0000000000008265, ((4, 3), (3, 4), 2): 0.25525777977995046, ((2, 5), (4, 3), 1): -0.9999999999991734, ((1, 2), (4, 3), 1): -0.22973200180038497, ((2, 4), (4, 3), 1): -0.8999999999991735, ((1, 5), (2, 5), 1): -0.1110010586109577, ((2, 1), (2, 3), 1): -0.14293443729804403, ((1, 2), (1, 5), 1): -0.1966359963967505, ((2, 3), (3, 2), 2): 0.9000000000008266, ((1, 2), (4, 5), 1): -0.1974246031421065, ((2, 5), (4, 5), 1): -0.9999999999991734, ((4, 3), (2, 3), 2): 0.8100000000008267, ((3, 3), (3, 2), 2): 0.9000000000008266, ((1, 1), (3, 2), 1): -0.12946590361356974, ((1, 5), (1, 1), 1): -0.8999999999991735, ((3, 5), (1, 2), 1): -0.9999999999991734, ((1, 5), (4, 4), 1): -0.8999999999991735, ((3, 1), (4, 3), 2): 0.21848444044257878, ((4, 4), (2, 4), 2): 0.7290000000008267, ((4, 5), (2, 2), 1): -0.8999999999991735, ((3, 4), (2, 5), 1): -0.3852670481919753, ((1, 5), (3, 5), 1): -0.15475499999917341, ((3, 2), (1, 1), 2): 0.9000000000008266, ((4, 2), (1, 3), 1): -0.22973200180038497, ((2, 2), (1, 1), 1): -0.7289999999991735, ((2, 5), (4, 2), 1): -0.9999999999991734, ((3, 2), (1, 3), 2): 0.21848444044257878, ((4, 2), (3, 1), 2): 1.0000000000008265, ((1, 4), (4, 4), 2): 0.6561000000008267, ((4, 3), (3, 1), 1): -0.7289999999991735, ((3, 5), (2, 1), 2): 1.0000000000008265, ((4, 3), (2, 2), 1): -0.7289999999991735, ((2, 3), (1, 2), 1): -0.8099999999991735, ((4, 4), (3, 5), 2): 0.18620167771165866, ((1, 3), (3, 3), 1): -0.12535154999917347, ((1, 3), (2, 1), 2): 1.0000000000008265, ((2, 4), (4, 1), 1): -0.8999999999991735, ((2, 4), (1, 3), 1): -0.8999999999991735, ((4, 1), (4, 5), 2): 0.15521246920657275, ((4, 4), (4, 2), 2): 0.8100000000008267, ((3, 1), (2, 1), 2): 1.0000000000008265, ((4, 4), (1, 1), 1): -0.8099999999991735, ((1, 5), (4, 5), 2): 0.5904900000008266, ((2, 4), (4, 5), 1): -0.8999999999991735, ((3, 3), (2, 2), 1): -0.8099999999991735, ((4, 1), (2, 3), 2): 0.3467403433743483, ((3, 2), (1, 2), 1): -0.7289999999991735, ((1, 5), (3, 2), 2): 0.9000000000008266, ((2, 2), (4, 1), 1): -0.7289999999991735, ((3, 3), (1, 1), 1): -0.8099999999991735, ((3, 5), (4, 4), 2): 0.11281639500082657, ((2, 1), (1, 4), 2): 0.17245829911832233, ((3, 3), (1, 2), 1): -0.8099999999991735, ((4, 5), (2, 4), 2): 0.7290000000008267, ((1, 3), (1, 4), 2): 0.170078999299604, ((2, 5), (3, 2), 2): 0.9000000000008266, ((3, 3), (4, 2), 2): 0.13927950000082656, ((4, 3), (2, 4), 2): 0.7290000000008267, ((2, 2), (1, 5), 2): 0.12864099356981004, ((2, 2), (3, 1), 2): 1.0000000000008265, ((2, 3), (1, 4), 1): -0.31996050034978474, ((3, 4), (4, 3), 2): 0.1253515500008265, ((1, 3), (4, 3), 2): 0.7290000000008267, ((3, 4), (2, 1), 1): -0.8999999999991735, ((4, 3), (3, 2), 2): 0.9000000000008266, ((4, 3), (1, 3), 2): 0.7290000000008267, ((3, 2), (4, 4), 2): 0.170078999299604, ((3, 1), (3, 4), 2): 0.21848444044257878, ((4, 5), (2, 3), 1): -0.8999999999991735, ((3, 2), (2, 2), 1): -0.7289999999991735, ((2, 1), (3, 3), 1): -0.1700789992979509, ((2, 1), (3, 2), 1): -0.18620167771000554, ((3, 1), (2, 2), 1): -0.18620167771000554, ((4, 4), (2, 5), 1): -0.2836966445775094, ((3, 4), (4, 2), 1): -0.8999999999991735, ((3, 2), (2, 5), 1): -0.21936067015798794, ((3, 5), (4, 1), 1): -0.9999999999991734, ((4, 3), (4, 1), 2): 0.9000000000008266, ((1, 4), (1, 5), 1): -0.2836966445775094, ((4, 5), (3, 4), 1): -0.15475499999917341, ((3, 1), (3, 2), 2): 0.3152184939767554, ((2, 4), (1, 2), 1): -0.8999999999991735, ((2, 5), (2, 3), 1): -0.9999999999991734, ((1, 4), (2, 3), 1): -0.13927949999917347, ((3, 3), (2, 4), 2): 0.25525777977995046, ((4, 5), (4, 2), 2): 0.8100000000008267, ((4, 3), (4, 2), 2): 0.8100000000008267, ((1, 1), (2, 2), 2): 0.3852670481936284, ((4, 3), (4, 5), 2): 0.12864099356981004, ((2, 2), (2, 3), 2): 0.24276048938055123, ((4, 3), (1, 2), 1): -0.7289999999991735, ((1, 1), (1, 5), 2): 0.15521246920657275, ((2, 2), (1, 2), 1): -0.7289999999991735, ((1, 5), (2, 4), 1): -0.15475499999917341, ((3, 1), (4, 1), 1): -0.6560999999991736, ((1, 2), (2, 2), 2): 0.9000000000008266, ((2, 3), (4, 5), 1): -0.3467403433726951, ((4, 4), (3, 4), 2): 0.7290000000008267, ((4, 1), (2, 5), 1): -0.15521246920491968, ((3, 1), (1, 3), 2): 0.21936067015964106, ((4, 2), (3, 5), 1): -0.17245829911666924, ((1, 4), (3, 5), 2): 0.6561000000008267, ((1, 1), (2, 1), 2): 1.0000000000008265, ((2, 1), (4, 1), 2): 0.15475500000082648, ((2, 2), (2, 4), 1): -0.19162033235194653, ((1, 4), (2, 1), 1): -0.8099999999991735, ((4, 3), (4, 4), 1): -0.21848444044092571, ((4, 4), (3, 2), 2): 0.9000000000008266, ((4, 4), (3, 1), 2): 1.0000000000008265, ((1, 5), (2, 5), 2): 0.6561000000008267, ((2, 4), (3, 4), 2): 0.7290000000008267, ((3, 3), (4, 3), 1): -0.8099999999991735, ((1, 2), (1, 5), 2): 0.15307109936972624, ((4, 2), (4, 5), 2): 0.15307109936972624, ((1, 1), (4, 5), 2): 0.17697239675864584, ((3, 4), (3, 3), 1): -0.8999999999991735, ((1, 1), (3, 2), 2): 0.9000000000008266, ((3, 2), (4, 1), 2): 0.15475500000082648, ((2, 4), (4, 2), 1): -0.8999999999991735, ((4, 4), (2, 4), 1): -0.13927949999917347, ((1, 1), (2, 4), 1): -0.12864099356815697, ((3, 4), (2, 3), 2): 0.8100000000008267, ((2, 2), (3, 2), 2): 0.9000000000008266, ((3, 5), (2, 2), 2): 0.9000000000008266, ((4, 1), (3, 1), 2): 1.0000000000008265, ((3, 3), (2, 3), 2): 0.8100000000008267, ((1, 5), (3, 3), 1): -0.8999999999991735, ((1, 1), (1, 4), 1): -0.15307109936807312, ((2, 4), (2, 2), 1): -0.8999999999991735, ((4, 2), (3, 1), 1): -0.11281639499917347, ((4, 5), (1, 2), 2): 0.8100000000008267, ((4, 3), (3, 1), 2): 1.0000000000008265, ((1, 1), (4, 3), 1): -0.15307109936807312, ((2, 2), (4, 4), 2): 0.17245829911832233, ((4, 3), (2, 2), 2): 0.9000000000008266, ((4, 2), (4, 3), 1): -0.1700789992979509, ((3, 3), (3, 4), 2): 0.18897666588835704, ((2, 1), (4, 2), 1): -0.6560999999991736, ((4, 1), (2, 1), 1): -0.1015347554991735, ((4, 4), (2, 2), 1): -0.8099999999991735, ((1, 3), (1, 4), 1): -0.21848444044092571, ((3, 1), (4, 4), 2): 0.17245829911832233, ((4, 5), (3, 5), 1): -0.1110010586109577, ((2, 3), (2, 1), 2): 1.0000000000008265, ((4, 1), (4, 5), 1): -0.15521246920491968, ((3, 3), (3, 1), 1): -0.8099999999991735, ((4, 4), (4, 1), 1): -0.8099999999991735, ((4, 4), (4, 2), 1): -0.8099999999991735, ((2, 2), (1, 4), 1): -0.21848444044092571, ((4, 1), (3, 4), 1): -0.12864099356815697, ((3, 2), (3, 3), 2): 0.24276048938055123, ((2, 1), (3, 4), 2): 0.21936067015964106, ((4, 1), (2, 3), 1): -0.12864099356815697, ((2, 2), (4, 1), 2): 0.9000000000008266, ((1, 5), (2, 2), 2): 0.9000000000008266, ((2, 5), (1, 3), 1): -0.9999999999991734, ((3, 2), (1, 5), 2): 0.15307109936972624, ((1, 3), (4, 5), 1): -0.25532698011967586, ((2, 1), (1, 4), 1): -0.17245829911666924, ((2, 4), (1, 4), 1): -0.8999999999991735, ((1, 3), (3, 1), 1): -0.7289999999991735, ((2, 5), (3, 2), 1): -0.9999999999991734, ((4, 2), (2, 5), 1): -0.1966359963967505, ((1, 1), (4, 1), 2): 0.9000000000008266, ((3, 5), (1, 2), 2): 0.8100000000008267, ((3, 4), (1, 3), 2): 0.7290000000008267, ((2, 2), (1, 5), 1): -0.21936067015798794, ((3, 3), (4, 3), 2): 0.12032523024891092, ((1, 3), (3, 5), 2): 0.2297320018020381, ((3, 5), (3, 1), 1): -0.9999999999991734, ((4, 2), (1, 5), 2): 0.15521246920657275, ((4, 3), (3, 2), 1): -0.12535154999917347, ((1, 2), (3, 2), 2): 0.9000000000008266, ((4, 2), (4, 3), 2): 0.21848444044257878, ((4, 1), (3, 5), 2): 0.19663599639840357, ((1, 2), (2, 4), 1): -0.1700789992979509, ((3, 4), (1, 1), 1): -0.8999999999991735, ((3, 2), (2, 2), 2): 0.9000000000008266, ((4, 2), (2, 4), 2): 0.28796445031637674, ((3, 5), (4, 1), 2): 0.9000000000008266, ((3, 3), (3, 1), 2): 1.0000000000008265, ((2, 5), (3, 5), 1): -0.9999999999991734, ((1, 3), (2, 5), 2): 0.170078999299604, ((1, 4), (2, 4), 1): -0.12811676214810555, ((1, 1), (2, 2), 1): -0.07721612477313156, ((4, 5), (3, 1), 2): 1.0000000000008265, ((3, 4), (2, 2), 1): -0.8999999999991735}

optimal policy by Shapley pour player 1:

{((2, 2), (1, 2), 2): {'W': 0.7083186368189566, 'E': 0.29168136318104343, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 5), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 1), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 1), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 1): {'W': 0.0, 'E': 0.5003073438490172, 'stand': 0.4996926561509828, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 5), 2): {'W': 0.20903306721800632, 'stand': 0.7617894099163024, 'S': 0.029177522865691273}, ((4, 2), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 2): {'W': 0.1658962145004801, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.8341037854995199}, ((1, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 2), 2): {'W': 0.4560465488881654, 'E': 0.20313690156069295, 'stand': 0.3408165495511416, 'S': 0.0}, ((4, 5), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 4), 2): {'W': 0.9109616665070557, 'E': 0.08903833349294436, 'stand': 0.0, 'S': 0.0}, ((2, 3), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 1), (4, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 5), 1): {'W': 0.7670530563176892, 'stand': 0.1703661297132203, 'S': 0.0625808139690905, 'N': 0.0}, ((3, 1), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (2, 3), 2): {'W': 0.1913445621291614, 'E': 0.0, 'stand': 0.0, 'S': 0.8086554378708386, 'N': 0.0}, ((4, 3), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 4), (4, 5), 2): {'W': 0.20903306721800632, 'stand': 0.7617894099163024, 'N': 0.029177522865691273}, ((4, 1), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 5), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 1), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 1): {'W': 0.0, 'E': 0.6589135588818891, 'stand': 0.0, 'S': 0.3410864411181109, 'N': 0.0}, ((3, 2), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 4), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 2): {'W': 0.25295078631377266, 'E': 0.15854335511477835, 'stand': 0.588505858571449, 'S': 0.0}, ((3, 1), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 2): {'W': 0.36970751025671234, 'E': 0.11405536072897716, 'stand': 0.5162371290143105, 'N': 0.0}, ((3, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 1), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 2): {'W': 0.1913445621291614, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.8086554378708386}, ((4, 5), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (1, 3), 2): {'W': 0.8670724321299017, 'E': 0.13292756787009824, 'stand': 0.0, 'S': 0.0}, ((3, 1), (3, 2), 1): {'W': 0.0, 'E': 0.6094039867835117, 'stand': 0.0, 'S': 0.0, 'N': 0.3905960132164883}, ((4, 1), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (1, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 1): {'W': 0.0, 'E': 0.8526910852552859, 'stand': 0.14730891474471408, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 5), 2): {'W': 0.03519746054004361, 'E': 0.0, 'stand': 0.4394289998005997, 'S': 0.0, 'N': 0.5253735396593567}, ((1, 4), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (4, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (2, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 1), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.3167932173737932, 'S': 0.6832067826262068, 'N': 0.0}, ((2, 1), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 4), 1): {'W': 0.0, 'E': 0.6589135588818891, 'stand': 0.0, 'S': 0.0, 'N': 0.3410864411181109}, ((1, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.3774070987828243, 'S': 0.0, 'N': 0.6225929012171757}, ((3, 5), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (3, 3), 1): {'W': 0.0, 'E': 0.7115889841930673, 'stand': 0.0, 'S': 0.0, 'N': 0.28841101580693274}, ((2, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 3), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 3), (4, 4), 2): {'W': 0.25295078631377266, 'E': 0.15854335511477835, 'stand': 0.588505858571449, 'N': 0.0}, ((4, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 4), 2): {'W': 0.9109616665070557, 'E': 0.08903833349294436, 'stand': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (1, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.3774070987828243, 'S': 0.6225929012171757, 'N': 0.0}, ((3, 1), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (2, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (3, 3), 1): {'W': 0.2710593253231364, 'E': 0.0, 'stand': 0.15301831540597227, 'S': 0.0, 'N': 0.5759223592708913}, ((1, 3), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (2, 5), 1): {'W': 0.3552779123794504, 'stand': 0.0, 'S': 0.6447220876205496, 'N': 0.0}, ((4, 1), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 5), 1): {'W': 0.3552779123794504, 'stand': 0.0, 'S': 0.0, 'N': 0.6447220876205496}, ((2, 5), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (3, 4), 1): {'W': 0.6254649417730187, 'E': 0.0, 'stand': 0.30480927403245217, 'S': 0.06972578419452918, 'N': 0.0}, ((1, 3), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (2, 5), 1): {'W': 0.0, 'stand': 0.5, 'S': 0.5, 'N': 0.0}, ((2, 3), (3, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (2, 5), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (3, 3), 1): {'W': 0.39996321855781936, 'E': 0.0, 'stand': 0.5158441684467479, 'S': 0.08419261299543278, 'N': 0.0}, ((1, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (2, 3), 1): {'W': 0.0, 'E': 0.5003073438490172, 'stand': 0.4996926561509828, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 3), 1): {'W': 0.39996321855781936, 'E': 0.0, 'stand': 0.5158441684467479, 'S': 0.0, 'N': 0.08419261299543278}, ((3, 1), (4, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (1, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 4), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 2), 1): {'W': 0.0, 'E': 0.8526910852552859, 'stand': 0.14730891474471408, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (1, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 1), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (4, 5), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (3, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 4), 1): {'W': 0.0, 'E': 0.2834725664299268, 'stand': 0.7165274335700732, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 4), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (2, 2), 1): {'W': 0.0, 'E': 0.6094039867835117, 'stand': 0.0, 'S': 0.3905960132164883, 'N': 0.0}, ((1, 5), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 5), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 1), (3, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 4), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 1): {'W': 0.3345694854250364, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.6654305145749636}, ((1, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 5), 1): {'W': 0.7670530563176892, 'stand': 0.1703661297132203, 'S': 0.0, 'N': 0.0625808139690905}, ((1, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 4), 1): {'W': 0.6254649417730187, 'E': 0.0, 'stand': 0.30480927403245217, 'S': 0.0, 'N': 0.06972578419452918}, ((4, 4), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 5), 1): {'W': 0.0, 'stand': 0.5, 'S': 0.0, 'N': 0.5}, ((4, 1), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 2), 2): {'W': 0.7083186368189566, 'E': 0.29168136318104343, 'stand': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 2), 2): {'W': 0.4560465488881654, 'E': 0.20313690156069295, 'stand': 0.3408165495511416, 'N': 0.0}, ((3, 5), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 3), 1): {'W': 0.0, 'E': 0.7115889841930673, 'stand': 0.0, 'S': 0.28841101580693274, 'N': 0.0}, ((3, 4), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.5, 'S': 0.5, 'N': 0.0}, ((4, 2), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 1), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 3), 2): {'W': 0.36970751025671234, 'E': 0.11405536072897716, 'stand': 0.5162371290143105, 'S': 0.0}, ((1, 4), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 2), 1): {'W': 0.11040571557358966, 'E': 0.0, 'stand': 0.7694418987067743, 'S': 0.1201523857196361, 'N': 0.0}, ((3, 1), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 5), 2): {'W': 0.03519746054004361, 'E': 0.0, 'stand': 0.4394289998005997, 'S': 0.5253735396593567, 'N': 0.0}, ((1, 2), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (2, 4), 2): {'W': 0.1658962145004801, 'E': 0.0, 'stand': 0.0, 'S': 0.8341037854995199, 'N': 0.0}, ((2, 5), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 5), (2, 5), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 3), 1): {'W': 0.2710593253231364, 'E': 0.0, 'stand': 0.15301831540597227, 'S': 0.5759223592708913, 'N': 0.0}, ((1, 2), (1, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 2), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (4, 5), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.5, 'S': 0.0, 'N': 0.5}, ((2, 4), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (2, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.3493961641926502, 'S': 0.6506038358073498, 'N': 0.0}, ((4, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 1), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 4), 1): {'W': 0.3345694854250364, 'E': 0.0, 'stand': 0.0, 'S': 0.6654305145749636, 'N': 0.0}, ((1, 4), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.3167932173737932, 'S': 0.0, 'N': 0.6832067826262068}, ((2, 1), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (2, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 5), (3, 5), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.3493961641926502, 'S': 0.0, 'N': 0.6506038358073498}, ((2, 1), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (4, 3), 2): {'W': 0.8670724321299017, 'E': 0.13292756787009824, 'stand': 0.0, 'N': 0.0}, ((1, 3), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 4), 1): {'W': 0.0, 'E': 0.2834725664299268, 'stand': 0.7165274335700732, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 2), 1): {'W': 0.11040571557358966, 'E': 0.0, 'stand': 0.7694418987067743, 'S': 0.0, 'N': 0.1201523857196361}, ((4, 5), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}}

ecart entre new\_V et val de Shapley :

(8.282263763703668e-14, 6.281908326855046e-11)

Petit Analyse :

1. Shapley converge assez rapide .j’ai pas complément vérifier mais je pense fortement que valeur de jeu trouvé pour deux player 0 et player 1 par algorithme Shapley est bien inverse ca veut dire quand valeur de jeu pour état x est par exemple 1 pour player 0 valeur de jeu pour ce état est -1 pour player 1

apprentissage pour player 0 , contre optimal policy trouve pour palyer 1 avec algorithme Shapley. Fonction utilisé pour choisir action de player 1 à chaque step est suivant :

def choiceActOfPlayerType1(game,s,pi\_playerB):

a = pi\_playerB.get(s)

maxi = -1

for act in a:

if maxi < a.get(act):

maxi = a.get(act)

liste = []

for act in a:

if abs(a.get(act) - maxi) <= 0.00001:

liste.append(act)

return random.choice(liste)

Run Littman with 1000000 iteration

learnin rate at the end of the run : 0.009999953948213411

Time Littman : 1486.8093430995941

Game value by Littman pour player 0 :

{((2, 2), (1, 2), 2): 1.0, ((2, 5), (2, 1), 2): -0.8631733262472143, ((1, 4), (4, 1), 1): 0.9136873564092859, ((1, 5), (2, 3), 1): 0.9131952579883968, ((3, 1), (4, 1), 2): 1.0, ((3, 5), (1, 3), 1): 1, ((1, 1), (1, 2), 2): 1.0, ((3, 1), (1, 2), 2): 1.0, ((1, 2), (3, 4), 2): -0.2188763041469852, ((1, 4), (4, 5), 1): 1, ((1, 5), (4, 3), 1): 1, ((2, 1), (4, 4), 1): 1, ((3, 5), (3, 2), 1): 1.0, ((3, 2), (4, 3), 1): 1, ((2, 1), (2, 4), 2): 1, ((4, 4), (4, 1), 2): 1, ((2, 2), (1, 1), 2): 1.0, ((4, 3), (4, 4), 2): 1, ((2, 3), (2, 2), 2): -0.7750887918178951, ((1, 2), (1, 4), 2): 1, ((1, 4), (2, 2), 1): 0.9675472876194535, ((4, 3), (2, 5), 2): -0.18989071690208165, ((1, 4), (4, 2), 1): 1, ((2, 5), (1, 4), 2): 1, ((3, 4), (3, 3), 2): -0.685622042434395, ((2, 3), (3, 5), 2): 8.583530495503105e-13, ((4, 3), (3, 3), 1): 0.23540723826237453, ((4, 5), (1, 4), 1): 1, ((2, 2), (2, 1), 1): 0.986300872138943, ((4, 5), (2, 4), 1): 0.9000000000063348, ((3, 4), (2, 3), 1): 0.8999999999999994, ((1, 5), (4, 1), 2): 1, ((1, 1), (2, 3), 1): 0.26726597023430776, ((2, 4), (1, 5), 2): 1, ((4, 2), (3, 4), 2): 1, ((2, 3), (4, 3), 2): 1, ((2, 3), (3, 4), 1): 0.3892330962806652, ((1, 5), (1, 2), 2): 1, ((2, 4), (1, 1), 2): 1, ((2, 1), (4, 5), 2): 1, ((1, 1), (1, 4), 2): 1, ((1, 1), (4, 3), 2): 1, ((2, 3), (4, 1), 1): 0.9008065903728646, ((3, 5), (2, 5), 2): -0.5558131446349435, ((3, 2), (3, 4), 2): 8.010779513046179e-07, ((1, 4), (3, 2), 2): -0.7659026083047097, ((2, 1), (1, 5), 2): 1, ((2, 3), (4, 4), 2): 1, ((2, 1), (1, 2), 2): 1.0, ((4, 5), (2, 1), 2): -0.8634125833807111, ((2, 4), (2, 3), 1): 0.8999999999999999, ((3, 5), (1, 1), 2): 1, ((3, 3), (4, 5), 2): 1, ((1, 5), (2, 2), 1): 0.9001058390232491, ((2, 4), (4, 4), 2): 1, ((2, 5), (1, 3), 2): 1, ((2, 4), (3, 3), 2): -0.6904167523391228, ((2, 4), (1, 4), 2): 1, ((2, 3), (1, 1), 1): 0.9426084547050361, ((4, 1), (4, 4), 1): 1, ((2, 4), (4, 3), 2): 1, ((3, 3), (4, 1), 2): 1, ((2, 5), (3, 1), 1): 1.0, ((4, 1), (2, 2), 1): 1, ((3, 1), (4, 3), 1): 1, ((4, 4), (3, 5), 1): 0.21319081306864865, ((3, 1), (1, 1), 2): 1.0, ((2, 2), (2, 5), 2): 1, ((3, 3), (1, 4), 1): 1, ((3, 4), (3, 2), 1): 0.9000000000000002, ((1, 2), (2, 4), 2): 1, ((2, 4), (3, 5), 2): -0.16559543901946933, ((1, 2), (2, 1), 1): 0.9849631897892849, ((2, 5), (2, 4), 1): 1.0, ((4, 2), (4, 1), 2): 1.0, ((4, 2), (3, 5), 2): 1, ((3, 4), (4, 2), 2): 1, ((1, 3), (3, 2), 2): -0.7672932750788424, ((4, 5), (4, 3), 1): 1, ((1, 1), (3, 1), 2): -0.863947400554085, ((1, 3), (4, 5), 2): 1, ((1, 4), (3, 3), 2): -0.6954186778467031, ((4, 3), (1, 1), 1): 0.905233662412187, ((2, 3), (3, 1), 2): -0.8636360413387697, ((2, 5), (2, 1), 1): 1.0, ((3, 2), (2, 4), 2): 0.0, ((1, 5), (1, 3), 2): 1, ((1, 2), (3, 1), 1): 0.9037879637507592, ((1, 2), (3, 4), 1): 0.24504672836449679, ((4, 2), (2, 3), 1): 1, ((1, 5), (4, 3), 2): 1, ((2, 1), (4, 4), 2): 1, ((4, 3), (1, 4), 2): 1, ((4, 1), (3, 2), 2): -0.3024160537598234, ((2, 3), (4, 2), 1): 1, ((2, 1), (2, 5), 2): 1, ((2, 5), (3, 3), 2): -0.6961471163335919, ((1, 2), (4, 3), 2): 1, ((1, 4), (2, 2), 2): -0.7976969610919518, ((2, 4), (2, 3), 2): -0.6843212189066806, ((2, 2), (3, 4), 2): 0.0, ((4, 1), (1, 4), 1): 1, ((2, 1), (2, 3), 2): 2.295396470081824e-11, ((4, 3), (2, 5), 1): 0.3494178234465919, ((1, 4), (3, 4), 1): 0.20638420651212772, ((3, 4), (4, 5), 2): 1, ((4, 1), (4, 3), 1): 1, ((2, 5), (4, 5), 2): 1, ((2, 5), (1, 4), 1): 1, ((3, 4), (1, 5), 1): 1, ((1, 5), (1, 1), 2): 1, ((3, 5), (3, 3), 2): -0.7135741653269815, ((3, 4), (2, 5), 2): -0.17526851878757269, ((3, 2), (1, 1), 1): 0.9136275107010455, ((4, 1), (3, 5), 1): 1, ((3, 2), (2, 3), 2): -0.23855532130093318, ((4, 1), (3, 4), 2): 1, ((2, 3), (2, 4), 1): 0.3125886054361777, ((3, 2), (4, 5), 1): 1, ((3, 5), (2, 1), 1): 1.0, ((1, 5), (4, 2), 1): 1, ((1, 4), (1, 3), 1): 1, ((4, 4), (1, 4), 2): 1, ((1, 4), (3, 2), 1): 0.8100003849149561, ((1, 3), (2, 1), 1): 0.9427274995874735, ((2, 4), (3, 3), 1): 0.8999999999999999, ((3, 1), (2, 1), 1): 1.0, ((4, 4), (1, 5), 2): 1, ((1, 5), (4, 5), 1): 1, ((3, 2), (1, 2), 2): 1, ((3, 5), (1, 1), 1): 1.0, ((4, 5), (3, 2), 1): 0.9629918639939838, ((3, 3), (1, 1), 2): 1, ((2, 4), (4, 4), 1): 1, ((4, 4), (3, 3), 2): -0.6854851181800075, ((2, 3), (3, 4), 2): -0.17508602357378392, ((2, 3), (1, 1), 2): 1, ((4, 4), (1, 2), 1): 1, ((3, 4), (4, 1), 2): 1, ((1, 1), (1, 3), 2): 1, ((1, 2), (4, 4), 2): 1, ((4, 3), (2, 4), 1): 1, ((2, 5), (3, 1), 2): -0.8656636035153099, ((4, 4), (4, 3), 2): 1, ((4, 5), (4, 3), 2): 1, ((2, 3), (1, 4), 2): 1, ((3, 1), (1, 1), 1): 0.9263782714423818, ((2, 2), (3, 5), 1): 0.3074402294550338, ((1, 3), (4, 3), 1): 1, ((3, 2), (4, 3), 2): 1, ((3, 4), (2, 1), 2): -0.8692755967667225, ((3, 3), (1, 4), 2): 1, ((1, 1), (3, 3), 1): 0.26119721726293843, ((3, 1), (2, 3), 1): 0.29430276256477983, ((2, 5), (1, 2), 1): 1, ((2, 1), (4, 1), 1): 0.8644761980612132, ((2, 4), (3, 5), 1): 0.41297391063505784, ((3, 1), (1, 5), 2): 1, ((4, 3), (2, 1), 2): -0.8426069570394695, ((2, 5), (4, 1), 1): 1.0, ((2, 3), (3, 1), 1): 0.8207788222071999, ((3, 1), (3, 3), 2): 2.302778523970835e-11, ((4, 5), (2, 5), 1): 0.18730671179489267, ((2, 3), (1, 3), 2): 1, ((3, 1), (3, 2), 1): 0.29572899100994815, ((4, 1), (3, 3), 1): 0.2964008380323053, ((3, 4), (1, 4), 1): 1, ((1, 4), (2, 3), 2): -0.7000674291043107, ((4, 2), (1, 1), 1): 0.8991386256270479, ((4, 3), (4, 2), 1): 1, ((3, 1), (1, 3), 1): 1, ((4, 1), (1, 4), 2): 1, ((4, 1), (1, 5), 1): 1, ((4, 3), (1, 2), 2): 1, ((3, 3), (2, 1), 1): 0.9025216851812011, ((1, 5), (2, 4), 2): -0.6256016853658884, ((2, 5), (2, 2), 1): 1.0, ((1, 2), (2, 2), 1): 0.6274074362597819, ((1, 5), (1, 3), 1): 1, ((3, 4), (3, 1), 2): -0.8736531168315241, ((3, 4), (1, 2), 2): 1, ((4, 1), (2, 5), 2): 1, ((3, 3), (3, 5), 2): 4.761403800852127e-06, ((1, 4), (1, 1), 2): 1, ((2, 5), (3, 4), 1): 1.0, ((4, 3), (1, 4), 1): 1, ((1, 2), (2, 5), 1): 0.26849604608374317, ((1, 5), (3, 4), 1): 0.9059548503149311, ((2, 3), (4, 2), 2): 1, ((1, 3), (2, 2), 1): 0.3005329808823557, ((3, 2), (3, 5), 1): 0.3122143988657013, ((2, 1), (2, 5), 1): 0.1852069199039067, ((1, 5), (2, 1), 1): 1.0, ((4, 5), (1, 2), 1): 1, ((2, 4), (3, 4), 1): 0.8999999999999999, ((3, 2), (2, 1), 2): -0.858239601236797, ((4, 4), (2, 1), 2): -0.8549395313950303, ((4, 2), (4, 5), 1): 1, ((3, 4), (4, 5), 1): 1, ((1, 1), (4, 5), 1): 1, ((3, 4), (1, 5), 2): 1, ((1, 1), (4, 2), 1): 1, ((1, 4), (1, 2), 1): 1, ((1, 2), (4, 2), 1): 1, ((4, 2), (2, 1), 1): 0.9284161940345049, ((3, 1), (2, 4), 1): 0.2547137971157622, ((2, 4), (4, 2), 2): 1, ((3, 5), (3, 3), 1): 1.0, ((1, 1), (2, 4), 2): 1, ((1, 3), (4, 4), 1): 1, ((2, 2), (3, 2), 1): 0.9863525720815467, ((1, 2), (2, 3), 2): -0.16848258519726597, ((4, 1), (3, 1), 1): 1, ((4, 1), (1, 3), 2): 1, ((3, 3), (2, 3), 1): 0.8100000000000006, ((2, 3), (2, 4), 2): 0.0, ((2, 1), (4, 3), 2): 1, ((1, 5), (3, 3), 2): -0.7291369468552734, ((2, 4), (3, 2), 1): 0.9, ((3, 3), (1, 5), 1): 1, ((4, 1), (1, 1), 2): 1, ((4, 5), (1, 4), 2): 1, ((1, 3), (1, 1), 2): 1, ((2, 3), (3, 3), 1): 0.81, ((3, 3), (3, 4), 1): 0.35970199601921155, ((1, 4), (1, 3), 2): 1, ((3, 4), (3, 5), 2): 0.0, ((3, 5), (1, 3), 2): 1, ((4, 1), (2, 1), 2): -0.8604877880041826, ((1, 3), (1, 2), 1): 1, ((4, 2), (1, 4), 1): 1, ((1, 5), (3, 4), 2): -0.6316377050748799, ((1, 4), (3, 1), 1): 0.8575751567953486, ((3, 5), (4, 3), 2): 1, ((3, 5), (1, 4), 2): 1, ((4, 4), (1, 5), 1): 1, ((3, 2), (4, 2), 1): 1, ((3, 2), (3, 3), 1): 0.28006268093415726, ((2, 4), (2, 2), 2): -0.7840185430066046, ((4, 4), (3, 3), 1): 0.20617795792002896, ((3, 2), (1, 5), 1): 1, ((1, 5), (2, 1), 2): -0.8616362749466826, ((3, 1), (3, 5), 1): 0.19974728448100032, ((1, 3), (3, 1), 2): -0.8589022703300455, ((4, 3), (1, 5), 2): 1, ((3, 4), (4, 1), 1): 0.9462513461763066, ((1, 1), (4, 1), 1): 0.8622608335473604, ((1, 3), (1, 1), 1): 0.9502825734333393, ((2, 2), (4, 3), 2): 1, ((3, 4), (1, 3), 1): 1, ((3, 3), (4, 4), 2): 1, ((4, 4), (2, 3), 2): -0.6938300966176532, ((3, 5), (3, 1), 2): -0.9216527090312312, ((4, 3), (3, 5), 2): 1, ((3, 4), (4, 4), 2): 1, ((4, 2), (1, 2), 2): 1, ((3, 1), (2, 3), 2): -0.19225772639077698, ((4, 5), (4, 2), 1): 1, ((2, 1), (1, 1), 2): 0.9942511868004293, ((2, 5), (2, 3), 2): -0.6885970688177976, ((2, 4), (2, 5), 2): 2.5753972091063176e-12, ((3, 1), (1, 5), 1): 1, ((2, 5), (1, 5), 2): 1, ((4, 3), (2, 1), 1): 0.9177289500008977, ((1, 1), (3, 4), 2): 1, ((4, 1), (4, 2), 2): 1, ((2, 2), (1, 3), 1): 1, ((3, 1), (3, 3), 1): 0.30551208532085233, ((1, 3), (4, 1), 1): 0.8879174941444491, ((4, 3), (3, 5), 1): 0.31418662816628373, ((3, 1), (2, 5), 2): 1, ((1, 1), (1, 2), 1): 1, ((2, 3), (2, 5), 1): 0.3963219250701623, ((4, 1), (3, 3), 2): 1, ((3, 3), (3, 5), 1): 0.4178317334127695, ((2, 5), (1, 1), 2): 1, ((4, 3), (3, 4), 1): 0.23962413431307197, ((1, 3), (2, 5), 1): 0.2121361243553823, ((3, 2), (4, 4), 1): 1, ((4, 1), (1, 5), 2): 1, ((3, 2), (2, 5), 2): 3.582669716899664e-06, ((3, 3), (2, 1), 2): -0.8577854330694561, ((1, 4), (4, 1), 2): 1, ((2, 4), (2, 5), 1): 0.32847791909536994, ((2, 3), (3, 2), 1): 0.8100010693032591, ((2, 5), (2, 2), 2): -0.7693420490631387, ((3, 5), (3, 4), 1): 1.0, ((4, 3), (2, 3), 1): 0.23295537245099232, ((3, 4), (1, 2), 1): 1, ((3, 5), (2, 5), 1): 1.0, ((4, 2), (4, 4), 1): 1, ((1, 4), (4, 5), 2): 1, ((4, 2), (3, 3), 1): 0.27106353018979795, ((1, 4), (4, 3), 2): 1, ((2, 1), (2, 4), 1): 0.26382623080453965, ((3, 2), (3, 5), 2): 1, ((2, 5), (4, 2), 2): 1, ((2, 3), (2, 2), 1): 1.0, ((2, 1), (3, 5), 1): 1, ((3, 1), (4, 2), 1): 1, ((1, 1), (2, 5), 1): 1, ((1, 2), (3, 3), 1): 1, ((1, 3), (2, 3), 1): 0.21269190735259402, ((1, 2), (4, 2), 2): 1, ((4, 2), (4, 1), 1): 0.9706447506760197, ((4, 2), (2, 1), 2): -0.8593487547967643, ((3, 5), (2, 4), 2): -0.6205652965251469, ((1, 3), (1, 5), 2): 1, ((3, 5), (4, 2), 1): 1, ((2, 4), (4, 1), 2): 1, ((1, 3), (2, 2), 2): -0.8155770986437914, ((1, 2), (2, 3), 1): 0.2571677495677611, ((3, 1), (4, 5), 1): 1, ((4, 2), (3, 4), 1): 0.27057706675442084, ((1, 5), (3, 1), 2): -0.8904087169632182, ((2, 4), (4, 5), 2): 1, ((1, 5), (1, 2), 1): 1, ((2, 1), (4, 3), 1): 1, ((3, 1), (2, 2), 2): -0.21416373413281287, ((2, 4), (3, 2), 2): -0.7739456307526892, ((3, 5), (4, 4), 1): 1, ((4, 5), (1, 5), 1): 1, ((4, 1), (1, 2), 2): 1, ((3, 2), (1, 4), 2): 1, ((3, 3), (1, 2), 2): 1, ((2, 3), (3, 3), 2): -0.6866086149402897, ((4, 5), (3, 3), 1): 0.9818493244248111, ((3, 3), (4, 2), 1): 1, ((2, 2), (4, 2), 2): 1, ((2, 2), (3, 1), 1): 0.8526205851967358, ((1, 3), (1, 2), 2): 1, ((4, 5), (4, 1), 2): 1, ((3, 1), (1, 4), 1): 1, ((4, 2), (1, 4), 2): 1, ((2, 1), (1, 5), 1): 1, ((1, 4), (3, 1), 2): -0.866073934492756, ((2, 3), (4, 4), 1): 1, ((4, 1), (4, 2), 1): 1, ((4, 4), (4, 5), 1): 1, ((3, 3), (4, 5), 1): 1, ((3, 1), (1, 2), 1): 1, ((3, 3), (2, 5), 1): 0.3455865047656974, ((2, 1), (3, 3), 2): -0.1906228788496419, ((4, 4), (2, 5), 2): -0.5542437134693273, ((4, 2), (3, 2), 1): 0.9437879205954613, ((2, 5), (3, 3), 1): 1.0, ((4, 3), (4, 1), 1): 0.9456570095173489, ((3, 3), (4, 1), 1): 0.9174455276873388, ((1, 4), (1, 5), 2): 1, ((2, 4), (1, 2), 2): 1, ((3, 3), (4, 4), 1): 1, ((1, 2), (4, 1), 2): 1, ((3, 3), (2, 4), 1): 0.3583241697987933, ((2, 1), (3, 1), 1): 0.910037195115547, ((4, 3), (4, 5), 1): 1, ((2, 2), (2, 5), 1): 0.2785345021819776, ((2, 2), (4, 5), 1): 1, ((1, 1), (1, 5), 1): 1, ((2, 4), (2, 1), 1): 0.9012544300712992, ((3, 4), (3, 2), 2): -0.7959798315588459, ((4, 1), (2, 4), 2): 1, ((1, 2), (2, 1), 2): -0.8913386915039888, ((1, 5), (1, 4), 1): 1, ((4, 1), (2, 4), 1): 1, ((1, 3), (4, 1), 2): 1, ((3, 2), (3, 1), 1): 0.8969886105290028, ((1, 3), (3, 2), 1): 0.8832859638728822, ((4, 4), (1, 3), 1): 1, ((3, 5), (4, 5), 1): 1, ((1, 4), (3, 3), 1): 0.8309601453368775, ((1, 2), (1, 3), 1): 1, ((4, 4), (3, 4), 1): 0.20812437745975335, ((3, 2), (2, 4), 1): 0.30958270071164284, ((3, 5), (3, 4), 2): -0.6344565283458965, ((1, 1), (2, 1), 1): 1.0, ((4, 5), (3, 2), 2): -0.8183079409477653, ((3, 2), (4, 1), 1): 0.9085670955742433, ((3, 2), (2, 1), 1): 0.9931444863484848, ((3, 3), (1, 3), 2): 1, ((2, 3), (3, 5), 1): 0.3540928642336035, ((1, 3), (3, 4), 1): 1, ((1, 4), (4, 3), 1): 1, ((3, 5), (2, 2), 1): 1.0, ((4, 4), (4, 3), 1): 1, ((2, 1), (1, 3), 1): 1, ((4, 2), (2, 5), 2): 1, ((2, 1), (3, 5), 2): 1, ((4, 5), (3, 1), 1): 1.0, ((4, 1), (1, 1), 1): 0.901149566957699, ((1, 4), (3, 4), 2): -0.6207580969119927, ((2, 2), (4, 4), 1): 1, ((4, 1), (4, 3), 2): 1, ((1, 2), (3, 3), 2): -0.6900689697293135, ((2, 4), (3, 1), 2): -0.8727290472799978, ((2, 1), (4, 2), 2): 1.0, ((3, 5), (2, 4), 1): 1.0, ((3, 1), (4, 4), 1): 1, ((1, 3), (1, 5), 1): 1, ((1, 4), (2, 5), 2): 1, ((4, 5), (3, 5), 2): -0.564306612694186, ((2, 3), (2, 1), 1): 0.9026710176718071, ((2, 5), (4, 4), 1): 1, ((3, 1), (4, 5), 2): 1, ((1, 3), (2, 4), 2): -0.18477656216356786, ((2, 2), (1, 4), 2): 1, ((1, 5), (3, 1), 1): 0.9073967561986799, ((2, 1), (3, 4), 1): 0.23025484082467834, ((3, 5), (1, 5), 2): 1, ((4, 5), (1, 5), 2): 1, ((3, 2), (4, 5), 2): 1, ((3, 2), (1, 4), 1): 1, ((2, 3), (1, 5), 1): 1, ((1, 5), (4, 2), 2): 1, ((4, 5), (3, 3), 2): -0.7056078361488356, ((1, 1), (3, 5), 2): 1, ((2, 2), (4, 2), 1): 1, ((4, 4), (1, 4), 1): 1, ((2, 2), (3, 3), 2): -0.2232858689001804, ((4, 5), (4, 1), 1): 0.948359552151878, ((4, 4), (3, 1), 1): 0.9420395087590503, ((1, 2), (3, 5), 2): 1, ((4, 4), (2, 3), 1): 0.8100565571924024, ((4, 2), (1, 5), 1): 1, ((1, 5), (4, 1), 1): 0.945941332204827, ((3, 4), (2, 4), 1): 0.9000000000000004, ((1, 2), (3, 2), 1): 0.8986936250943722, ((1, 1), (2, 5), 2): 1, ((2, 3), (4, 1), 2): 1, ((4, 4), (4, 5), 2): 1, ((3, 3), (2, 5), 2): 0.0, ((1, 3), (4, 2), 2): 1, ((4, 2), (2, 4), 1): 0.26133991880067436, ((3, 5), (2, 3), 1): 1.0, ((1, 1), (1, 3), 1): 1, ((4, 2), (3, 2), 2): -0.8163042205805638, ((1, 1), (4, 2), 2): 1, ((1, 2), (4, 4), 1): 1, ((4, 4), (2, 2), 2): -0.7858610528326707, ((4, 2), (4, 4), 2): 1, ((1, 2), (4, 1), 1): 0.8681073118138514, ((3, 5), (4, 2), 2): 1, ((1, 4), (2, 4), 2): -0.6270648195520294, ((2, 2), (3, 5), 2): 3.986079111526677e-06, ((2, 1), (3, 1), 2): -0.8594415191133026, ((1, 1), (4, 4), 2): 1, ((3, 4), (2, 2), 2): -0.7745445372857865, ((2, 2), (4, 5), 2): 1, ((1, 1), (3, 3), 2): -0.21564015566439865, ((2, 4), (2, 1), 2): -0.8482364649111156, ((2, 5), (1, 2), 2): 1, ((2, 1), (2, 2), 1): 0.27045703084224143, ((1, 5), (2, 3), 2): -0.6906831609025608, ((4, 2), (2, 2), 2): -0.7721402914648525, ((4, 5), (4, 4), 1): 1, ((1, 5), (1, 4), 2): 1, ((2, 5), (4, 1), 2): 1, ((3, 4), (1, 1), 2): 1, ((3, 2), (3, 1), 2): -0.8476356799595344, ((3, 5), (3, 2), 2): -0.7850993589340615, ((4, 5), (2, 5), 2): 1, ((2, 3), (1, 3), 1): 1, ((3, 5), (4, 5), 2): 1, ((1, 2), (1, 1), 1): 0.9638292309554756, ((3, 4), (1, 4), 2): 1, ((4, 2), (1, 1), 2): 1, ((2, 5), (4, 3), 2): 1, ((1, 2), (1, 4), 1): 1, ((4, 3), (1, 5), 1): 1, ((1, 4), (4, 2), 2): 1, ((4, 5), (2, 2), 2): -0.7796250602385543, ((1, 2), (4, 5), 2): 1, ((4, 5), (1, 1), 1): 1.0, ((1, 1), (3, 1), 1): 1.0, ((3, 4), (3, 1), 1): 0.9396861379730368, ((3, 3), (3, 2), 1): 0.8508205101338928, ((4, 3), (3, 3), 2): -0.6854699004868502, ((1, 4), (1, 1), 1): 0.9683924474799386, ((1, 5), (4, 4), 2): 1, ((2, 5), (3, 4), 2): -0.6304832073964337, ((3, 3), (1, 3), 1): 1, ((2, 2), (2, 1), 2): -0.8546275594938282, ((1, 3), (3, 4), 2): -0.6183682155242851, ((1, 3), (3, 5), 1): 0.21825766954758938, ((1, 2), (2, 5), 2): 1, ((1, 5), (3, 5), 2): 1, ((1, 1), (2, 3), 2): 1, ((4, 2), (1, 3), 2): 1, ((3, 1), (1, 4), 2): 1, ((2, 1), (1, 3), 2): 1, ((2, 3), (4, 3), 1): 1, ((4, 5), (4, 4), 2): 1, ((2, 1), (4, 5), 1): 1, ((3, 2), (1, 3), 1): 1, ((1, 4), (4, 4), 1): 1, ((4, 4), (2, 1), 1): 0.8825869896902597, ((2, 3), (1, 2), 2): 1, ((4, 5), (1, 3), 1): 1, ((2, 4), (3, 1), 1): 0.9000000157214005, ((3, 2), (3, 4), 1): 0.30047010002916874, ((1, 3), (3, 3), 2): -0.6872212910116553, ((4, 4), (3, 2), 1): 0.9912303018494009, ((1, 4), (2, 5), 1): 0.20578077363069833, ((1, 3), (4, 4), 2): 1, ((2, 4), (1, 3), 2): 1, ((2, 1), (1, 2), 1): 1, ((2, 5), (4, 4), 2): 1, ((4, 5), (2, 1), 1): 0.9003792577339812, ((1, 3), (2, 4), 1): 0.2301148042110453, ((4, 4), (1, 1), 2): 1, ((3, 2), (2, 3), 1): 0.3419399186687755, ((4, 1), (1, 3), 1): 1, ((3, 3), (2, 2), 2): -0.7730279934446591, ((3, 5), (1, 5), 1): 1, ((1, 5), (3, 2), 1): 0.9000000000000019, ((3, 3), (1, 5), 2): 1, ((1, 2), (1, 3), 2): 1, ((2, 3), (1, 5), 2): 1, ((3, 4), (4, 3), 1): 1, ((4, 1), (4, 4), 2): 1, ((1, 1), (3, 5), 1): 1, ((3, 4), (3, 5), 1): 0.3365484461223059, ((4, 1), (2, 2), 2): -0.7658747502489196, ((2, 2), (3, 3), 1): 0.3232060603103929, ((4, 2), (3, 3), 2): -0.46772637889377155, ((3, 5), (4, 3), 1): 1, ((1, 2), (3, 5), 1): 1, ((3, 2), (4, 2), 2): 1, ((3, 5), (1, 4), 1): 1, ((3, 4), (2, 4), 2): -0.6190984097737784, ((4, 3), (1, 3), 1): 1, ((3, 1), (3, 4), 1): 0.29761027283711317, ((4, 5), (2, 3), 2): -0.7091146435136725, ((2, 5), (2, 4), 2): -0.6166558219236168, ((1, 3), (4, 2), 1): 1, ((2, 1), (3, 2), 2): -0.23643286324782317, ((3, 1), (4, 2), 2): 1, ((3, 5), (2, 3), 2): -0.6905401063683269, ((2, 5), (3, 5), 2): -0.5551413237712067, ((4, 5), (1, 3), 2): 1, ((3, 1), (3, 5), 2): 1, ((4, 4), (1, 3), 2): 1, ((1, 4), (1, 2), 2): 1, ((2, 2), (3, 4), 1): 0.2947700270701733, ((2, 2), (4, 3), 1): 1, ((4, 5), (3, 4), 2): -0.6385720571888694, ((4, 5), (1, 1), 2): 1, ((2, 4), (1, 5), 1): 1, ((4, 1), (1, 2), 1): 1, ((4, 4), (1, 2), 2): 1, ((2, 4), (1, 1), 1): 0.9567624874258467, ((4, 3), (1, 1), 2): 1, ((1, 1), (4, 4), 1): 1, ((2, 2), (2, 3), 1): 0.2817817533560273, ((3, 4), (4, 4), 1): 1, ((4, 2), (1, 2), 1): 1, ((2, 1), (1, 1), 1): 0.960594131742142, ((2, 1), (2, 2), 2): -0.21417734275337397, ((4, 2), (2, 2), 1): 1.0, ((2, 3), (4, 5), 2): 1, ((1, 2), (3, 1), 2): -0.8635855481585994, ((2, 5), (1, 5), 1): 1, ((1, 3), (2, 3), 2): -0.7272630814474345, ((1, 1), (3, 4), 1): 1, ((3, 1), (2, 4), 2): 1.0523548320219059e-10, ((2, 2), (1, 3), 2): 1, ((1, 4), (3, 5), 1): 0.22146753492227875, ((4, 2), (2, 3), 2): -0.6863046259414114, ((4, 1), (3, 2), 1): 0.9866151918903482, ((3, 1), (2, 5), 1): 1, ((2, 3), (2, 5), 2): 4.903790242999515e-06, ((1, 2), (1, 1), 2): 1.0, ((2, 2), (2, 4), 2): 7.982015661654208e-07, ((2, 5), (1, 1), 1): 1.0, ((1, 4), (2, 1), 2): -0.8842734565208104, ((4, 3), (3, 4), 2): -0.18304742097437846, ((2, 5), (4, 3), 1): 1, ((1, 2), (4, 3), 1): 1, ((2, 4), (4, 3), 1): 1, ((1, 5), (2, 5), 1): 0.12871468682159104, ((2, 1), (2, 3), 1): 0.2978055967373565, ((1, 2), (1, 5), 1): 1, ((2, 3), (3, 2), 2): -0.7712912548333125, ((1, 2), (4, 5), 1): 1, ((2, 5), (4, 5), 1): 1, ((4, 3), (2, 3), 2): -0.6898962256734776, ((3, 3), (3, 2), 2): -0.7848414053365502, ((1, 1), (3, 2), 1): 1, ((1, 5), (1, 1), 1): 0.9819101902260298, ((3, 5), (1, 2), 1): 1, ((1, 5), (4, 4), 1): 1, ((3, 1), (4, 3), 2): 1, ((4, 4), (2, 4), 2): -0.6142768829975284, ((4, 5), (2, 2), 1): 0.9000032403669198, ((3, 4), (2, 5), 1): 0.4794761240829083, ((1, 5), (3, 5), 1): 0.17242324712264306, ((3, 2), (1, 1), 2): 1, ((4, 2), (1, 3), 1): 1, ((2, 2), (1, 1), 1): 0.9435003088121388, ((2, 5), (4, 2), 1): 1, ((3, 2), (1, 3), 2): 1, ((4, 2), (3, 1), 2): -0.8742543980518349, ((1, 4), (4, 4), 2): 1, ((4, 3), (3, 1), 1): 0.9863836373912871, ((3, 5), (2, 1), 2): -0.8481331565618229, ((4, 3), (2, 2), 1): 0.8694630998059285, ((2, 3), (1, 2), 1): 1, ((4, 4), (3, 5), 2): 1, ((1, 3), (3, 3), 1): 0.22810743550265458, ((1, 3), (2, 1), 2): -0.8568435825325658, ((2, 4), (4, 1), 1): 0.9243548832511299, ((2, 4), (1, 3), 1): 1, ((4, 1), (4, 5), 2): 1, ((4, 4), (4, 2), 2): 1, ((3, 1), (2, 1), 2): -0.8407729344608385, ((4, 4), (1, 1), 1): 0.9668459412112698, ((1, 5), (4, 5), 2): 1, ((2, 4), (4, 5), 1): 1, ((3, 3), (2, 2), 1): 0.9325440701088805, ((4, 1), (2, 3), 2): -0.249376358967419, ((3, 2), (1, 2), 1): 1, ((1, 5), (3, 2), 2): -0.7898605374243967, ((2, 2), (4, 1), 1): 0.8865347998769759, ((3, 3), (1, 1), 1): 0.9250760681918311, ((3, 5), (4, 4), 2): 1, ((2, 1), (1, 4), 2): 1, ((3, 3), (1, 2), 1): 1, ((4, 5), (2, 4), 2): -0.6194951373439616, ((1, 3), (1, 4), 2): 1, ((2, 5), (3, 2), 2): -0.7899650775447741, ((3, 3), (4, 2), 2): 1, ((4, 3), (2, 4), 2): -0.6177360531606678, ((2, 2), (1, 5), 2): 1, ((2, 2), (3, 1), 2): -0.852514172140446, ((2, 3), (1, 4), 1): 1, ((3, 4), (4, 3), 2): 1, ((1, 3), (4, 3), 2): 1, ((3, 4), (2, 1), 1): 0.9023124361175457, ((4, 3), (3, 2), 2): -0.7967674315757387, ((4, 3), (1, 3), 2): 1, ((3, 2), (4, 4), 2): 1, ((3, 1), (3, 4), 2): 1, ((4, 5), (2, 3), 1): 0.9000000000059686, ((3, 2), (2, 2), 1): 0.9803240078263065, ((2, 1), (3, 3), 1): 0.2639128676144993, ((2, 1), (3, 2), 1): 1.0, ((3, 1), (2, 2), 1): 1.0, ((4, 4), (2, 5), 1): 0.26142584063713475, ((3, 4), (4, 2), 1): 1, ((3, 2), (2, 5), 1): 0.348887267930845, ((3, 5), (4, 1), 1): 1.0, ((4, 3), (4, 1), 2): 1, ((1, 4), (1, 5), 1): 1, ((4, 5), (3, 4), 1): 0.18470069659048918, ((3, 1), (3, 2), 2): -0.21359861261294014, ((2, 4), (1, 2), 1): 1, ((2, 5), (2, 3), 1): 1.0, ((1, 4), (2, 3), 1): 0.19394492182156908, ((3, 3), (2, 4), 2): -0.19089049692962337, ((4, 5), (4, 2), 2): 1, ((4, 3), (4, 2), 2): 1, ((1, 1), (2, 2), 2): -0.30912742482491534, ((4, 3), (4, 5), 2): 1, ((2, 2), (2, 3), 2): 0.0, ((4, 3), (1, 2), 1): 1, ((1, 1), (1, 5), 2): 1, ((2, 2), (1, 2), 1): 1, ((1, 5), (2, 4), 1): 0.1774251208851756, ((3, 1), (4, 1), 1): 0.9094292425073045, ((1, 2), (2, 2), 2): -0.7784023176596221, ((2, 3), (4, 5), 1): 1, ((4, 4), (3, 4), 2): -0.6161428636403751, ((4, 1), (2, 5), 1): 1, ((3, 1), (1, 3), 2): 1, ((4, 2), (3, 5), 1): 0.263943831519425, ((1, 4), (3, 5), 2): -0.5544102451699695, ((1, 1), (2, 1), 2): -0.8429334077232212, ((2, 1), (4, 1), 2): 1, ((2, 2), (2, 4), 1): 0.3306429135952058, ((1, 4), (2, 1), 1): 0.9078438321232764, ((4, 3), (4, 4), 1): 1, ((4, 4), (3, 2), 2): -0.7750518379779601, ((4, 4), (3, 1), 2): -0.8854786885219236, ((1, 5), (2, 5), 2): -0.5566376398792015, ((2, 4), (3, 4), 2): -0.6187754203654321, ((3, 3), (4, 3), 1): 1, ((1, 2), (1, 5), 2): 1, ((4, 2), (4, 5), 2): 1, ((1, 1), (4, 5), 2): 1, ((3, 4), (3, 3), 1): 0.9, ((1, 1), (3, 2), 2): -0.7704560895566982, ((3, 2), (4, 1), 2): 1, ((2, 4), (4, 2), 1): 1, ((4, 4), (2, 4), 1): 0.21204639258842276, ((1, 1), (2, 4), 1): 0.21378201683116596, ((3, 4), (2, 3), 2): -0.6867279533222852, ((2, 2), (3, 2), 2): -0.7702336307823482, ((3, 5), (2, 2), 2): -0.7871835951029534, ((4, 1), (3, 1), 2): -0.8667383458752773, ((3, 3), (2, 3), 2): -0.6864698069305676, ((1, 5), (3, 3), 1): 0.9000000000000007, ((1, 1), (1, 4), 1): 1, ((2, 4), (2, 2), 1): 0.9000156263409147, ((4, 2), (3, 1), 1): 0.937671022844187, ((4, 5), (1, 2), 2): 1, ((4, 3), (3, 1), 2): -0.8297737748493687, ((1, 1), (4, 3), 1): 1, ((2, 2), (4, 4), 2): 1, ((4, 3), (2, 2), 2): -0.7747268881936149, ((4, 2), (4, 3), 1): 1, ((3, 3), (3, 4), 2): 0.0, ((2, 1), (4, 2), 1): 1, ((4, 1), (2, 1), 1): 1, ((4, 4), (2, 2), 1): 0.8219031366504004, ((1, 3), (1, 4), 1): 1, ((3, 1), (4, 4), 2): 1, ((4, 5), (3, 5), 1): 0.1768461667844611, ((2, 3), (2, 1), 2): -0.8667950183688918, ((4, 1), (4, 5), 1): 1, ((3, 3), (3, 1), 1): 0.8328246379368293, ((4, 4), (4, 1), 1): 0.923384622706716, ((4, 4), (4, 2), 1): 1, ((2, 2), (1, 4), 1): 1, ((4, 1), (3, 4), 1): 0.22788882291107457, ((3, 2), (3, 3), 2): 0.0, ((2, 1), (3, 4), 2): 8.658837708976596e-11, ((4, 1), (2, 3), 1): 0.29440993156224315, ((2, 2), (4, 1), 2): 1, ((1, 5), (2, 2), 2): -0.7653427802389656, ((2, 5), (1, 3), 1): 1, ((3, 2), (1, 5), 2): 1, ((1, 3), (4, 5), 1): 1, ((2, 1), (1, 4), 1): 1, ((2, 4), (1, 4), 1): 1, ((1, 3), (3, 1), 1): 0.8506193743000977, ((2, 5), (3, 2), 1): 1.0, ((4, 2), (2, 5), 1): 1, ((1, 1), (4, 1), 2): 1, ((3, 5), (1, 2), 2): 1, ((3, 4), (1, 3), 2): 1, ((2, 2), (1, 5), 1): 1, ((3, 3), (4, 3), 2): 1, ((1, 3), (3, 5), 2): -0.17231732649873713, ((3, 5), (3, 1), 1): 1.0, ((4, 2), (1, 5), 2): 1, ((4, 3), (3, 2), 1): 0.28576151484120854, ((1, 2), (3, 2), 2): -0.7711378276797967, ((4, 2), (4, 3), 2): 1, ((4, 1), (3, 5), 2): 1, ((1, 2), (2, 4), 1): 0.23691526630102727, ((3, 4), (1, 1), 1): 0.9482936879300682, ((3, 2), (2, 2), 2): -0.7590946823765985, ((4, 2), (2, 4), 2): -0.19995830335809756, ((3, 5), (4, 1), 2): 1, ((3, 3), (3, 1), 2): -0.8632022165728279, ((2, 5), (3, 5), 1): 1.0, ((1, 3), (2, 5), 2): 1, ((1, 4), (2, 4), 1): 0.19828062492784312, ((1, 1), (2, 2), 1): 0.8962661994330758, ((4, 5), (3, 1), 2): -0.8775748222754503, ((3, 4), (2, 2), 1): 0.900004382265532}

optimal policy for playerA by Littman :

{((2, 2), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (1, 2), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 1), (1, 2), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 4), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 5), (4, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 1), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (2, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 5), (1, 4), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 2), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 3), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (1, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (4, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 1), (1, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (4, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 3), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 3), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (2, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 1), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 3), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (1, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (3, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (1, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (2, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (4, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 1), (3, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 1), (4, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (2, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 3), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 5), (4, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 5), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (1, 1), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 5), (3, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 2), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 4), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 5), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 2), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (1, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (1, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 3), (2, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 5), (4, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 3), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 2), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (2, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 1), (1, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 3), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 3), (2, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (2, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 2), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (2, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (4, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (4, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 4), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 2), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 3), (4, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 2), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (3, 1), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 1), (1, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 5), (3, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 1), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 5), (1, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 3), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 1), (2, 1), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (3, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (4, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 5), (1, 4), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 2), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 1), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (1, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 1), (4, 2), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 2), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 1), (1, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 3), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 1), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.449056840267834, 'S': 0.550943159732166, 'N': 0.0}, ((2, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (3, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 1), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (4, 2), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (2, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (3, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 3), (2, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 5), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (1, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 1), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (1, 5), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 1), (1, 2), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (4, 1), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 3), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 3), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 3), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (1, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 4), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 1), (2, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 3), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 2), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (3, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 5), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 2), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (3, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (3, 1), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (1, 1), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (3, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (4, 2), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (4, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (1, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (4, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 1), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 3), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 3), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 2), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (4, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 2), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 4), (2, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (1, 2), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 5), (1, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 5), (4, 1), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 4), (1, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (2, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 3), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (4, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 2), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 5), (4, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 2), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 3), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (1, 1), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (3, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (3, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 5), (3, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (2, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 2), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (1, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 1), (1, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 3), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (4, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 1), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (4, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (2, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (1, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (2, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (4, 4), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 2), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 3), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 1), (3, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 5), 1): {'W': 0.7155456674162021, 'E': 0.0, 'stand': 0.28445433258379793, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (3, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 2), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (4, 2), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 5), (2, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (3, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 1), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (4, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.6210125838107445, 'S': 0.3789874161892554, 'N': 0.0}, ((4, 2), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (3, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 2), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (2, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 5), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (3, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 5), (1, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (4, 4), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 1), (4, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (1, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 3), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 3), (3, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (2, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (4, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (2, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 3), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (4, 4), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 1), (1, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 3), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 2), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (3, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (3, 4), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.39926814356913676, 'S': 0.0, 'N': 0.6007318564308632}, ((2, 4), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 3), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (1, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 4), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (2, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (1, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (4, 1), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (4, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 4), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (2, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (4, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (3, 1), 2): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (1, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (1, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 3), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (2, 1), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 1), (4, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (3, 4), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 1), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (3, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (4, 1), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 5), (1, 2), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 4), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 3), (3, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 1), (3, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 1), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 2), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}}

ecart entre new\_V et val de littman :

(1.7898173400479052, 262.8780533575073)

ecart entre val de shapley pour player 0 et val de littman pour player 0

(1.8999999999991646, 441.42437501845814)

Petit Analyse :

1. Shapley converge assez vite mais Littman avec un millions itération prendre trop tamps

2. On peut voir que en apprentissage pour player 0 contre policy trouvé pour player 1 par algorithme de Shapley en utilisant fonction Type 1 pour choisir action de player 1 à chaque étape , il y a pas mal états qui ne sont pas jamais touché , autrement dit ils ont meme valeur de jeu et aussi meme probabilités pour les action que au départ (étape installation) ca nous montre que player 1 ne jeu jamais certain action donc on ne rentre jamais dans ces états donc leur valeur ne change jamais, autrement dit algorithme de Littman apprendre la valeur et les probabilités des états qui sont nécessaire , les états dans le quelle player 0 doit répondre à action effectué par player 1.

Ça explique aussi pourquoi l’écart entre valeur de jeu trouvé par algorithme Littman et valeur de jeu retourné par fonction « new\_V\_and\_pi » et aussi valeur de jeu trouvé par algorithme Shapley est énorme en effet il y a pas mal états qui on valeur 1 (valeur installation au début d’algorithme de Littman) qui ne sont pas correct. Mais c’est possible que ce truc ne pose pas problème énorme pour jouer contre un Shapley player , en effet c’est correct que on n’est pas de tout convergé vers équilibre de Nash mais peut être avec cette stratégie trouvé (stratégie mixte trouvé par Littman pour player 0 en apprentissage contre stratégie trouvé par Shapley pour player 1) on peut gagner ou au moins pas trop perde contre Shapley player , c’est à voir dans prochain step quand on va faire jouer les deux player

3. Pour les états que valeur de jeu a était modifié , écart entres les velus de jeu pour ces états trouvé par Shapley et trouvé par Littman est faible

4. Jai pas vérifier complément mais je pense que quand meme que on n’est pas converger mais stratégie mixte (pour les états qui sont touché , les états que dans les quelle on a jouer ) est la mer chose que stratégie mixte trouve par Shapley pour ces états , A vérifier en écrivant un petit programme qui compare les pi trouvé par Shapley et Littman pour player 0

apprentissage pour player 0 , contre player random (player 1 jeu completment random). Fonction utilisé pour choisir action de player 1 à chaque step est suivant :

def choiceActOfPlayerType2(game,s,pi\_playerB):

return random.choice(game.actions(p1,s))

Run Littman with 1000000 iteration

learnin rate at the end of the run : 0.009999953948213411

Time Littman : 1467.811663866043

Game value by Littman pour player 0 :

{((2, 2), (1, 2), 2): -0.15772821973174386, ((2, 5), (2, 1), 2): -1.0240904530865538, ((1, 4), (4, 1), 1): 0.7449635524399424, ((1, 5), (2, 3), 1): 0.8249096161896577, ((3, 1), (4, 1), 2): -0.12674562385437135, ((3, 5), (1, 3), 1): 0.9486422641731205, ((1, 1), (1, 2), 2): -0.31405196365834376, ((3, 1), (1, 2), 2): -0.31541958707419004, ((1, 2), (3, 4), 2): -0.3210515043202141, ((1, 4), (4, 5), 1): 0.2960681159306222, ((1, 5), (4, 3), 1): 0.8333346188236287, ((2, 1), (4, 4), 1): 0.1439561137868911, ((3, 5), (3, 2), 1): 0.9420824733333671, ((3, 2), (4, 3), 1): 0.10279933638202571, ((2, 1), (2, 4), 2): -0.2464909430151613, ((4, 4), (4, 1), 2): -0.788320319220016, ((2, 2), (1, 1), 2): -0.16068237606619598, ((4, 3), (4, 4), 2): -0.17922823264343854, ((2, 3), (2, 2), 2): -0.849531613448409, ((1, 2), (1, 4), 2): -0.186551319476635, ((1, 4), (2, 2), 1): 0.7290380567468709, ((4, 3), (2, 5), 2): -0.21859213357428312, ((1, 4), (4, 2), 1): 0.7380098390161547, ((2, 5), (1, 4), 2): -0.14589968084370208, ((3, 4), (3, 3), 2): -0.6786443134292693, ((2, 3), (3, 5), 2): -0.17799771304219364, ((4, 3), (3, 3), 1): 0.13703213686672325, ((4, 5), (1, 4), 1): 0.8368801921335283, ((2, 2), (2, 1), 1): 0.6300660517285204, ((4, 5), (2, 4), 1): 0.8329481044905332, ((3, 4), (2, 3), 1): 0.829651901912734, ((1, 5), (4, 1), 2): -0.791302852608658, ((1, 1), (2, 3), 1): 0.09501267935484928, ((2, 4), (1, 5), 2): -0.07883921072612207, ((4, 2), (3, 4), 2): -0.24390618916085885, ((2, 3), (4, 3), 2): -0.14163080605036116, ((2, 3), (3, 4), 1): 0.2503626974546096, ((1, 5), (1, 2), 2): -0.6559038736880758, ((2, 4), (1, 1), 2): -0.8391062497156435, ((2, 1), (4, 5), 2): -0.16089745568343683, ((1, 1), (1, 4), 2): -0.21561128737800506, ((1, 1), (4, 3), 2): -0.2769418525963025, ((2, 3), (4, 1), 1): 0.7034598280062115, ((3, 5), (2, 5), 2): -0.3884273147127445, ((3, 2), (3, 4), 2): -0.21133031296345478, ((1, 4), (3, 2), 2): -0.8078576628208608, ((2, 1), (1, 5), 2): -0.16108697380647527, ((2, 3), (4, 4), 2): -0.17798089452124982, ((2, 1), (1, 2), 2): -0.1511892488402822, ((4, 5), (2, 1), 2): -1.038717307859602, ((2, 4), (2, 3), 1): 0.8223155798320214, ((3, 5), (1, 1), 2): -0.8370029543656122, ((3, 3), (4, 5), 2): -0.10440718060556747, ((1, 5), (2, 2), 1): 0.7919971705081337, ((2, 4), (4, 4), 2): -0.15751432883629427, ((2, 5), (1, 3), 2): -0.5098697358582136, ((2, 4), (3, 3), 2): -0.6738091279791874, ((2, 4), (1, 4), 2): -0.13548456438331058, ((2, 3), (1, 1), 1): 0.7068247866651169, ((4, 1), (4, 4), 1): 0.104189376977689, ((2, 4), (4, 3), 2): -0.5060078875135705, ((3, 3), (4, 1), 2): -0.8038153880803038, ((2, 5), (3, 1), 1): 0.9639011857958647, ((4, 1), (2, 2), 1): 0.12233784193825543, ((3, 1), (4, 3), 1): 0.1054706316933997, ((4, 4), (3, 5), 1): 0.15857953832077457, ((3, 1), (1, 1), 2): -0.20133358624283165, ((2, 2), (2, 5), 2): -0.1834143508352943, ((3, 3), (1, 4), 1): 0.7531459966594708, ((3, 4), (3, 2), 1): 0.8239140664615572, ((1, 2), (2, 4), 2): -0.24475266940347887, ((2, 4), (3, 5), 2): -0.11776862488712868, ((1, 2), (2, 1), 1): 0.29572532644884414, ((2, 5), (2, 4), 1): 0.9405530062162754, ((4, 2), (4, 1), 2): -0.7866758227604339, ((4, 2), (3, 5), 2): -0.1801832072483596, ((3, 4), (4, 2), 2): -0.6520836479289279, ((1, 3), (3, 2), 2): -0.8276803518886013, ((4, 5), (4, 3), 1): 0.822338426280439, ((1, 1), (3, 1), 2): -1.0263839988498298, ((1, 3), (4, 5), 2): -0.14022806381958897, ((1, 4), (3, 3), 2): -0.6570882670553371, ((4, 3), (1, 1), 1): 0.6802727223993811, ((2, 3), (3, 1), 2): -0.9996577202269452, ((2, 5), (2, 1), 1): 0.9387729872122945, ((3, 2), (2, 4), 2): -0.24965311129810186, ((1, 5), (1, 3), 2): -0.477674182335902, ((1, 2), (3, 1), 1): 0.6010773934706432, ((1, 2), (3, 4), 1): 0.1206248192260157, ((4, 2), (2, 3), 1): 0.12475163931098222, ((1, 5), (4, 3), 2): -0.4900743547048881, ((2, 1), (4, 4), 2): -0.21613352112408735, ((4, 3), (1, 4), 2): -0.23597969018762474, ((4, 1), (3, 2), 2): -0.4152739276060094, ((2, 3), (4, 2), 1): 0.7247127326346308, ((2, 1), (2, 5), 2): -0.18866110051224247, ((2, 5), (3, 3), 2): -0.6605384230857616, ((1, 2), (4, 3), 2): -0.3206073143063649, ((1, 4), (2, 2), 2): -0.8438346915261647, ((2, 4), (2, 3), 2): -0.6772137747351817, ((2, 2), (3, 4), 2): -0.24631605823179065, ((4, 1), (1, 4), 1): 0.1100693752158144, ((2, 1), (2, 3), 2): -0.2888884379568044, ((4, 3), (2, 5), 1): 0.16258910098818047, ((1, 4), (3, 4), 1): 0.15324385895482232, ((3, 4), (4, 5), 2): -0.07662600675112058, ((4, 1), (4, 3), 1): 0.09837693738371647, ((2, 5), (4, 5), 2): -0.14467114849004817, ((2, 5), (1, 4), 1): 0.9446635562168568, ((3, 4), (1, 5), 1): 0.8484163599331425, ((1, 5), (1, 1), 2): -0.8355244942472309, ((3, 5), (3, 3), 2): -0.6736474258077335, ((3, 4), (2, 5), 2): -0.11479495922759972, ((3, 2), (1, 1), 1): 0.663147692027712, ((4, 1), (3, 5), 1): 0.10913176212732346, ((3, 2), (2, 3), 2): -0.43292386891023316, ((4, 1), (3, 4), 2): -0.2525851263193913, ((2, 3), (2, 4), 1): 0.19018276103145904, ((3, 2), (4, 5), 1): 0.17118090075266582, ((3, 5), (2, 1), 1): 0.9397271765772685, ((1, 5), (4, 2), 1): 0.8163849709661591, ((1, 4), (1, 3), 1): 0.7372324179323853, ((4, 4), (1, 4), 2): -0.4079806340780571, ((1, 4), (3, 2), 1): 0.7282485159969831, ((1, 3), (2, 1), 1): 0.6690005913774004, ((2, 4), (3, 3), 1): 0.8080949071653484, ((3, 1), (2, 1), 1): 0.5797932406004959, ((4, 4), (1, 5), 2): -0.17178885397989976, ((1, 5), (4, 5), 1): 0.8254784579139298, ((3, 2), (1, 2), 2): -0.22669697820211415, ((3, 5), (1, 1), 1): 0.944163279345751, ((4, 5), (3, 2), 1): 0.8217254374511693, ((3, 3), (1, 1), 2): -0.8182205461256091, ((2, 4), (4, 4), 1): 0.8357305710228125, ((4, 4), (3, 3), 2): -0.6693288204531034, ((2, 3), (3, 4), 2): -0.23412889402580664, ((2, 3), (1, 1), 2): -0.8511845088810338, ((4, 4), (1, 2), 1): 0.7321919789363918, ((3, 4), (4, 1), 2): -0.7908462258888009, ((1, 1), (1, 3), 2): -0.253503565131818, ((1, 2), (4, 4), 2): -0.2133222365541939, ((4, 3), (2, 4), 1): 0.15499992131998677, ((2, 5), (3, 1), 2): -0.9767593941751804, ((4, 4), (4, 3), 2): -0.4761742594166332, ((4, 5), (4, 3), 2): -0.5066310859791401, ((2, 3), (1, 4), 2): -0.1153049878832823, ((3, 1), (1, 1), 1): 0.5816201216781238, ((2, 2), (3, 5), 1): 0.16710275351760975, ((1, 3), (4, 3), 1): 0.6534830806178439, ((3, 2), (4, 3), 2): -0.12657496305866567, ((3, 4), (2, 1), 2): -1.016138977825701, ((3, 3), (1, 4), 2): -0.18054060797799706, ((1, 1), (3, 3), 1): 0.1092229613054612, ((3, 1), (2, 3), 1): 0.09507261742934217, ((2, 5), (1, 2), 1): 0.9486648361326881, ((2, 1), (4, 1), 1): 0.5817383303849375, ((2, 4), (3, 5), 1): 0.3433692593135993, ((3, 1), (1, 5), 2): -0.16936851651797433, ((4, 3), (2, 1), 2): -0.990110935297961, ((2, 5), (4, 1), 1): 0.9407841615301941, ((2, 3), (3, 1), 1): 0.6983578374554379, ((3, 1), (3, 3), 2): -0.29159646231667613, ((4, 5), (2, 5), 1): 0.1528849449218143, ((2, 3), (1, 3), 2): -0.15295114862448794, ((3, 1), (3, 2), 1): 0.09595365297297788, ((4, 1), (3, 3), 1): 0.10135423711737532, ((3, 4), (1, 4), 1): 0.8367388090230443, ((1, 4), (2, 3), 2): -0.6698994085229486, ((4, 2), (1, 1), 1): 0.6028227194872806, ((4, 3), (4, 2), 1): 0.6722906416131945, ((3, 1), (1, 3), 1): 0.10798308115861673, ((4, 1), (1, 4), 2): -0.22848903651008032, ((4, 1), (1, 5), 1): 0.13365086302217435, ((4, 3), (1, 2), 2): -0.6860214277809722, ((3, 3), (2, 1), 1): 0.7441981923763478, ((1, 5), (2, 4), 2): -0.4761793137612633, ((2, 5), (2, 2), 1): 0.9513955094442323, ((1, 2), (2, 2), 1): 0.14584460401710367, ((1, 5), (1, 3), 1): 0.8215375642444225, ((3, 4), (3, 1), 2): -1.0075994478975725, ((3, 4), (1, 2), 2): -0.6886322140627914, ((4, 1), (2, 5), 2): -0.222691569964247, ((3, 3), (3, 5), 2): -0.10900041783519031, ((1, 4), (1, 1), 2): -0.8432326103231323, ((2, 5), (3, 4), 1): 0.931707242550565, ((4, 3), (1, 4), 1): 0.2293471299696043, ((1, 2), (2, 5), 1): 0.11997660474938264, ((1, 5), (3, 4), 1): 0.8250129644696128, ((2, 3), (4, 2), 2): -0.6523337736298502, ((1, 3), (2, 2), 1): 0.2611860099635418, ((3, 2), (3, 5), 1): 0.15932690509173203, ((2, 1), (2, 5), 1): 0.1064275364023292, ((1, 5), (2, 1), 1): 0.8057036260292816, ((4, 5), (1, 2), 1): 0.8335946577658138, ((2, 4), (3, 4), 1): 0.8414142396022437, ((3, 2), (2, 1), 2): -0.9859522513994473, ((4, 4), (2, 1), 2): -0.9972340486005901, ((4, 2), (4, 5), 1): 0.15123674213147015, ((3, 4), (4, 5), 1): 0.3819425653437272, ((1, 1), (4, 5), 1): 0.15997606299912445, ((3, 4), (1, 5), 2): -0.11279199657902823, ((1, 1), (4, 2), 1): 0.23404530732112683, ((1, 4), (1, 2), 1): 0.7242275479043089, ((1, 2), (4, 2), 1): 0.5959863795205734, ((4, 2), (2, 1), 1): 0.5967038199752974, ((3, 1), (2, 4), 1): 0.09741609882087364, ((2, 4), (4, 2), 2): -0.639397325956856, ((3, 5), (3, 3), 1): 0.9400580897446256, ((1, 1), (2, 4), 2): -0.2533133575944614, ((1, 3), (4, 4), 1): 0.19585929806269056, ((2, 2), (3, 2), 1): 0.6308185636141674, ((1, 2), (2, 3), 2): -0.3212760891767969, ((4, 1), (3, 1), 1): 0.16445046332546975, ((4, 1), (1, 3), 2): -0.2756383382779602, ((3, 3), (2, 3), 1): 0.7410621727404882, ((2, 3), (2, 4), 2): -0.20395997915742814, ((2, 1), (4, 3), 2): -0.2574003476366088, ((1, 5), (3, 3), 2): -0.6420851434833736, ((2, 4), (3, 2), 1): 0.8052609224402854, ((3, 3), (1, 5), 1): 0.3561523063229112, ((4, 1), (1, 1), 2): -0.8411671536535902, ((4, 5), (1, 4), 2): -0.3808333070512987, ((1, 3), (1, 1), 2): -0.8052236752837132, ((2, 3), (3, 3), 1): 0.7207168777854235, ((3, 3), (3, 4), 1): 0.19170962849811787, ((1, 4), (1, 3), 2): -0.5041708813420688, ((3, 4), (3, 5), 2): -0.10771192723940146, ((3, 5), (1, 3), 2): -0.5238587849712038, ((4, 1), (2, 1), 2): -1.0056646991210039, ((1, 3), (1, 2), 1): 0.6686065685392528, ((4, 2), (1, 4), 1): 0.14344842153728415, ((1, 5), (3, 4), 2): -0.4923791656373436, ((1, 4), (3, 1), 1): 0.7372722778899806, ((3, 5), (4, 3), 2): -0.48894792807790427, ((3, 5), (1, 4), 2): -0.37372084186848337, ((4, 4), (1, 5), 1): 0.3478039383623323, ((3, 2), (4, 2), 1): 0.6603326865813369, ((3, 2), (3, 3), 1): 0.09537996990452297, ((2, 4), (2, 2), 2): -0.8516628301318268, ((4, 4), (3, 3), 1): 0.27768936472934436, ((3, 2), (1, 5), 1): 0.2143583968728621, ((1, 5), (2, 1), 2): -1.0201253910281909, ((3, 1), (3, 5), 1): 0.1095936788153829, ((1, 3), (3, 1), 2): -0.975843366210235, ((4, 3), (1, 5), 2): -0.15058481212265762, ((3, 4), (4, 1), 1): 0.8384048229652549, ((1, 1), (4, 1), 1): 0.5913470244764353, ((1, 3), (1, 1), 1): 0.6740415944340681, ((2, 2), (4, 3), 2): -0.24412270023520113, ((3, 4), (1, 3), 1): 0.8407971727165889, ((3, 3), (4, 4), 2): -0.10599572984368408, ((4, 4), (2, 3), 2): -0.6864544830891868, ((3, 5), (3, 1), 2): -0.9880065882977442, ((4, 3), (3, 5), 2): -0.1794409968838499, ((3, 4), (4, 4), 2): -0.12119108357286931, ((4, 2), (1, 2), 2): -0.666064796068267, ((3, 1), (2, 3), 2): -0.323563897929162, ((4, 5), (4, 2), 1): 0.8380605547609374, ((2, 1), (1, 1), 2): -0.1334055815615072, ((2, 5), (2, 3), 2): -0.6724790245200595, ((2, 4), (2, 5), 2): -0.10571899451719763, ((3, 1), (1, 5), 1): 0.15254332343404325, ((2, 5), (1, 5), 2): -0.11167839023170496, ((4, 3), (2, 1), 1): 0.678737432771633, ((1, 1), (3, 4), 2): -0.27975646482426786, ((4, 1), (4, 2), 2): -0.31223508266396643, ((2, 2), (1, 3), 1): 0.09551941646007528, ((3, 1), (3, 3), 1): 0.09527168685119253, ((1, 3), (4, 1), 1): 0.6712663990958089, ((4, 3), (3, 5), 1): 0.1578231871950999, ((3, 1), (2, 5), 2): -0.21931007768564068, ((1, 1), (1, 2), 1): 0.08952264735260893, ((2, 3), (2, 5), 1): 0.18879903255030633, ((4, 1), (3, 3), 2): -0.3100571674802274, ((3, 3), (3, 5), 1): 0.18693391299995193, ((2, 5), (1, 1), 2): -0.8380964418811792, ((4, 3), (3, 4), 1): 0.12359800360419718, ((1, 3), (2, 5), 1): 0.1619740022957617, ((3, 2), (4, 4), 1): 0.16130920991143313, ((4, 1), (1, 5), 2): -0.16647574788924419, ((3, 2), (2, 5), 2): -0.18384767992533863, ((3, 3), (2, 1), 2): -1.0161658334335324, ((1, 4), (4, 1), 2): -0.7717474772760144, ((2, 4), (2, 5), 1): 0.27099304150321146, ((2, 3), (3, 2), 1): 0.7039345640085476, ((2, 5), (2, 2), 2): -0.835556278439622, ((3, 5), (3, 4), 1): 0.9677669072209774, ((4, 3), (2, 3), 1): 0.22931128955162797, ((3, 4), (1, 2), 1): 0.8382114263827026, ((3, 5), (2, 5), 1): 0.9558299870789666, ((4, 2), (4, 4), 1): 0.10596095423235964, ((1, 4), (4, 5), 2): -0.15438991219486997, ((4, 2), (3, 3), 1): 0.09797820077025476, ((1, 4), (4, 3), 2): -0.4956626196339431, ((2, 1), (2, 4), 1): 0.09842482857279176, ((3, 2), (3, 5), 2): -0.1778008951436995, ((2, 5), (4, 2), 2): -0.645708327716923, ((2, 3), (2, 2), 1): 0.705714037920129, ((2, 1), (3, 5), 1): 0.1424545757065206, ((3, 1), (4, 2), 1): 0.11631440011893354, ((1, 1), (2, 5), 1): 0.1121534792334571, ((1, 2), (3, 3), 1): 0.1405694238761364, ((1, 3), (2, 3), 1): 0.1437125232921077, ((1, 2), (4, 2), 2): -0.6240785372395101, ((4, 2), (4, 1), 1): 0.6292316929978926, ((4, 2), (2, 1), 2): -1.0032505406165009, ((3, 5), (2, 4), 2): -0.5388297139829573, ((1, 3), (1, 5), 2): -0.11630890680545676, ((3, 5), (4, 2), 1): 0.94215057431791, ((2, 4), (4, 1), 2): -0.8113929142756823, ((1, 3), (2, 2), 2): -0.8226921903076515, ((1, 2), (2, 3), 1): 0.09257589431922342, ((3, 1), (4, 5), 1): 0.14183866351251279, ((4, 2), (3, 4), 1): 0.11226014105597683, ((1, 5), (3, 1), 2): -1.0197053129061022, ((2, 4), (4, 5), 2): -0.10945724801523647, ((1, 5), (1, 2), 1): 0.8226828296603893, ((2, 1), (4, 3), 1): 0.12672242081487972, ((3, 1), (2, 2), 2): -0.501723219828888, ((2, 4), (3, 2), 2): -0.8120790566729525, ((3, 5), (4, 4), 1): 0.9462245239462365, ((4, 5), (1, 5), 1): 0.8351531179661068, ((4, 1), (1, 2), 2): -0.4120816841786877, ((3, 2), (1, 4), 2): -0.18178515398653483, ((3, 3), (1, 2), 2): -0.6958865449700471, ((2, 3), (3, 3), 2): -0.706463037969019, ((4, 5), (3, 3), 1): 0.8242814215889699, ((3, 3), (4, 2), 1): 0.736848911505605, ((2, 2), (4, 2), 2): -0.3688475785333407, ((2, 2), (3, 1), 1): 0.6365677445415218, ((1, 3), (1, 2), 2): -0.6540744477759032, ((4, 5), (4, 1), 2): -0.7626336916616598, ((3, 1), (1, 4), 1): 0.14659836279059385, ((4, 2), (1, 4), 2): -0.22052428989096895, ((2, 1), (1, 5), 1): 0.14523150673216087, ((1, 4), (3, 1), 2): -0.9799545856035878, ((2, 3), (4, 4), 1): 0.7513988286577168, ((4, 1), (4, 2), 1): 0.10182195375790329, ((4, 4), (4, 5), 1): 0.23716266788051982, ((3, 3), (4, 5), 1): 0.23694979160068774, ((3, 1), (1, 2), 1): 0.5811794466250962, ((3, 3), (2, 5), 1): 0.25032043135293147, ((2, 1), (3, 3), 2): -0.32061670893157945, ((4, 4), (2, 5), 2): -0.3712009122170791, ((4, 2), (3, 2), 1): 0.12891815817152466, ((2, 5), (3, 3), 1): 0.9328507051294487, ((4, 3), (4, 1), 1): 0.6859443296189562, ((3, 3), (4, 1), 1): 0.7503206258491832, ((1, 4), (1, 5), 2): -0.10404463358581914, ((2, 4), (1, 2), 2): -0.6736531985574729, ((3, 3), (4, 4), 1): 0.20674251843866645, ((1, 2), (4, 1), 2): -0.7496506079831856, ((3, 3), (2, 4), 1): 0.2817505918582334, ((2, 1), (3, 1), 1): 0.5772386273798739, ((4, 3), (4, 5), 1): 0.16776791587582218, ((2, 2), (2, 5), 1): 0.15317539228408356, ((2, 2), (4, 5), 1): 0.21459569997380895, ((1, 1), (1, 5), 1): 0.10861799517320163, ((2, 4), (2, 1), 1): 0.8024427946314637, ((3, 4), (3, 2), 2): -0.8109993899764244, ((4, 1), (2, 4), 2): -0.27893657960263607, ((1, 2), (2, 1), 2): -0.9744446438907701, ((1, 5), (1, 4), 1): 0.8195148105605506, ((4, 1), (2, 4), 1): 0.10460423208803574, ((1, 3), (4, 1), 2): -0.7857956337885467, ((3, 2), (3, 1), 1): 0.6558613476210566, ((1, 3), (3, 2), 1): 0.6527347244275425, ((4, 4), (1, 3), 1): 0.7389799535711933, ((3, 5), (4, 5), 1): 0.9650419799864948, ((1, 4), (3, 3), 1): 0.7252538525199186, ((1, 2), (1, 3), 1): 0.0931981348878625, ((4, 4), (3, 4), 1): 0.1497291147841359, ((3, 2), (2, 4), 1): 0.17156981719302325, ((3, 5), (3, 4), 2): -0.5224827409181315, ((1, 1), (2, 1), 1): 0.1585626684568431, ((4, 5), (3, 2), 2): -0.8039737483845026, ((3, 2), (4, 1), 1): 0.6573090185249396, ((3, 2), (2, 1), 1): 0.6541320098752883, ((3, 3), (1, 3), 2): -0.18925131716660734, ((2, 3), (3, 5), 1): 0.23338230446633235, ((1, 3), (3, 4), 1): 0.15987736270977634, ((1, 4), (4, 3), 1): 0.7327273188704081, ((3, 5), (2, 2), 1): 0.9525457706992649, ((4, 4), (4, 3), 1): 0.7327356794171768, ((2, 1), (1, 3), 1): 0.09785799962060715, ((4, 2), (2, 5), 2): -0.22019629912227676, ((2, 1), (3, 5), 2): -0.2120580861898437, ((4, 5), (3, 1), 1): 0.8354720757188593, ((4, 1), (1, 1), 1): 0.573974432801693, ((1, 4), (3, 4), 2): -0.4833842427236331, ((2, 2), (4, 4), 1): 0.19877259809061068, ((4, 1), (4, 3), 2): -0.2541396078620373, ((1, 2), (3, 3), 2): -0.6835737128099462, ((2, 4), (3, 1), 2): -0.9624494414175082, ((2, 1), (4, 2), 2): -0.313237534290211, ((3, 5), (2, 4), 1): 0.9296410352793578, ((3, 1), (4, 4), 1): 0.10703377005895402, ((1, 3), (1, 5), 1): 0.17448641834913267, ((1, 4), (2, 5), 2): -0.14709420685751243, ((4, 5), (3, 5), 2): -0.34729832016106804, ((2, 3), (2, 1), 1): 0.7000987092056375, ((2, 5), (4, 4), 1): 0.9337049323366542, ((3, 1), (4, 5), 2): -0.16072449333719624, ((1, 3), (2, 4), 2): -0.2235555608858637, ((2, 2), (1, 4), 2): -0.18421762578055711, ((1, 5), (3, 1), 1): 0.8051465088996641, ((2, 1), (3, 4), 1): 0.10577052532324399, ((3, 5), (1, 5), 2): -0.1428823248423288, ((4, 5), (1, 5), 2): -0.2630024622251248, ((3, 2), (4, 5), 2): -0.10829998396986759, ((3, 2), (1, 4), 1): 0.23602551515176565, ((2, 3), (1, 5), 1): 0.23235011834563357, ((1, 5), (4, 2), 2): -0.6274276695846317, ((4, 5), (3, 3), 2): -0.6673183978895285, ((1, 1), (3, 5), 2): -0.2022531524105805, ((2, 2), (4, 2), 1): 0.6385442262894716, ((4, 4), (1, 4), 1): 0.7350690443185259, ((2, 2), (3, 3), 2): -0.3795368994153971, ((4, 5), (4, 1), 1): 0.8393969380869728, ((4, 4), (3, 1), 1): 0.7508627249143166, ((1, 2), (3, 5), 2): -0.2163898693805337, ((4, 4), (2, 3), 1): 0.735603941737762, ((4, 2), (1, 5), 1): 0.15434843489676042, ((1, 5), (4, 1), 1): 0.8428159683621446, ((3, 4), (2, 4), 1): 0.83581989183324, ((1, 2), (3, 2), 1): 0.19578192710527004, ((1, 1), (2, 5), 2): -0.18863356684467056, ((2, 3), (4, 1), 2): -0.7985256685603239, ((4, 4), (4, 5), 2): -0.10066828216547888, ((3, 3), (2, 5), 2): -0.1814186280745287, ((1, 3), (4, 2), 2): -0.6541439484071495, ((4, 2), (2, 4), 1): 0.11231363509585282, ((3, 5), (2, 3), 1): 0.9564298781303016, ((1, 1), (1, 3), 1): 0.08978813135977223, ((4, 2), (3, 2), 2): -0.8190493791139173, ((1, 1), (4, 2), 2): -0.3580171990048832, ((1, 2), (4, 4), 1): 0.16336331705965298, ((4, 4), (2, 2), 2): -0.8475573139046141, ((4, 2), (4, 4), 2): -0.18718531918628079, ((1, 2), (4, 1), 1): 0.6242339214914884, ((3, 5), (4, 2), 2): -0.6600519155486143, ((1, 4), (2, 4), 2): -0.5013785256644768, ((2, 2), (3, 5), 2): -0.1827191849547073, ((2, 1), (3, 1), 2): -1.0470643090687346, ((1, 1), (4, 4), 2): -0.21528120948150511, ((3, 4), (2, 2), 2): -0.8429125593796278, ((2, 2), (4, 5), 2): -0.16045314472510425, ((1, 1), (3, 3), 2): -0.37005211037389385, ((2, 4), (2, 1), 2): -1.012267849050045, ((2, 5), (1, 2), 2): -0.6718076961423867, ((2, 1), (2, 2), 1): 0.08984446144684606, ((1, 5), (2, 3), 2): -0.6755418653236149, ((4, 2), (2, 2), 2): -0.8317354236621974, ((4, 5), (4, 4), 1): 0.8237673413836061, ((1, 5), (1, 4), 2): -0.3501343914765394, ((2, 5), (4, 1), 2): -0.8049186879619813, ((3, 4), (1, 1), 2): -0.8285247792158422, ((3, 2), (3, 1), 2): -0.9967585383368268, ((3, 5), (3, 2), 2): -0.8193288927006259, ((4, 5), (2, 5), 2): -0.3383054503584442, ((2, 3), (1, 3), 1): 0.7372961530840295, ((3, 5), (4, 5), 2): -0.10926191627954587, ((1, 2), (1, 1), 1): 0.6187335831296963, ((3, 4), (1, 4), 2): -0.18158188729731248, ((4, 2), (1, 1), 2): -0.8169034851773468, ((2, 5), (4, 3), 2): -0.4972400297202259, ((1, 2), (1, 4), 1): 0.10180040235425596, ((4, 3), (1, 5), 1): 0.22172839773950656, ((1, 4), (4, 2), 2): -0.6250521051685838, ((4, 5), (2, 2), 2): -0.842647114512097, ((1, 2), (4, 5), 2): -0.12906094350108593, ((4, 5), (1, 1), 1): 0.8413432920829529, ((1, 1), (3, 1), 1): 0.2484250678430093, ((3, 4), (3, 1), 1): 0.8409394061327525, ((3, 3), (3, 2), 1): 0.7378230274035851, ((4, 3), (3, 3), 2): -0.6640561020083967, ((1, 4), (1, 1), 1): 0.7408920909361585, ((1, 5), (4, 4), 2): -0.3616923918353041, ((2, 5), (3, 4), 2): -0.5111275422175062, ((3, 3), (1, 3), 1): 0.7390891936833606, ((2, 2), (2, 1), 2): -1.0214557003006501, ((1, 3), (3, 4), 2): -0.5319787685202028, ((1, 3), (3, 5), 1): 0.1662136971856306, ((1, 2), (2, 5), 2): -0.1873359068849953, ((1, 5), (3, 5), 2): -0.30301997710536926, ((1, 1), (2, 3), 2): -0.31612386152489097, ((4, 2), (1, 3), 2): -0.34094008623762156, ((3, 1), (1, 4), 2): -0.22042230289912185, ((2, 1), (1, 3), 2): -0.246642376186119, ((2, 3), (4, 3), 1): 0.7200776086434555, ((4, 5), (4, 4), 2): -0.32863206535786577, ((2, 1), (4, 5), 1): 0.15099121784914724, ((3, 2), (1, 3), 1): 0.662601071525012, ((1, 4), (4, 4), 1): 0.7367125121267006, ((4, 4), (2, 1), 1): 0.7467947751965819, ((2, 3), (1, 2), 2): -0.22004743642384125, ((4, 5), (1, 3), 1): 0.8331857462268925, ((2, 4), (3, 1), 1): 0.7993183968709948, ((3, 2), (3, 4), 1): 0.09305403951623592, ((1, 3), (3, 3), 2): -0.6655719503761132, ((4, 4), (3, 2), 1): 0.7284683310951579, ((1, 4), (2, 5), 1): 0.14353730094786238, ((1, 3), (4, 4), 2): -0.2269837167552577, ((2, 4), (1, 3), 2): -0.18995698128684205, ((2, 1), (1, 2), 1): 0.09488345500110142, ((2, 5), (4, 4), 2): -0.35076067348919615, ((4, 5), (2, 1), 1): 0.8370883817757762, ((1, 3), (2, 4), 1): 0.12754263199687466, ((4, 4), (1, 1), 2): -0.8078851019747095, ((3, 2), (2, 3), 1): 0.12119821202158175, ((4, 1), (1, 3), 1): 0.13057663254902463, ((3, 3), (2, 2), 2): -0.8478655498686483, ((3, 5), (1, 5), 1): 0.9535780033812236, ((1, 5), (3, 2), 1): 0.8076547192490393, ((3, 3), (1, 5), 2): -0.11600663291837877, ((1, 2), (1, 3), 2): -0.24517332648297363, ((2, 3), (1, 5), 2): -0.10559635642764575, ((3, 4), (4, 3), 1): 0.8224963883781746, ((4, 1), (4, 4), 2): -0.20545879654583146, ((1, 1), (3, 5), 1): 0.12462940014894308, ((3, 4), (3, 5), 1): 0.2813604550181322, ((4, 1), (2, 2), 2): -0.8530034428216184, ((2, 2), (3, 3), 1): 0.09746133176724786, ((4, 2), (3, 3), 2): -0.3564481327888369, ((3, 5), (4, 3), 1): 0.9611047416781259, ((1, 2), (3, 5), 1): 0.15234013473269914, ((3, 2), (4, 2), 2): -0.13814500612085528, ((3, 5), (1, 4), 1): 0.9466955419523053, ((3, 4), (2, 4), 2): -0.5830701394476691, ((4, 3), (1, 3), 1): 0.6612043998115902, ((3, 1), (3, 4), 1): 0.09835204769498841, ((4, 5), (2, 3), 2): -0.6759278133631181, ((2, 5), (2, 4), 2): -0.5207890150929406, ((1, 3), (4, 2), 1): 0.6693306608350886, ((2, 1), (3, 2), 2): -0.4385886100297209, ((3, 1), (4, 2), 2): -0.13726455068676696, ((3, 5), (2, 3), 2): -0.676914129329629, ((2, 5), (3, 5), 2): -0.314584310041748, ((4, 5), (1, 3), 2): -0.503813761496467, ((3, 1), (3, 5), 2): -0.1867356425045897, ((4, 4), (1, 3), 2): -0.5212747390980454, ((1, 4), (1, 2), 2): -0.6406447056592458, ((2, 2), (3, 4), 1): 0.15561596761962262, ((2, 2), (4, 3), 1): 0.638922522528739, ((4, 5), (3, 4), 2): -0.5093480119801221, ((4, 5), (1, 1), 2): -0.8113784801238824, ((2, 4), (1, 5), 1): 0.3525426642825588, ((4, 1), (1, 2), 1): 0.18375200354179266, ((4, 4), (1, 2), 2): -0.6932667263515737, ((2, 4), (1, 1), 1): 0.8106932084714681, ((4, 3), (1, 1), 2): -0.8497017101730797, ((1, 1), (4, 4), 1): 0.13354850630871556, ((2, 2), (2, 3), 1): 0.09337093726015264, ((3, 4), (4, 4), 1): 0.8376911031717383, ((4, 2), (1, 2), 1): 0.5867174249726496, ((2, 1), (1, 1), 1): 0.5584465579077252, ((2, 1), (2, 2), 2): -0.36639494260611905, ((4, 2), (2, 2), 1): 0.19967259466538154, ((2, 3), (4, 5), 2): -0.10897293449696079, ((1, 2), (3, 1), 2): -0.9923708004005068, ((2, 5), (1, 5), 1): 0.9475575189827875, ((1, 3), (2, 3), 2): -0.651084619495431, ((1, 1), (3, 4), 1): 0.1131779935193319, ((3, 1), (2, 4), 2): -0.25506471209130316, ((2, 2), (1, 3), 2): -0.1436204109045541, ((1, 4), (3, 5), 1): 0.23992054103197188, ((4, 2), (2, 3), 2): -0.7277747558994835, ((4, 1), (3, 2), 1): 0.10448500290451329, ((3, 1), (2, 5), 1): 0.14607240165423124, ((2, 3), (2, 5), 2): -0.11048068381396331, ((1, 2), (1, 1), 2): -0.8109732304408392, ((2, 2), (2, 4), 2): -0.20089161964493402, ((2, 5), (1, 1), 1): 0.9596455271704089, ((1, 4), (2, 1), 2): -1.003213319144183, ((4, 3), (3, 4), 2): -0.24065166191328152, ((2, 5), (4, 3), 1): 0.9234012260160608, ((1, 2), (4, 3), 1): 0.19499862445777558, ((2, 4), (4, 3), 1): 0.8378640819192111, ((1, 5), (2, 5), 1): 0.1447537518636393, ((2, 1), (2, 3), 1): 0.0886992827909851, ((1, 2), (1, 5), 1): 0.1485130694283699, ((2, 3), (3, 2), 2): -0.8044601103845616, ((1, 2), (4, 5), 1): 0.16886429744401052, ((2, 5), (4, 5), 1): 0.9620664034433717, ((4, 3), (2, 3), 2): -0.7045776536213577, ((3, 3), (3, 2), 2): -0.8343238280271507, ((1, 1), (3, 2), 1): 0.14599407478167872, ((1, 5), (1, 1), 1): 0.8076450197078485, ((3, 5), (1, 2), 1): 0.9488733558029843, ((1, 5), (4, 4), 1): 0.8202182597882648, ((3, 1), (4, 3), 2): -0.24449360503015619, ((4, 4), (2, 4), 2): -0.5304931452851455, ((4, 5), (2, 2), 1): 0.8319895538834646, ((3, 4), (2, 5), 1): 0.4146084853440036, ((1, 5), (3, 5), 1): 0.1453377365511527, ((3, 2), (1, 1), 2): -0.8338875378307832, ((4, 2), (1, 3), 1): 0.20198294133187952, ((2, 2), (1, 1), 1): 0.6237951468821924, ((2, 5), (4, 2), 1): 0.9377727451184087, ((3, 2), (1, 3), 2): -0.24505379882398315, ((4, 2), (3, 1), 2): -0.9902207165084997, ((1, 4), (4, 4), 2): -0.3454163801258274, ((4, 3), (3, 1), 1): 0.663018773475551, ((3, 5), (2, 1), 2): -1.0006102574641433, ((4, 3), (2, 2), 1): 0.6537050431753448, ((2, 3), (1, 2), 1): 0.7046431044187192, ((4, 4), (3, 5), 2): -0.17761216277226627, ((1, 3), (3, 3), 1): 0.18219582633859763, ((1, 3), (2, 1), 2): -1.0051752192455794, ((2, 4), (4, 1), 1): 0.8258101867920172, ((2, 4), (1, 3), 1): 0.8215658171020092, ((4, 1), (4, 5), 2): -0.16227719305649005, ((4, 4), (4, 2), 2): -0.6255044764642782, ((3, 1), (2, 1), 2): -0.9857566383696332, ((4, 4), (1, 1), 1): 0.7495496893646891, ((1, 5), (4, 5), 2): -0.20121397235750735, ((2, 4), (4, 5), 1): 0.8418955685801012, ((3, 3), (2, 2), 1): 0.7359232179875699, ((4, 1), (2, 3), 2): -0.4151927466957051, ((3, 2), (1, 2), 1): 0.6584231979867731, ((1, 5), (3, 2), 2): -0.8070382912434988, ((2, 2), (4, 1), 1): 0.6454735798138057, ((3, 3), (1, 1), 1): 0.7465910616644685, ((3, 5), (4, 4), 2): -0.1584385166926757, ((2, 1), (1, 4), 2): -0.18668731676770983, ((3, 3), (1, 2), 1): 0.7482947635507662, ((4, 5), (2, 4), 2): -0.5168917849805538, ((1, 3), (1, 4), 2): -0.17981374585375035, ((2, 5), (3, 2), 2): -0.8156024048039205, ((3, 3), (4, 2), 2): -0.14749943219474534, ((4, 3), (2, 4), 2): -0.5536010587562195, ((2, 2), (1, 5), 2): -0.11276771925820445, ((2, 2), (3, 1), 2): -1.0057775827470783, ((2, 3), (1, 4), 1): 0.25270026947809143, ((3, 4), (4, 3), 2): -0.1411767858400799, ((1, 3), (4, 3), 2): -0.5038716316569681, ((3, 4), (2, 1), 1): 0.8380512062573156, ((4, 3), (3, 2), 2): -0.8086820381642237, ((4, 3), (1, 3), 2): -0.5686365885913662, ((3, 2), (4, 4), 2): -0.17836172949454646, ((3, 1), (3, 4), 2): -0.24432358280548505, ((4, 5), (2, 3), 1): 0.8232404262648098, ((3, 2), (2, 2), 1): 0.6576178906383033, ((2, 1), (3, 3), 1): 0.09990097702313187, ((2, 1), (3, 2), 1): 0.10609771005038882, ((3, 1), (2, 2), 1): 0.10186936789068932, ((4, 4), (2, 5), 1): 0.23868143918071005, ((3, 4), (4, 2), 1): 0.8414289809750952, ((3, 2), (2, 5), 1): 0.16049951231300166, ((3, 5), (4, 1), 1): 0.9315626552562611, ((4, 3), (4, 1), 2): -0.8003780933395895, ((1, 4), (1, 5), 1): 0.23286036127981902, ((4, 5), (3, 4), 1): 0.2635489582523943, ((3, 1), (3, 2), 2): -0.36280696737689044, ((2, 4), (1, 2), 1): 0.821261423771065, ((2, 5), (2, 3), 1): 0.943687900023156, ((1, 4), (2, 3), 1): 0.1714400397176007, ((3, 3), (2, 4), 2): -0.3559424443706116, ((4, 5), (4, 2), 2): -0.6436562788605779, ((4, 3), (4, 2), 2): -0.6429774474315523, ((1, 1), (2, 2), 2): -0.38167022133491724, ((4, 3), (4, 5), 2): -0.10581353061336649, ((2, 2), (2, 3), 2): -0.27794890506093667, ((4, 3), (1, 2), 1): 0.6511276431842538, ((1, 1), (1, 5), 2): -0.1671976683162499, ((2, 2), (1, 2), 1): 0.6268944193398706, ((1, 5), (2, 4), 1): 0.14654117457643073, ((3, 1), (4, 1), 1): 0.5882106552744117, ((1, 2), (2, 2), 2): -0.8191823416313758, ((2, 3), (4, 5), 1): 0.298514948669472, ((4, 4), (3, 4), 2): -0.522863625876747, ((4, 1), (2, 5), 1): 0.11144038316384272, ((3, 1), (1, 3), 2): -0.2552111131323323, ((4, 2), (3, 5), 1): 0.11328651594976054, ((1, 4), (3, 5), 2): -0.3537692969842573, ((1, 1), (2, 1), 2): -1.045496918212538, ((2, 1), (4, 1), 2): -0.35316397311220654, ((2, 2), (2, 4), 1): 0.09432089631839363, ((1, 4), (2, 1), 1): 0.7310135687484283, ((4, 3), (4, 4), 1): 0.16387681113011895, ((4, 4), (3, 2), 2): -0.82150827200457, ((4, 4), (3, 1), 2): -0.9469834439775376, ((1, 5), (2, 5), 2): -0.2888428035545703, ((2, 4), (3, 4), 2): -0.5535104496403696, ((3, 3), (4, 3), 1): 0.7385183508287896, ((1, 2), (1, 5), 2): -0.160430703360457, ((4, 2), (4, 5), 2): -0.1573980183677276, ((1, 1), (4, 5), 2): -0.15220518630283128, ((3, 4), (3, 3), 1): 0.8237092273693706, ((1, 1), (3, 2), 2): -0.8611242932330275, ((3, 2), (4, 1), 2): -0.16765250855993274, ((2, 4), (4, 2), 1): 0.805457964997474, ((4, 4), (2, 4), 1): 0.23579137517830628, ((1, 1), (2, 4), 1): 0.09811288154865913, ((3, 4), (2, 3), 2): -0.696583399796178, ((2, 2), (3, 2), 2): -0.8628882283197221, ((3, 5), (2, 2), 2): -0.82562719940397, ((4, 1), (3, 1), 2): -1.016912767083019, ((3, 3), (2, 3), 2): -0.7398795132797126, ((1, 5), (3, 3), 1): 0.8154557031410775, ((1, 1), (1, 4), 1): 0.09964052070123298, ((2, 4), (2, 2), 1): 0.8056245986988497, ((4, 2), (3, 1), 1): 0.3658167429848288, ((4, 5), (1, 2), 2): -0.6707552106277354, ((4, 3), (3, 1), 2): -1.026464692389207, ((1, 1), (4, 3), 1): 0.15381078933615772, ((2, 2), (4, 4), 2): -0.18386121473820752, ((4, 3), (2, 2), 2): -0.8444554233582484, ((4, 2), (4, 3), 1): 0.09872090967716501, ((3, 3), (3, 4), 2): -0.1997292623421652, ((2, 1), (4, 2), 1): 0.5748633904519487, ((4, 1), (2, 1), 1): 0.2036471363840583, ((4, 4), (2, 2), 1): 0.7376082752435481, ((1, 3), (1, 4), 1): 0.16018929344275962, ((3, 1), (4, 4), 2): -0.18260722027100945, ((4, 5), (3, 5), 1): 0.14851933563401035, ((2, 3), (2, 1), 2): -1.0174802396949152, ((4, 1), (4, 5), 1): 0.11563610219093987, ((3, 3), (3, 1), 1): 0.7389328109499472, ((4, 4), (4, 1), 1): 0.757368259363391, ((4, 4), (4, 2), 1): 0.7516873337101115, ((2, 2), (1, 4), 1): 0.15411157231814268, ((4, 1), (3, 4), 1): 0.10276014717211514, ((3, 2), (3, 3), 2): -0.27513342375355576, ((2, 1), (3, 4), 2): -0.25758432981805174, ((4, 1), (2, 3), 1): 0.10245938754158893, ((2, 2), (4, 1), 2): -0.8346390597971634, ((1, 5), (2, 2), 2): -0.8430471397361049, ((2, 5), (1, 3), 1): 0.9241672373847863, ((3, 2), (1, 5), 2): -0.16094918372219535, ((1, 3), (4, 5), 1): 0.23227211028614975, ((2, 1), (1, 4), 1): 0.10398618498197969, ((2, 4), (1, 4), 1): 0.8204173023277389, ((1, 3), (3, 1), 1): 0.6712642655229583, ((2, 5), (3, 2), 1): 0.9119968856375876, ((4, 2), (2, 5), 1): 0.1455367393514705, ((1, 1), (4, 1), 2): -0.8148985945196116, ((3, 5), (1, 2), 2): -0.6364895582222843, ((3, 4), (1, 3), 2): -0.546436175685836, ((2, 2), (1, 5), 1): 0.16304287632293965, ((3, 3), (4, 3), 2): -0.1333000045049935, ((1, 3), (3, 5), 2): -0.21684422455656363, ((3, 5), (3, 1), 1): 0.9380194003404011, ((4, 2), (1, 5), 2): -0.15669242658400845, ((4, 3), (3, 2), 1): 0.2929198059817749, ((1, 2), (3, 2), 2): -0.8062174212234529, ((4, 2), (4, 3), 2): -0.24399931312417492, ((4, 1), (3, 5), 2): -0.19676166408022017, ((1, 2), (2, 4), 1): 0.11744229941514082, ((3, 4), (1, 1), 1): 0.8401512462537152, ((3, 2), (2, 2), 2): -0.8726570706545856, ((4, 2), (2, 4), 2): -0.3525142907020793, ((3, 5), (4, 1), 2): -0.8107349253128088, ((3, 3), (3, 1), 2): -0.9562987896828032, ((2, 5), (3, 5), 1): 0.9514981908742949, ((1, 3), (2, 5), 2): -0.1787752099302484, ((1, 4), (2, 4), 1): 0.14823483400129456, ((1, 1), (2, 2), 1): 0.09123631419559791, ((4, 5), (3, 1), 2): -0.9975489813704217, ((3, 4), (2, 2), 1): 0.8400181478888231}

optimal policy for playerA by Littman pour player 0 :

{((2, 2), (1, 2), 2): {'W': 0.3457348114868445, 'E': 0.0, 'stand': 0.6542651885131555, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (4, 1), 1): {'W': 0.26629535354868117, 'E': 0.7337046464513188, 'stand': 0.0, 'S': 0.0}, ((1, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (2, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 2), 1): {'W': 0.0, 'E': 0.39179290498831637, 'stand': 0.05452286118412358, 'S': 0.55368423382756}, ((4, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 1), 1): {'W': 0.0, 'E': 0.8438883053782442, 'stand': 0.0, 'S': 0.15611169462175575, 'N': 0.0}, ((4, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 3), 1): {'E': 0.8005648440017102, 'stand': 0.0, 'S': 0.1994351559982898}, ((2, 4), (1, 5), 2): {'W': 0.0, 'E': 0.07587917390392943, 'stand': 0.6541630148007228, 'S': 0.0, 'N': 0.26995781129534774}, ((4, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 2), 2): {'W': 0.6760139941143514, 'stand': 0.0, 'S': 0.32398600588564863}, ((2, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (4, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (1, 4), 2): {'E': 0.9052503994055208, 'stand': 0.0, 'S': 0.0947496005944792}, ((1, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 2), (3, 4), 2): {'W': 0.0, 'E': 0.39039636740839456, 'stand': 0.0, 'S': 0.0, 'N': 0.6096036325916054}, ((1, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 5), 2): {'E': 0.9885322633204524, 'stand': 0.0, 'S': 0.0, 'N': 0.011467736679547572}, ((2, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (1, 2), 2): {'E': 0.7229491271151282, 'stand': 0.1773743171493336, 'S': 0.0, 'N': 0.09967655573553823}, ((4, 5), (2, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 2): {'W': 0.0, 'E': 0.6626580942323317, 'stand': 0.3373419057676683, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 4), 2): {'W': 0.8184227465039539, 'E': 0.0, 'stand': 0.0, 'S': 0.18157725349604617, 'N': 0.0}, ((2, 5), (1, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.15144738453906847, 'N': 0.8485526154609315}, ((2, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 1): {'E': 0.8262946434669404, 'stand': 0.17370535653305963, 'N': 0.0}, ((2, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.09218836508105344, 'S': 0.9078116349189466, 'N': 0.0}, ((3, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 5), 1): {'W': 0.0, 'E': 0.3707012952590848, 'stand': 0.48477213001162844, 'N': 0.14452657472928673}, ((3, 1), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (4, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (4, 5), 2): {'W': 0.1514301004510893, 'E': 0.0, 'stand': 0.0, 'S': 0.8485698995489107}, ((1, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (1, 1), 1): {'W': 0.0, 'E': 0.7589264634800678, 'stand': 0.0, 'N': 0.2410735365199322}, ((2, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 3), 2): {'W': 0.5678551222726469, 'stand': 0.0, 'S': 0.43214487772735305}, ((1, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (4, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (4, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 2), 1): {'W': 0.0, 'E': 0.9478717315518879, 'stand': 0.052128268448112136, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 2): {'W': 0.037692134601682414, 'E': 0.0, 'stand': 0.0, 'S': 0.9623078653983176}, ((1, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 4), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (2, 3), 2): {'E': 0.17625493582347243, 'stand': 0.8237450641765276, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (4, 5), 2): {'W': 0.0, 'E': 0.10017036869654528, 'stand': 0.6296391975948988, 'S': 0.2701904337085559, 'N': 0.0}, ((4, 1), (4, 3), 1): {'E': 0.151049601342663, 'stand': 0.0, 'N': 0.848950398657337}, ((2, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (3, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 5), 2): {'W': 0.0, 'E': 0.012782114664806388, 'stand': 0.0, 'S': 0.0, 'N': 0.9872178853351936}, ((3, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 5), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.49279704468421537, 'S': 0.5072029553157846, 'N': 0.0}, ((3, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 1): {'W': 0.19158585061791733, 'stand': 0.0, 'S': 0.8084141493820827}, ((1, 4), (1, 3), 1): {'W': 0.0, 'E': 0.45492473618553086, 'stand': 0.0, 'S': 0.5450752638144691}, ((4, 4), (1, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (3, 2), 1): {'W': 0.0, 'E': 0.4824475426755881, 'stand': 0.0, 'S': 0.5175524573244119}, ((1, 3), (2, 1), 1): {'W': 0.0, 'E': 0.5877338420520768, 'stand': 0.0, 'S': 0.4122661579479232}, ((2, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 1): {'W': 0.0, 'E': 0.9977203908102045, 'stand': 0.0, 'S': 0.0, 'N': 0.0022796091897954755}, ((4, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (1, 2), 2): {'W': 0.5187078752212503, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.4812921247787497}, ((3, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0626169892069307, 'stand': 0.0, 'S': 0.9373830107930693, 'N': 0.0}, ((2, 3), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (4, 4), 2): {'W': 0.04437438874114963, 'E': 0.0, 'stand': 0.0, 'S': 0.9556256112588504}, ((4, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (4, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 2): {'W': 0.0, 'E': 0.16259637062252158, 'stand': 0.6550999917308966, 'S': 0.0, 'N': 0.1823036376465818}, ((3, 1), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 3), 2): {'W': 0.0, 'E': 0.5326079629999747, 'stand': 0.38415459427956, 'S': 0.08323744272046525, 'N': 0.0}, ((3, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (3, 3), 1): {'E': 0.020507577725924042, 'stand': 0.979492422274076, 'S': 0.0}, ((3, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.8740526360786074, 'N': 0.12594736392139266}, ((2, 5), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 1), 1): {'W': 0.0, 'E': 0.9039192068257528, 'stand': 0.09608079317424723, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 5), 1): {'W': 0.0, 'E': 0.46888797548040195, 'stand': 0.0, 'S': 0.531112024519598, 'N': 0.0}, ((3, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 2): {'E': 0.10314715091110309, 'stand': 0.896852849088897, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 3), 2): {'W': 0.830634770117159, 'E': 0.0, 'stand': 0.16936522988284097, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.6030794936250496, 'S': 0.0, 'N': 0.3969205063749504}, ((4, 1), (3, 3), 1): {'E': 0.5336652062866866, 'stand': 0.46633479371331343, 'N': 0.0}, ((3, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (4, 2), 1): {'W': 0.0, 'E': 0.15872966995747428, 'stand': 0.0, 'N': 0.8412703300425257}, ((3, 1), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 5), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (1, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 5), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (4, 5), 1): {'W': 0.0, 'E': 0.3133232373655449, 'stand': 0.0, 'N': 0.6866767626344551}, ((3, 4), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 2), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 4), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.11278939294558243, 'S': 0.8872106070544176, 'N': 0.0}, ((2, 4), (4, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (3, 2), 1): {'W': 0.0, 'E': 0.980656720405313, 'stand': 0.019343279594686957, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.7641211333505464, 'S': 0.23587886664945357, 'N': 0.0}, ((2, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 1), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 2): {'W': 0.6975754807845314, 'stand': 0.0, 'N': 0.3024245192154687}, ((1, 3), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3170345347171851, 'S': 0.0, 'N': 0.6829654652828149}, ((1, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.8481050337356782, 'S': 0.0, 'N': 0.15189496626432175}, ((3, 5), (1, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.6370754879987455, 'N': 0.36292451200125453}, ((4, 1), (2, 1), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 1): {'W': 0.0, 'E': 0.9219614840499428, 'stand': 0.0, 'S': 0.07803851595005715}, ((4, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 2): {'W': 0.05861471478537128, 'stand': 0.0, 'S': 0.0, 'N': 0.9413852852146287}, ((4, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 3), 1): {'W': 0.8695202452534768, 'E': 0.0, 'stand': 0.0, 'S': 0.13047975474652315, 'N': 0.0}, ((2, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 1), 1): {'E': 0.8658428563431005, 'stand': 0.0, 'S': 0.13415714365689943}, ((1, 3), (1, 1), 1): {'W': 0.0, 'E': 0.800480796517015, 'stand': 0.0, 'S': 0.19951920348298502}, ((2, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 4), 2): {'W': 0.0, 'E': 0.16667489870920268, 'stand': 0.7065409585518905, 'S': 0.1267841427389068, 'N': 0.0}, ((4, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 2): {'W': 0.632345634447879, 'E': 0.0, 'stand': 0.36765436555212105, 'N': 0.0}, ((3, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 1): {'W': 0.02822293754480787, 'stand': 0.0, 'N': 0.9717770624551921}, ((2, 1), (1, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (2, 5), 2): {'W': 0.0, 'E': 0.026278190115837652, 'stand': 0.0, 'S': 0.9737218098841623, 'N': 0.0}, ((3, 1), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 1), 1): {'W': 0.001577184818812416, 'E': 0.8708748740774583, 'stand': 0.0, 'N': 0.12754794110372927}, ((1, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (3, 3), 1): {'W': 0.0, 'E': 0.03298894900154162, 'stand': 0.6228351544076449, 'S': 0.3441758965908135, 'N': 0.0}, ((1, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 2), 1): {'E': 0.0, 'stand': 0.2582616056742508, 'S': 0.7417383943257492}, ((2, 3), (2, 5), 1): {'W': 0.0, 'E': 0.22487745724904484, 'stand': 0.0, 'S': 0.7751225427509552, 'N': 0.0}, ((4, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 1): {'W': 0.0, 'E': 0.014853596053771987, 'stand': 0.41920649882589567, 'S': 0.0, 'N': 0.5659399051203323}, ((2, 5), (1, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 3), (3, 4), 1): {'W': 0.0, 'E': 0.1699003557378655, 'stand': 0.7018287829792116, 'N': 0.1282708612829229}, ((1, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 5), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 5), 1): {'W': 0.0, 'E': 0.19183184391407782, 'stand': 0.0, 'S': 0.8081681560859222, 'N': 0.0}, ((2, 3), (3, 2), 1): {'W': 0.0, 'E': 0.8383975368810901, 'stand': 0.1616024631189099, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 1): {'W': 0.8567434419158114, 'E': 0.14325655808418855, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 3), 1): {'W': 0.8065082669149247, 'E': 0.03255547961178127, 'stand': 0.12490211372718063, 'N': 0.03603413974611338}, ((1, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.9309109445594409, 'N': 0.06908905544055911}, ((3, 2), (3, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 2): {'W': 0.03660331844588305, 'stand': 0.0, 'S': 0.963396681554117, 'N': 0.0}, ((2, 3), (2, 2), 1): {'W': 0.0, 'E': 0.9732034262985306, 'stand': 0.0, 'S': 0.0, 'N': 0.02679657370146937}, ((2, 1), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.6288138997938437, 'N': 0.3711861002061563}, ((1, 1), (2, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (4, 1), 1): {'W': 0.000766122879412734, 'E': 0.7069146706686925, 'stand': 0.0, 'N': 0.2923192064518948}, ((4, 2), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (2, 3), 1): {'W': 0.5270030989317034, 'E': 0.0, 'stand': 0.42342596582007574, 'S': 0.049570935248220836}, ((3, 1), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (1, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.1501617135113158, 'S': 0.8498382864886842, 'N': 0.0}, ((2, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 2), 2): {'W': 0.8009102745197332, 'E': 0.0, 'stand': 0.0, 'S': 0.19908972548026682, 'N': 0.0}, ((2, 2), (3, 1), 1): {'W': 0.0, 'E': 0.97580994057984, 'stand': 0.0, 'S': 0.024190059420159896, 'N': 0.0}, ((1, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (4, 1), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 2), 1): {'E': 0.0, 'stand': 0.26796364876410195, 'N': 0.732036351235898}, ((4, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 2), 2): {'W': 0.597092642860652, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.402907357139348}, ((3, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.26902986597979084, 'N': 0.7309701340202092}, ((2, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 5), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (2, 4), 1): {'E': 0.9599295111583055, 'stand': 0.04007048884169451, 'N': 0.0}, ((1, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (1, 3), 1): {'W': 0.6494857319398897, 'E': 0.0, 'stand': 0.0, 'S': 0.35051426806011027}, ((4, 4), (3, 4), 1): {'W': 0.8359747580752093, 'E': 0.1640252419247907, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (2, 1), 1): {'E': 0.864647229451816, 'stand': 0.0, 'S': 0.13535277054818398}, ((4, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 3), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 3), 1): {'W': 0.0, 'E': 0.9130263661117559, 'stand': 0.08697363388824408, 'S': 0.0}, ((3, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.25856130390485876, 'N': 0.7414386960951412}, ((4, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.043254031817317795, 'N': 0.9567459681826822}, ((4, 1), (1, 1), 1): {'E': 0.0657779805709312, 'stand': 0.0, 'N': 0.9342220194290688}, ((1, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (3, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (1, 5), 1): {'W': 0.0, 'E': 0.25020726533334214, 'stand': 0.0, 'S': 0.7497927346666579}, ((1, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 1): {'W': 0.0, 'E': 0.9305606641561402, 'stand': 0.0, 'S': 0.06235938052614932, 'N': 0.00707995531771039}, ((2, 5), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 5), 2): {'E': 0.8070895815684781, 'stand': 0.0, 'S': 0.19291041843152193, 'N': 0.0}, ((1, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (1, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.22333079854671256, 'S': 0.7766692014532874}, ((2, 1), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (4, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 2), 1): {'W': 0.0, 'E': 0.9559050978088363, 'stand': 0.04409490219116374, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 1), 1): {'W': 0.0, 'E': 0.8624308431773158, 'stand': 0.0, 'N': 0.13756915682268417}, ((1, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 5), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 1): {'E': 0.0, 'stand': 0.40122821193633296, 'S': 0.598771788063667}, ((4, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 2), 2): {'E': 0.11568695546357088, 'stand': 0.0, 'S': 0.8843130445364291}, ((1, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (4, 2), 2): {'W': 0.047202218513760635, 'stand': 0.9527977814862394, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 4), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (2, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 5), (4, 4), 1): {'W': 0.0, 'stand': 0.005508083892688198, 'N': 0.9944919161073118}, ((1, 5), (1, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (4, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (2, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 1): {'W': 0.010435722697802907, 'E': 0.97059160107459, 'stand': 0.0, 'S': 0.01897267622760712}, ((3, 4), (1, 4), 2): {'W': 0.8537460416421215, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.1462539583578785}, ((4, 2), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (4, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (1, 4), 1): {'W': 0.9255601069031106, 'E': 0.0, 'stand': 0.0, 'S': 0.07443989309688936}, ((4, 3), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 2), 2): {'W': 0.5599262930648217, 'E': 0.0, 'stand': 0.0, 'S': 0.44007370693517833}, ((4, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 5), 2): {'W': 0.0, 'E': 0.07111960292801656, 'stand': 0.0, 'S': 0.9288803970719834}, ((4, 5), (1, 1), 1): {'W': 0.008590305788235275, 'stand': 0.0, 'N': 0.9914096942117647}, ((1, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3191891875172296, 'S': 0.6808108124827704}, ((1, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 3), 2): {'W': 0.9063913991839417, 'E': 0.0, 'stand': 0.0, 'N': 0.09360860081605822}, ((3, 1), (1, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 2): {'W': 0.8759319055777035, 'stand': 0.0, 'N': 0.12406809442229645}, ((2, 1), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (2, 1), 1): {'W': 0.02117730814045815, 'E': 0.972178195253195, 'stand': 0.0, 'N': 0.006644496606346811}, ((2, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0626114896114085, 'S': 0.0, 'N': 0.9373885103885915}, ((1, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (2, 5), 1): {'W': 0.04291211233740114, 'E': 0.48895431862937333, 'stand': 0.46813356903322556, 'S': 0.0}, ((1, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (4, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.9177140834088338, 'N': 0.08228591659116619}, ((4, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (2, 4), 1): {'W': 0.0, 'E': 0.17263477210182454, 'stand': 0.76062116057055, 'S': 0.06674406732762549}, ((4, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.26026528599295673, 'S': 0.7397347140070433}, ((3, 3), (1, 5), 2): {'W': 0.0, 'E': 0.2543701867230741, 'stand': 0.0, 'S': 0.0, 'N': 0.7456298132769259}, ((1, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (1, 5), 2): {'W': 0.0, 'E': 0.19413225935220105, 'stand': 0.805867740647799, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 1): {'E': 0.3425401965492035, 'stand': 0.6574598034507966, 'S': 0.0}, ((3, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3836187652421087, 'S': 0.0, 'N': 0.6163812347578913}, ((4, 1), (2, 2), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.47079896726671755, 'S': 0.5292010327332825, 'N': 0.0}, ((4, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 2), 2): {'W': 0.2298184670778777, 'E': 0.0, 'stand': 0.7701815329221223, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 2), 1): {'W': 0.0, 'E': 0.8851795829191906, 'stand': 0.0, 'S': 0.11482041708080938}, ((2, 1), (3, 2), 2): {'E': 0.0076900895063171945, 'stand': 0.0, 'S': 0.9923099104936829, 'N': 0.0}, ((3, 1), (4, 2), 2): {'E': 0.7795688076417416, 'stand': 0.16255165491845103, 'S': 0.05787953743980732, 'N': 0.0}, ((3, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 2): {'W': 0.0, 'stand': 0.699832752668278, 'N': 0.30016724733172195}, ((3, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 3), 2): {'W': 0.15495992709847958, 'E': 0.0, 'stand': 0.8450400729015204, 'N': 0.0}, ((1, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.2555346416319606, 'S': 0.7444653583680394}, ((2, 2), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 1), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 2), 1): {'E': 0.7897597106901787, 'stand': 0.0, 'N': 0.2102402893098213}, ((4, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.8900566822471291, 'N': 0.10994331775287094}, ((3, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 1): {'W': 0.0, 'E': 0.11566836024780003, 'stand': 0.0, 'N': 0.8843316397522}, ((2, 1), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.6340184005299871, 'S': 0.3659815994700128, 'N': 0.0}, ((4, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (4, 5), 2): {'W': 0.0, 'E': 0.22335622780746922, 'stand': 0.0, 'S': 0.7766437721925308, 'N': 0.0}, ((1, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 1), (3, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 2): {'W': 0.0, 'E': 0.3219552353161973, 'stand': 0.5096622022513646, 'S': 0.0, 'N': 0.16838256243243813}, ((1, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (3, 2), 1): {'E': 0.12413860558595519, 'stand': 0.6751042347099356, 'N': 0.20075715970410915}, ((3, 1), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 5), 2): {'W': 0.0, 'E': 0.8576464506861561, 'stand': 0.0, 'S': 0.14235354931384386, 'N': 0.0}, ((1, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (2, 4), 2): {'W': 0.0, 'E': 0.5352057660170757, 'stand': 0.0, 'S': 0.46479423398292424, 'N': 0.0}, ((2, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 5), 1): {'W': 0.04010495222270089, 'stand': 0.9448568789610987, 'S': 0.015038168816200305}, ((2, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.31981588911699865, 'N': 0.6801841108830013}, ((1, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 5), 1): {'W': 0.0, 'E': 0.046418192186417184, 'stand': 0.0, 'S': 0.9535818078135828}, ((2, 5), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 3), 1): {'W': 0.0, 'E': 0.9913733767728328, 'stand': 0.0, 'N': 0.008626623227167262}, ((2, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 2): {'W': 0.0, 'E': 0.42981899587668676, 'stand': 0.5701810041233133, 'S': 0.0}, ((4, 3), (3, 1), 1): {'W': 0.0, 'E': 0.15685128914636892, 'stand': 0.0, 'N': 0.8431487108536311}, ((3, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 2), 1): {'W': 0.0, 'E': 0.8149632282889628, 'stand': 0.0, 'N': 0.18503677171103716}, ((2, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (3, 3), 1): {'W': 0.0, 'E': 0.6440529783495184, 'stand': 0.0, 'S': 0.3559470216504817}, ((1, 3), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (4, 2), 2): {'W': 0.6473159914185953, 'E': 0.0, 'stand': 0.3526840085814047, 'N': 0.0}, ((3, 1), (2, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (1, 1), 1): {'W': 0.0, 'E': 0.9444670753759747, 'stand': 0.0, 'N': 0.055532924624025204}, ((1, 5), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 1), 1): {'W': 0.0, 'E': 0.9226731084773082, 'stand': 0.07732689152269179, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (1, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (1, 3), 2): {'W': 0.0, 'E': 0.6098474205226269, 'stand': 0.39015257947737314, 'N': 0.0}, ((3, 2), (4, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.6179325859785816, 'S': 0.0, 'N': 0.38206741402141836}, ((3, 1), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.39296888513223016, 'S': 0.0, 'N': 0.6070311148677698}, ((2, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 3), 2): {'W': 0.8011071582816893, 'E': 0.0, 'stand': 0.0, 'S': 0.19889284171831073, 'N': 0.0}, ((4, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 1): {'W': 0.7234274104001137, 'stand': 0.2765725895998863, 'S': 0.0}, ((3, 1), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (2, 5), 1): {'E': 0.2781039842924584, 'stand': 0.7218960157075416, 'N': 0.0}, ((3, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (3, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.12039976063159996, 'S': 0.8796002393684, 'N': 0.0}, ((1, 4), (2, 1), 1): {'W': 0.0, 'E': 0.3522807142189217, 'stand': 0.0, 'S': 0.6477192857810783}, ((4, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 5), (2, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (4, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 1): {'W': 0.0, 'E': 0.5927724094139373, 'stand': 0.0, 'N': 0.4072275905860627}, ((1, 1), (2, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (1, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 2), 2): {'W': 0.18938420461213368, 'stand': 0.0, 'N': 0.8106157953878663}, ((4, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 3), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (4, 3), 1): {'W': 0.9778106681708731, 'E': 0.0, 'stand': 0.0, 'N': 0.022189331829126805}, ((3, 3), (3, 4), 2): {'W': 0.4500210628303295, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.5499789371696705}, ((2, 1), (4, 2), 1): {'W': 0.0, 'E': 0.9989063634655806, 'stand': 0.0010936365344194066, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 5), 1): {'W': 0.9203669844580299, 'stand': 0.07963301554197011, 'N': 0.0}, ((2, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 1): {'W': 0.0, 'E': 0.41165316174270594, 'stand': 0.0, 'N': 0.5883468382572941}, ((4, 4), (4, 2), 1): {'W': 0.0, 'E': 0.6151038773105821, 'stand': 0.0, 'N': 0.3848961226894178}, ((2, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 1): {'E': 0.6750136509711925, 'stand': 0.3249863490288075, 'N': 0.0}, ((3, 2), (3, 3), 2): {'W': 0.7319910951312754, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.2680089048687247}, ((2, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 3), 1): {'E': 0.05919803741058341, 'stand': 0.9408019625894166, 'N': 0.0}, ((2, 2), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 1): {'W': 0.0, 'E': 0.8044442595364323, 'stand': 0.0, 'N': 0.19555574046356777}, ((1, 1), (4, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (1, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.3834583374759517, 'N': 0.6165416625240483}, ((3, 4), (1, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 2): {'W': 0.5998802602338998, 'E': 0.0, 'stand': 0.40011973976610016, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 5), 2): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 4), 1): {'W': 0.15725005526112623, 'E': 0.8427499447388738, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 2), 1): {'E': 0.0, 'stand': 0.8467726098728309, 'S': 0.15322739012716913}, ((4, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}}

ecart entre new\_V et val de littman :

(0.21796032082940123, 21.57442612149567)

ecart entre val de player 0 trouve par shpaley et val de player 0 trouve par littman

(0.38927602764165714, 53.83291410667564)

Petit Analyse :

1. Shapley converge assez vite mais Littman avec un millions itération prendre trop tamps

2. On peur voir que clairement écart entre valeur de jeu trouve par Littman contre player random et valeur de jeu retourné par fonction « new\_V\_and\_pi » et aussi velue de jeu trouvé pour player 0 par Shapley a diminué énormément .c’est la preuve pour dire que si on veut que Littman converge aussi vers équilibre de Nash il faut apprendre les valeur de jeu contre un player random. Mais comme on peut voir encore on a un écart mac 0.21 et somme des écarts est 21.57 ce veut dire que on a besoin bcp lus que un millions itération pour converger complément

3. J’ai vérifier complément exactement pour 384 état en total et 842 action en total , probable de ces action en stratégie mixte trouvé par Shapley et par Littman n’est pas la meme chose

apprentissage pour player 0 , contre optimal policy trouve pour palyer 1 avec algorithme Shapley. Fonction utilisé pour choisir action de player 1 à chaque step est suivant :

def choiceActOfPlayerType3(game,s,pi\_playerB):

a = pi\_playerB.get(s)

rnd = np.random.rand()

tmp = 0

for s, p in a.items():

tmp += p

if tmp >= rnd:

return s

Run Littman with 1000000 iteration

learnin rate at the end of the run : 0.009999953948213411

Time Littman : 1480.093512058258

Game value by Littman pour player 0:

{((2, 2), (1, 2), 2): 0.9915272935856937, ((2, 5), (2, 1), 2): -1.0221411439162256, ((1, 4), (4, 1), 1): 0.7193302436020922, ((1, 5), (2, 3), 1): 0.7389633238923892, ((3, 1), (4, 1), 2): 0.9110107425264534, ((3, 5), (1, 3), 1): 1, ((1, 1), (1, 2), 2): -0.3363873704070877, ((3, 1), (1, 2), 2): 0.7697105433488367, ((1, 2), (3, 4), 2): -0.32477407301756217, ((1, 4), (4, 5), 1): 1, ((1, 5), (4, 3), 1): 1, ((2, 1), (4, 4), 1): 1, ((3, 5), (3, 2), 1): 1.0, ((3, 2), (4, 3), 1): 0.11255806942556384, ((2, 1), (2, 4), 2): -0.3043746283123611, ((4, 4), (4, 1), 2): 1.0, ((2, 2), (1, 1), 2): 1.0, ((4, 3), (4, 4), 2): -0.1982553760482503, ((2, 3), (2, 2), 2): -0.9353071671882353, ((1, 2), (1, 4), 2): 1, ((1, 4), (2, 2), 1): 0.6525571000790065, ((4, 3), (2, 5), 2): -0.2929986695751713, ((1, 4), (4, 2), 1): 1, ((2, 5), (1, 4), 2): 1, ((3, 4), (3, 3), 2): -0.8462753486904151, ((2, 3), (3, 5), 2): -0.1851884133406325, ((4, 3), (3, 3), 1): 0.07893147216798484, ((4, 5), (1, 4), 1): 1.0, ((2, 2), (2, 1), 1): 0.6185400139819576, ((4, 5), (2, 4), 1): 0.8268908020338337, ((3, 4), (2, 3), 1): 0.8415452979940495, ((1, 5), (4, 1), 2): 1, ((1, 1), (2, 3), 1): 0.0718405376579788, ((2, 4), (1, 5), 2): 1, ((4, 2), (3, 4), 2): -0.2797067887933583, ((2, 3), (4, 3), 2): 1, ((2, 3), (3, 4), 1): 0.3131418211870889, ((1, 5), (1, 2), 2): 1, ((2, 4), (1, 1), 2): 1, ((2, 1), (4, 5), 2): 1, ((1, 1), (1, 4), 2): 1, ((1, 1), (4, 3), 2): 1, ((2, 3), (4, 1), 1): 0.719230615797779, ((3, 5), (2, 5), 2): -0.6673774525891525, ((3, 2), (3, 4), 2): -0.21843154653154642, ((1, 4), (3, 2), 2): -0.9533844736958459, ((2, 1), (1, 5), 2): 1, ((2, 3), (4, 4), 2): 1, ((2, 1), (1, 2), 2): 0.9957565734900736, ((4, 5), (2, 1), 2): -1.095724397879992, ((2, 4), (2, 3), 1): 0.865407562867546, ((3, 5), (1, 1), 2): 1, ((3, 3), (4, 5), 2): 1, ((1, 5), (2, 2), 1): 0.8407110812291316, ((2, 4), (4, 4), 2): 1, ((2, 5), (1, 3), 2): 1.0, ((2, 4), (3, 3), 2): -0.8276936760545174, ((2, 4), (1, 4), 2): 0.9837368750017608, ((2, 3), (1, 1), 1): 0.7416325776578927, ((4, 1), (4, 4), 1): 1, ((2, 4), (4, 3), 2): 1, ((3, 3), (4, 1), 2): 1.0, ((2, 5), (3, 1), 1): 0.9688305774740342, ((4, 1), (2, 2), 1): 0.08216070649829267, ((3, 1), (4, 3), 1): 1, ((4, 4), (3, 5), 1): 0.08755933852916321, ((3, 1), (1, 1), 2): 1, ((2, 2), (2, 5), 2): -0.2032493776031336, ((3, 3), (1, 4), 1): 1.0, ((3, 4), (3, 2), 1): 0.8394957039685329, ((1, 2), (2, 4), 2): -0.2797373435668318, ((2, 4), (3, 5), 2): -0.26490410676787784, ((1, 2), (2, 1), 1): 0.030759009206226262, ((2, 5), (2, 4), 1): 0.9968008702142158, ((4, 2), (4, 1), 2): -0.22613345978960847, ((4, 2), (3, 5), 2): 1, ((3, 4), (4, 2), 2): 1, ((1, 3), (3, 2), 2): -0.917041011777808, ((4, 5), (4, 3), 1): 1, ((1, 1), (3, 1), 2): -1.0219670206820923, ((1, 3), (4, 5), 2): 1, ((1, 4), (3, 3), 2): -0.8466850759247537, ((4, 3), (1, 1), 1): 0.6984080637299087, ((2, 3), (3, 1), 2): -1.0017149034582145, ((2, 5), (2, 1), 1): 0.9947575363255311, ((3, 2), (2, 4), 2): -0.23279537006072293, ((1, 5), (1, 3), 2): 1, ((1, 2), (3, 1), 1): 0.6729988974227851, ((1, 2), (3, 4), 1): 0.11585371323830106, ((4, 2), (2, 3), 1): 0.11134952026148838, ((1, 5), (4, 3), 2): 1, ((2, 1), (4, 4), 2): 1, ((4, 3), (1, 4), 2): 1, ((4, 1), (3, 2), 2): -0.4247794148040952, ((2, 3), (4, 2), 1): 1, ((2, 1), (2, 5), 2): 1, ((2, 5), (3, 3), 2): -0.8531373985631862, ((1, 2), (4, 3), 2): 1, ((1, 4), (2, 2), 2): -0.9364848720374312, ((2, 4), (2, 3), 2): -0.8476710407374196, ((2, 2), (3, 4), 2): -0.23448806660752278, ((4, 1), (1, 4), 1): 1, ((2, 1), (2, 3), 2): -0.27142560113414677, ((4, 3), (2, 5), 1): 0.19985985111030138, ((1, 4), (3, 4), 1): 0.03901544021060199, ((3, 4), (4, 5), 2): 1, ((4, 1), (4, 3), 1): 0.056710381686518464, ((2, 5), (4, 5), 2): 1, ((2, 5), (1, 4), 1): 1.0, ((3, 4), (1, 5), 1): 1, ((1, 5), (1, 1), 2): 1, ((3, 5), (3, 3), 2): -0.8523385272028932, ((3, 4), (2, 5), 2): -0.15863893833746817, ((3, 2), (1, 1), 1): 0.7183027331453791, ((4, 1), (3, 5), 1): 1, ((3, 2), (2, 3), 2): -0.34667245660360957, ((4, 1), (3, 4), 2): 1, ((2, 3), (2, 4), 1): 0.22336997643996642, ((3, 2), (4, 5), 1): 1, ((3, 5), (2, 1), 1): 0.8846674733251153, ((1, 5), (4, 2), 1): 1, ((1, 4), (1, 3), 1): 1, ((4, 4), (1, 4), 2): 1, ((1, 4), (3, 2), 1): 0.774824558929807, ((1, 3), (2, 1), 1): 0.6163763239397392, ((2, 4), (3, 3), 1): 0.885385980671964, ((3, 1), (2, 1), 1): 0.6589300060563227, ((4, 4), (1, 5), 2): 1, ((1, 5), (4, 5), 1): 1.0, ((3, 2), (1, 2), 2): 1, ((3, 5), (1, 1), 1): 0.7442884629555389, ((4, 5), (3, 2), 1): 0.7735135632843608, ((3, 3), (1, 1), 2): 1, ((2, 4), (4, 4), 1): 0.9422398915489089, ((4, 4), (3, 3), 2): -0.8346585141105347, ((2, 3), (3, 4), 2): -0.31932683136312906, ((2, 3), (1, 1), 2): 1.0, ((4, 4), (1, 2), 1): 1, ((3, 4), (4, 1), 2): 1.0, ((1, 1), (1, 3), 2): 1.0, ((1, 2), (4, 4), 2): 1, ((4, 3), (2, 4), 1): 0.19428851352162532, ((2, 5), (3, 1), 2): -0.9931390646718986, ((4, 4), (4, 3), 2): 1, ((4, 5), (4, 3), 2): 1.0, ((2, 3), (1, 4), 2): 1, ((3, 1), (1, 1), 1): 0.7655764319726384, ((2, 2), (3, 5), 1): 0.19409134733175862, ((1, 3), (4, 3), 1): 1, ((3, 2), (4, 3), 2): 1.0, ((3, 4), (2, 1), 2): -0.9847078738952612, ((3, 3), (1, 4), 2): 1, ((1, 1), (3, 3), 1): 0.059276592914549016, ((3, 1), (2, 3), 1): 0.12428831658612308, ((2, 5), (1, 2), 1): 1, ((2, 1), (4, 1), 1): 0.7621979323922703, ((2, 4), (3, 5), 1): 0.36227357399755333, ((3, 1), (1, 5), 2): 1, ((4, 3), (2, 1), 2): -1.0105265303825313, ((2, 5), (4, 1), 1): 0.7484570731594332, ((2, 3), (3, 1), 1): 0.7606819544820957, ((3, 1), (3, 3), 2): -0.27585943080952235, ((4, 5), (2, 5), 1): 0.0622992739050925, ((2, 3), (1, 3), 2): 1.0, ((3, 1), (3, 2), 1): 0.09736740544308958, ((4, 1), (3, 3), 1): 0.07320467218857182, ((3, 4), (1, 4), 1): 0.9961879406532083, ((1, 4), (2, 3), 2): -0.853033105418926, ((4, 2), (1, 1), 1): 0.6964043975324109, ((4, 3), (4, 2), 1): 1, ((3, 1), (1, 3), 1): 1, ((4, 1), (1, 4), 2): 1, ((4, 1), (1, 5), 1): 1, ((4, 3), (1, 2), 2): 1, ((3, 3), (2, 1), 1): 0.6362452796503106, ((1, 5), (2, 4), 2): -0.7481400239040994, ((2, 5), (2, 2), 1): 0.9462625150026167, ((1, 2), (2, 2), 1): 0.0196019443835508, ((1, 5), (1, 3), 1): 1, ((3, 4), (3, 1), 2): -1.0781169371712866, ((3, 4), (1, 2), 2): 1, ((4, 1), (2, 5), 2): 1, ((3, 3), (3, 5), 2): -0.1660689119107398, ((1, 4), (1, 1), 2): 1.0, ((2, 5), (3, 4), 1): 0.9590029473445506, ((4, 3), (1, 4), 1): 1, ((1, 2), (2, 5), 1): 0.08000030471155788, ((1, 5), (3, 4), 1): 0.794679393502851, ((2, 3), (4, 2), 2): 1, ((1, 3), (2, 2), 1): 0.018742651572103138, ((3, 2), (3, 5), 1): 0.19809323106275492, ((2, 1), (2, 5), 1): 0.08688936435405292, ((1, 5), (2, 1), 1): 0.7344537983734345, ((4, 5), (1, 2), 1): 1, ((2, 4), (3, 4), 1): 0.8644972676500593, ((3, 2), (2, 1), 2): -1.0233077344872938, ((4, 4), (2, 1), 2): -1.0199424858086095, ((4, 2), (4, 5), 1): 1, ((3, 4), (4, 5), 1): 0.5581383692895042, ((1, 1), (4, 5), 1): 1, ((3, 4), (1, 5), 2): 1, ((1, 1), (4, 2), 1): 1, ((1, 4), (1, 2), 1): 1, ((1, 2), (4, 2), 1): 1, ((4, 2), (2, 1), 1): 0.6748568908404411, ((3, 1), (2, 4), 1): 0.10408614569396046, ((2, 4), (4, 2), 2): 1, ((3, 5), (3, 3), 1): 0.959400391983875, ((1, 1), (2, 4), 2): 1, ((1, 3), (4, 4), 1): 1, ((2, 2), (3, 2), 1): 0.6933174609578918, ((1, 2), (2, 3), 2): -0.34888553514701504, ((4, 1), (3, 1), 1): 0.025184277411379085, ((4, 1), (1, 3), 2): 1, ((3, 3), (2, 3), 1): 0.7520210906965661, ((2, 3), (2, 4), 2): -0.20708076505728712, ((2, 1), (4, 3), 2): 1.0, ((1, 5), (3, 3), 2): -0.8500525957823684, ((2, 4), (3, 2), 1): 0.8612918752529407, ((3, 3), (1, 5), 1): 1, ((4, 1), (1, 1), 2): 1, ((4, 5), (1, 4), 2): 1, ((1, 3), (1, 1), 2): 1, ((2, 3), (3, 3), 1): 0.7819692645096609, ((3, 3), (3, 4), 1): 0.2214525283097309, ((1, 4), (1, 3), 2): 1.0, ((3, 4), (3, 5), 2): -0.163655444985906, ((3, 5), (1, 3), 2): 1, ((4, 1), (2, 1), 2): -1.0105583675723864, ((1, 3), (1, 2), 1): 1, ((4, 2), (1, 4), 1): 1, ((1, 5), (3, 4), 2): -0.7694293684211069, ((1, 4), (3, 1), 1): 0.7498974005053463, ((3, 5), (4, 3), 2): 1.0, ((3, 5), (1, 4), 2): 1, ((4, 4), (1, 5), 1): 1.0, ((3, 2), (4, 2), 1): 1, ((3, 2), (3, 3), 1): 0.13849015387745406, ((2, 4), (2, 2), 2): -0.9356587459234228, ((4, 4), (3, 3), 1): 0.13859223216509822, ((3, 2), (1, 5), 1): 1, ((1, 5), (2, 1), 2): -1.0195567810107342, ((3, 1), (3, 5), 1): 0.07649122212286977, ((1, 3), (3, 1), 2): -1.0131619643675338, ((4, 3), (1, 5), 2): 1, ((3, 4), (4, 1), 1): 0.7349582785570006, ((1, 1), (4, 1), 1): 0.7100916209836037, ((1, 3), (1, 1), 1): 0.7347020740045117, ((2, 2), (4, 3), 2): 1, ((3, 4), (1, 3), 1): 1, ((3, 3), (4, 4), 2): 1, ((4, 4), (2, 3), 2): -0.8390300938973122, ((3, 5), (3, 1), 2): -1.1073516112516757, ((4, 3), (3, 5), 2): -0.19367226721143416, ((3, 4), (4, 4), 2): 1.0, ((4, 2), (1, 2), 2): 1, ((3, 1), (2, 3), 2): -0.2936149099110628, ((4, 5), (4, 2), 1): 1, ((2, 1), (1, 1), 2): 0.9135388893131937, ((2, 5), (2, 3), 2): -0.8268587525203294, ((2, 4), (2, 5), 2): -0.16023888728451013, ((3, 1), (1, 5), 1): 1, ((2, 5), (1, 5), 2): 1, ((4, 3), (2, 1), 1): 0.6355764907020499, ((1, 1), (3, 4), 2): 1, ((4, 1), (4, 2), 2): -0.34366489880564716, ((2, 2), (1, 3), 1): 0.1296041320017465, ((3, 1), (3, 3), 1): 0.08178743378735384, ((1, 3), (4, 1), 1): 0.692224035534766, ((4, 3), (3, 5), 1): 0.19838962603111657, ((3, 1), (2, 5), 2): 1, ((1, 1), (1, 2), 1): 0.07291094211716834, ((2, 3), (2, 5), 1): 0.21974337141171935, ((4, 1), (3, 3), 2): -0.44785903926987974, ((3, 3), (3, 5), 1): 0.22385942294254005, ((2, 5), (1, 1), 2): 1, ((4, 3), (3, 4), 1): 0.06216419143462894, ((1, 3), (2, 5), 1): 0.20062742494130562, ((3, 2), (4, 4), 1): 1, ((4, 1), (1, 5), 2): 1, ((3, 2), (2, 5), 2): -0.2006619005444049, ((3, 3), (2, 1), 2): -1.0384896196395497, ((1, 4), (4, 1), 2): 1, ((2, 4), (2, 5), 1): 0.290660208511221, ((2, 3), (3, 2), 1): 0.7707326715716163, ((2, 5), (2, 2), 2): -0.9070860343150151, ((3, 5), (3, 4), 1): 0.984983990401376, ((4, 3), (2, 3), 1): 0.04037408754037928, ((3, 4), (1, 2), 1): 1, ((3, 5), (2, 5), 1): 0.9874844204730594, ((4, 2), (4, 4), 1): 0.10914439969733332, ((1, 4), (4, 5), 2): 1, ((4, 2), (3, 3), 1): 0.028258363669014082, ((1, 4), (4, 3), 2): 1, ((2, 1), (2, 4), 1): 0.12779336907481564, ((3, 2), (3, 5), 2): -0.19222632106852103, ((2, 5), (4, 2), 2): 1.0, ((2, 3), (2, 2), 1): 0.7327770604019196, ((2, 1), (3, 5), 1): 1, ((3, 1), (4, 2), 1): 0.09762828028281692, ((1, 1), (2, 5), 1): 1, ((1, 2), (3, 3), 1): 0.12271989986415821, ((1, 3), (2, 3), 1): 0.021596566015110577, ((1, 2), (4, 2), 2): 1, ((4, 2), (4, 1), 1): 0.7652169546940524, ((4, 2), (2, 1), 2): -1.0396965919520553, ((3, 5), (2, 4), 2): -0.7512093491860021, ((1, 3), (1, 5), 2): 1, ((3, 5), (4, 2), 1): 1, ((2, 4), (4, 1), 2): 1, ((1, 3), (2, 2), 2): -0.9514328269775378, ((1, 2), (2, 3), 1): 0.017780380118136853, ((3, 1), (4, 5), 1): 1, ((4, 2), (3, 4), 1): 0.12370460972616448, ((1, 5), (3, 1), 2): -1.0424390240264674, ((2, 4), (4, 5), 2): 1, ((1, 5), (1, 2), 1): 1, ((2, 1), (4, 3), 1): 1, ((3, 1), (2, 2), 2): -0.3769895167801646, ((2, 4), (3, 2), 2): -0.9271746445206765, ((3, 5), (4, 4), 1): 1.0, ((4, 5), (1, 5), 1): 1, ((4, 1), (1, 2), 2): 1, ((3, 2), (1, 4), 2): 1, ((3, 3), (1, 2), 2): 1, ((2, 3), (3, 3), 2): -0.8155594765155092, ((4, 5), (3, 3), 1): 0.7478614783690143, ((3, 3), (4, 2), 1): 1, ((2, 2), (4, 2), 2): 1.0, ((2, 2), (3, 1), 1): 0.6330139848811314, ((1, 3), (1, 2), 2): 1, ((4, 5), (4, 1), 2): 1.0, ((3, 1), (1, 4), 1): 1, ((4, 2), (1, 4), 2): 1, ((2, 1), (1, 5), 1): 1, ((1, 4), (3, 1), 2): -1.073201913554793, ((2, 3), (4, 4), 1): 1.0, ((4, 1), (4, 2), 1): 0.07013585412885776, ((4, 4), (4, 5), 1): 0.2081478878541867, ((3, 3), (4, 5), 1): 1, ((3, 1), (1, 2), 1): 1, ((3, 3), (2, 5), 1): 0.263043220468142, ((2, 1), (3, 3), 2): -0.29112840000331536, ((4, 4), (2, 5), 2): -0.6647847207240494, ((4, 2), (3, 2), 1): 0.0257942834176096, ((2, 5), (3, 3), 1): 0.9723283793649622, ((4, 3), (4, 1), 1): 0.7883807692970108, ((3, 3), (4, 1), 1): 0.7541734807963065, ((1, 4), (1, 5), 2): -0.06943751900405973, ((2, 4), (1, 2), 2): 1.0, ((3, 3), (4, 4), 1): 0.14130772886841686, ((1, 2), (4, 1), 2): 1, ((3, 3), (2, 4), 1): 0.27771898021147023, ((2, 1), (3, 1), 1): 0.5880182479197683, ((4, 3), (4, 5), 1): 0.1729070730056956, ((2, 2), (2, 5), 1): 0.19948913183989947, ((2, 2), (4, 5), 1): 1, ((1, 1), (1, 5), 1): 1, ((2, 4), (2, 1), 1): 0.7966580245674417, ((3, 4), (3, 2), 2): -0.955388366712036, ((4, 1), (2, 4), 2): 1, ((1, 2), (2, 1), 2): -1.0371552375515642, ((1, 5), (1, 4), 1): 1, ((4, 1), (2, 4), 1): 1, ((1, 3), (4, 1), 2): 1, ((3, 2), (3, 1), 1): 0.638816725776122, ((1, 3), (3, 2), 1): 0.666854531180856, ((4, 4), (1, 3), 1): 1, ((3, 5), (4, 5), 1): 0.9575490430815858, ((1, 4), (3, 3), 1): 0.7298113360973606, ((1, 2), (1, 3), 1): 0.12265730903585269, ((4, 4), (3, 4), 1): 0.09602295682206333, ((3, 2), (2, 4), 1): 0.1991768629741929, ((3, 5), (3, 4), 2): -0.7689761777373667, ((1, 1), (2, 1), 1): 0.023741732986275636, ((4, 5), (3, 2), 2): -0.9699991145743961, ((3, 2), (4, 1), 1): 0.77241118579983, ((3, 2), (2, 1), 1): 0.6432568640748972, ((3, 3), (1, 3), 2): 1, ((2, 3), (3, 5), 1): 0.2630743962972418, ((1, 3), (3, 4), 1): 0.19231822810344099, ((1, 4), (4, 3), 1): 1, ((3, 5), (2, 2), 1): 0.9535370221177885, ((4, 4), (4, 3), 1): 1, ((2, 1), (1, 3), 1): 1, ((4, 2), (2, 5), 2): 1, ((2, 1), (3, 5), 2): 1, ((4, 5), (3, 1), 1): 0.6891521636803241, ((4, 1), (1, 1), 1): 0.7093851596588459, ((1, 4), (3, 4), 2): -0.7484386611474912, ((2, 2), (4, 4), 1): 1, ((4, 1), (4, 3), 2): 1, ((1, 2), (3, 3), 2): -0.8134076718871888, ((2, 4), (3, 1), 2): -1.0474468762995426, ((2, 1), (4, 2), 2): 0.26392864706109026, ((3, 5), (2, 4), 1): 0.9829772800335032, ((3, 1), (4, 4), 1): 1, ((1, 3), (1, 5), 1): 0.14501785979044857, ((1, 4), (2, 5), 2): -0.3098410934285747, ((4, 5), (3, 5), 2): -0.6750243506439766, ((2, 3), (2, 1), 1): 0.6076529124463237, ((2, 5), (4, 4), 1): 1.0, ((3, 1), (4, 5), 2): 1, ((1, 3), (2, 4), 2): -0.33710188858978024, ((2, 2), (1, 4), 2): 1, ((1, 5), (3, 1), 1): 0.8325577769703227, ((2, 1), (3, 4), 1): 0.11202975416850496, ((3, 5), (1, 5), 2): 1, ((4, 5), (1, 5), 2): 1, ((3, 2), (4, 5), 2): 1, ((3, 2), (1, 4), 1): 1.0, ((2, 3), (1, 5), 1): 1, ((1, 5), (4, 2), 2): 1, ((4, 5), (3, 3), 2): -0.8372193647644539, ((1, 1), (3, 5), 2): 1, ((2, 2), (4, 2), 1): 1, ((4, 4), (1, 4), 1): 1.0, ((2, 2), (3, 3), 2): -0.36096270122817736, ((4, 5), (4, 1), 1): 0.7777622245977638, ((4, 4), (3, 1), 1): 0.7179011547942747, ((1, 2), (3, 5), 2): 1, ((4, 4), (2, 3), 1): 0.7593879486674215, ((4, 2), (1, 5), 1): 1, ((1, 5), (4, 1), 1): 0.7191141500236764, ((3, 4), (2, 4), 1): 0.8726051221390645, ((1, 2), (3, 2), 1): 0.031005101076809115, ((1, 1), (2, 5), 2): 1, ((2, 3), (4, 1), 2): 1, ((4, 4), (4, 5), 2): -0.05174741894466634, ((3, 3), (2, 5), 2): -0.18606455895206503, ((1, 3), (4, 2), 2): 1, ((4, 2), (2, 4), 1): 0.11234780339159536, ((3, 5), (2, 3), 1): 0.9541393082652201, ((1, 1), (1, 3), 1): 0.054998255696445376, ((4, 2), (3, 2), 2): -0.9313759324103618, ((1, 1), (4, 2), 2): 1, ((1, 2), (4, 4), 1): 1, ((4, 4), (2, 2), 2): -0.9216742977244241, ((4, 2), (4, 4), 2): 1, ((1, 2), (4, 1), 1): 0.6847751092237218, ((3, 5), (4, 2), 2): 1.0, ((1, 4), (2, 4), 2): -0.7525789507152723, ((2, 2), (3, 5), 2): -0.20444096171827966, ((2, 1), (3, 1), 2): -1.0064598061849253, ((1, 1), (4, 4), 2): 1, ((3, 4), (2, 2), 2): -0.9242407930482551, ((2, 2), (4, 5), 2): 1, ((1, 1), (3, 3), 2): -0.3588845436280729, ((2, 4), (2, 1), 2): -1.0417970021890388, ((2, 5), (1, 2), 2): 1, ((2, 1), (2, 2), 1): 0.09523199978452641, ((1, 5), (2, 3), 2): -0.8313588349675614, ((4, 2), (2, 2), 2): -0.9164495002680402, ((4, 5), (4, 4), 1): 1, ((1, 5), (1, 4), 2): 1, ((2, 5), (4, 1), 2): 1.0, ((3, 4), (1, 1), 2): 1.0, ((3, 2), (3, 1), 2): -1.059915846328104, ((3, 5), (3, 2), 2): -0.9489320680259546, ((4, 5), (2, 5), 2): 1, ((2, 3), (1, 3), 1): 1.0, ((3, 5), (4, 5), 2): 0.9983798993360751, ((1, 2), (1, 1), 1): 0.7390239902712166, ((3, 4), (1, 4), 2): 1, ((4, 2), (1, 1), 2): 1, ((2, 5), (4, 3), 2): 1, ((1, 2), (1, 4), 1): 0.10679337224593578, ((4, 3), (1, 5), 1): 1.0, ((1, 4), (4, 2), 2): 1, ((4, 5), (2, 2), 2): -0.9229370736985706, ((1, 2), (4, 5), 2): 1, ((4, 5), (1, 1), 1): 0.7366468701170192, ((1, 1), (3, 1), 1): 0.29104505805994724, ((3, 4), (3, 1), 1): 0.7642543044820423, ((3, 3), (3, 2), 1): 0.7457772939875169, ((4, 3), (3, 3), 2): -0.8347439926282917, ((1, 4), (1, 1), 1): 0.7432950554923708, ((1, 5), (4, 4), 2): 1, ((2, 5), (3, 4), 2): -0.7480919049980416, ((3, 3), (1, 3), 1): 1, ((2, 2), (2, 1), 2): -1.0462652990476389, ((1, 3), (3, 4), 2): -0.7361479758084354, ((1, 3), (3, 5), 1): 0.19347402693651028, ((1, 2), (2, 5), 2): 1, ((1, 5), (3, 5), 2): 1, ((1, 1), (2, 3), 2): -0.5118986151250439, ((4, 2), (1, 3), 2): 1, ((3, 1), (1, 4), 2): 1, ((2, 1), (1, 3), 2): 1.0, ((2, 3), (4, 3), 1): 1.0, ((4, 5), (4, 4), 2): 1.0, ((2, 1), (4, 5), 1): 1, ((3, 2), (1, 3), 1): 1, ((1, 4), (4, 4), 1): 1.0, ((4, 4), (2, 1), 1): 0.6538138168409101, ((2, 3), (1, 2), 2): 1, ((4, 5), (1, 3), 1): 1, ((2, 4), (3, 1), 1): 0.8568300992868532, ((3, 2), (3, 4), 1): 0.14393983278771963, ((1, 3), (3, 3), 2): -0.8263536447235772, ((4, 4), (3, 2), 1): 0.6759566092505073, ((1, 4), (2, 5), 1): 0.04929344964015753, ((1, 3), (4, 4), 2): 1, ((2, 4), (1, 3), 2): 1.0, ((2, 1), (1, 2), 1): 0.05254057169389549, ((2, 5), (4, 4), 2): 1.0, ((4, 5), (2, 1), 1): 0.6724941536904679, ((1, 3), (2, 4), 1): 0.021514228712923713, ((4, 4), (1, 1), 2): 1, ((3, 2), (2, 3), 1): 0.15523891625992786, ((4, 1), (1, 3), 1): 1, ((3, 3), (2, 2), 2): -0.905495872778753, ((3, 5), (1, 5), 1): 1.0, ((1, 5), (3, 2), 1): 0.856179211844456, ((3, 3), (1, 5), 2): 1, ((1, 2), (1, 3), 2): -0.2592398508416961, ((2, 3), (1, 5), 2): 1, ((3, 4), (4, 3), 1): 1, ((4, 1), (4, 4), 2): 1, ((1, 1), (3, 5), 1): 1, ((3, 4), (3, 5), 1): 0.29105956420765394, ((4, 1), (2, 2), 2): -0.9077117249350182, ((2, 2), (3, 3), 1): 0.24398082657914935, ((4, 2), (3, 3), 2): -0.38477439180812834, ((3, 5), (4, 3), 1): 1, ((1, 2), (3, 5), 1): 1.0, ((3, 2), (4, 2), 2): 0.9877318080749802, ((3, 5), (1, 4), 1): 1.0, ((3, 4), (2, 4), 2): -0.7404130147496641, ((4, 3), (1, 3), 1): 1, ((3, 1), (3, 4), 1): 0.12292186342312092, ((4, 5), (2, 3), 2): -0.8398380760850568, ((2, 5), (2, 4), 2): -0.7492906012181941, ((1, 3), (4, 2), 1): 1, ((2, 1), (3, 2), 2): -0.3683535719205557, ((3, 1), (4, 2), 2): 0.9881484724098901, ((3, 5), (2, 3), 2): -0.8351344887434681, ((2, 5), (3, 5), 2): -0.665040833586234, ((4, 5), (1, 3), 2): 1, ((3, 1), (3, 5), 2): 1, ((4, 4), (1, 3), 2): 1, ((1, 4), (1, 2), 2): 1.0, ((2, 2), (3, 4), 1): 0.20018650339856112, ((2, 2), (4, 3), 1): 1, ((4, 5), (3, 4), 2): -0.7649811895168354, ((4, 5), (1, 1), 2): 1.0, ((2, 4), (1, 5), 1): 0.2811983278644052, ((4, 1), (1, 2), 1): 1, ((4, 4), (1, 2), 2): 1.0, ((2, 4), (1, 1), 1): 0.7366818766109421, ((4, 3), (1, 1), 2): 1, ((1, 1), (4, 4), 1): 1, ((2, 2), (2, 3), 1): 0.1459075864129592, ((3, 4), (4, 4), 1): 0.9117949839831787, ((4, 2), (1, 2), 1): 1, ((2, 1), (1, 1), 1): 0.8317089942869613, ((2, 1), (2, 2), 2): -0.32352822473749604, ((4, 2), (2, 2), 1): 0.03694028486419403, ((2, 3), (4, 5), 2): 1, ((1, 2), (3, 1), 2): -1.039761735200924, ((2, 5), (1, 5), 1): 1.0, ((1, 3), (2, 3), 2): -0.8473842985683504, ((1, 1), (3, 4), 1): 1, ((3, 1), (2, 4), 2): -0.2760006354918185, ((2, 2), (1, 3), 2): 1.0, ((1, 4), (3, 5), 1): 0.2547065774385713, ((4, 2), (2, 3), 2): -0.8173549126768801, ((4, 1), (3, 2), 1): 0.016853194837464325, ((3, 1), (2, 5), 1): 1, ((2, 3), (2, 5), 2): -0.16554554088850548, ((1, 2), (1, 1), 2): -0.3882020209209349, ((2, 2), (2, 4), 2): -0.21505431839859723, ((2, 5), (1, 1), 1): 0.7378323351714937, ((1, 4), (2, 1), 2): -1.0317041823597566, ((4, 3), (3, 4), 2): -0.34469631672884654, ((2, 5), (4, 3), 1): 1, ((1, 2), (4, 3), 1): 1, ((2, 4), (4, 3), 1): 1, ((1, 5), (2, 5), 1): 0.029841879463698914, ((2, 1), (2, 3), 1): 0.08038108235684498, ((1, 2), (1, 5), 1): 1, ((2, 3), (3, 2), 2): -0.9183181867929944, ((1, 2), (4, 5), 1): 1, ((2, 5), (4, 5), 1): 0.9859090147650783, ((4, 3), (2, 3), 2): -0.8229173832259269, ((3, 3), (3, 2), 2): -0.9418394721727531, ((1, 1), (3, 2), 1): 0.07951984471043569, ((1, 5), (1, 1), 1): 0.7350408357836214, ((3, 5), (1, 2), 1): 1, ((1, 5), (4, 4), 1): 1.0, ((3, 1), (4, 3), 2): 1.0, ((4, 4), (2, 4), 2): -0.7459388695271029, ((4, 5), (2, 2), 1): 0.8019630784455339, ((3, 4), (2, 5), 1): 0.3333989251626554, ((1, 5), (3, 5), 1): 0.020882571095176806, ((3, 2), (1, 1), 2): 1.0, ((4, 2), (1, 3), 1): 1, ((2, 2), (1, 1), 1): 0.7601027496517989, ((2, 5), (4, 2), 1): 1, ((3, 2), (1, 3), 2): 1, ((4, 2), (3, 1), 2): -1.0154095110257204, ((1, 4), (4, 4), 2): 1, ((4, 3), (3, 1), 1): 0.6406841432822161, ((3, 5), (2, 1), 2): -0.9889482575059639, ((4, 3), (2, 2), 1): 0.6220108846557997, ((2, 3), (1, 2), 1): 1, ((4, 4), (3, 5), 2): -0.3136759688709874, ((1, 3), (3, 3), 1): 0.021189143110572767, ((1, 3), (2, 1), 2): -1.0330100885687787, ((2, 4), (4, 1), 1): 0.7451578789217406, ((2, 4), (1, 3), 1): 1, ((4, 1), (4, 5), 2): 1, ((4, 4), (4, 2), 2): 1.0, ((3, 1), (2, 1), 2): -1.01832247161934, ((4, 4), (1, 1), 1): 0.7175662936235084, ((1, 5), (4, 5), 2): 1, ((2, 4), (4, 5), 1): 1, ((3, 3), (2, 2), 1): 0.7587739037875486, ((4, 1), (2, 3), 2): -0.3728863407422304, ((3, 2), (1, 2), 1): 1, ((1, 5), (3, 2), 2): -0.94631822208385, ((2, 2), (4, 1), 1): 0.7258980755036891, ((3, 3), (1, 1), 1): 0.7101080950865459, ((3, 5), (4, 4), 2): 1.0, ((2, 1), (1, 4), 2): 1, ((3, 3), (1, 2), 1): 1, ((4, 5), (2, 4), 2): -0.7543436489650523, ((1, 3), (1, 4), 2): -0.20231823707951246, ((2, 5), (3, 2), 2): -0.9406885264653174, ((3, 3), (4, 2), 2): 1.0, ((4, 3), (2, 4), 2): -0.7399487966377148, ((2, 2), (1, 5), 2): 1, ((2, 2), (3, 1), 2): -1.0016068549752841, ((2, 3), (1, 4), 1): 0.2525528895042233, ((3, 4), (4, 3), 2): 1.0, ((1, 3), (4, 3), 2): 1, ((3, 4), (2, 1), 1): 0.6649922279421261, ((4, 3), (3, 2), 2): -0.9256348938411844, ((4, 3), (1, 3), 2): 1, ((3, 2), (4, 4), 2): 1, ((3, 1), (3, 4), 2): -0.3450325532263982, ((4, 5), (2, 3), 1): 0.8664210944297425, ((3, 2), (2, 2), 1): 0.6855640642265464, ((2, 1), (3, 3), 1): 0.13024111788950804, ((2, 1), (3, 2), 1): 0.08307261480918669, ((3, 1), (2, 2), 1): 0.0849975197853767, ((4, 4), (2, 5), 1): 0.2524412646300107, ((3, 4), (4, 2), 1): 1, ((3, 2), (2, 5), 1): 0.1993453329466554, ((3, 5), (4, 1), 1): 0.8086393901654002, ((4, 3), (4, 1), 2): 1.0, ((1, 4), (1, 5), 1): 0.22665645754041772, ((4, 5), (3, 4), 1): 0.16331992596358255, ((3, 1), (3, 2), 2): -0.3235733793413481, ((2, 4), (1, 2), 1): 1, ((2, 5), (2, 3), 1): 0.9253395647424484, ((1, 4), (2, 3), 1): 0.05352814309630254, ((3, 3), (2, 4), 2): -0.32559250767492354, ((4, 5), (4, 2), 2): 1.0, ((4, 3), (4, 2), 2): 1, ((1, 1), (2, 2), 2): -0.48941663489602605, ((4, 3), (4, 5), 2): 1, ((2, 2), (2, 3), 2): -0.2580944146139984, ((4, 3), (1, 2), 1): 1, ((1, 1), (1, 5), 2): 1, ((2, 2), (1, 2), 1): 1, ((1, 5), (2, 4), 1): 0.07192262825485055, ((3, 1), (4, 1), 1): 0.8253917972576421, ((1, 2), (2, 2), 2): -0.9360178569911204, ((2, 3), (4, 5), 1): 1, ((4, 4), (3, 4), 2): -0.7506796868191293, ((4, 1), (2, 5), 1): 1, ((3, 1), (1, 3), 2): 1, ((4, 2), (3, 5), 1): 0.10713335462494775, ((1, 4), (3, 5), 2): -0.6663798557220616, ((1, 1), (2, 1), 2): -0.9937918709837282, ((2, 1), (4, 1), 2): 1.0, ((2, 2), (2, 4), 1): 0.12827720145335172, ((1, 4), (2, 1), 1): 0.619362330170476, ((4, 3), (4, 4), 1): 0.16254942669874084, ((4, 4), (3, 2), 2): -0.9130732147168171, ((4, 4), (3, 1), 2): -1.0138002720546777, ((1, 5), (2, 5), 2): -0.6728183434417208, ((2, 4), (3, 4), 2): -0.7322963380561269, ((3, 3), (4, 3), 1): 1.0, ((1, 2), (1, 5), 2): 1, ((4, 2), (4, 5), 2): 1, ((1, 1), (4, 5), 2): 1, ((3, 4), (3, 3), 1): 0.8381165254107101, ((1, 1), (3, 2), 2): -0.9079262599425959, ((3, 2), (4, 1), 2): 1.0, ((2, 4), (4, 2), 1): 1, ((4, 4), (2, 4), 1): 0.036795482845914475, ((1, 1), (2, 4), 1): 0.06505890726809792, ((3, 4), (2, 3), 2): -0.8245121102339293, ((2, 2), (3, 2), 2): -0.9099441625378689, ((3, 5), (2, 2), 2): -0.9349954862394512, ((4, 1), (3, 1), 2): -1.0123498660301893, ((3, 3), (2, 3), 2): -0.8214117164625162, ((1, 5), (3, 3), 1): 0.8780339674951319, ((1, 1), (1, 4), 1): 1, ((2, 4), (2, 2), 1): 0.8764697953620687, ((4, 2), (3, 1), 1): 0.03849597105895438, ((4, 5), (1, 2), 2): 1, ((4, 3), (3, 1), 2): -0.9894542367682273, ((1, 1), (4, 3), 1): 1, ((2, 2), (4, 4), 2): 1, ((4, 3), (2, 2), 2): -0.9197360291190448, ((4, 2), (4, 3), 1): 0.11592028835857583, ((3, 3), (3, 4), 2): -0.20623597099572458, ((2, 1), (4, 2), 1): 1, ((4, 1), (2, 1), 1): 0.26225431173799973, ((4, 4), (2, 2), 1): 0.7293290018765017, ((1, 3), (1, 4), 1): 0.15175076513380456, ((3, 1), (4, 4), 2): 1, ((4, 5), (3, 5), 1): 0.07729988973668643, ((2, 3), (2, 1), 2): -1.0507324755486234, ((4, 1), (4, 5), 1): 1, ((3, 3), (3, 1), 1): 0.7293614024403647, ((4, 4), (4, 1), 1): 0.7580461690392042, ((4, 4), (4, 2), 1): 1, ((2, 2), (1, 4), 1): 1, ((4, 1), (3, 4), 1): 0.05230624803224491, ((3, 2), (3, 3), 2): -0.26069678342624913, ((2, 1), (3, 4), 2): -0.2562854108746155, ((4, 1), (2, 3), 1): 0.06770080590743746, ((2, 2), (4, 1), 2): 1.0, ((1, 5), (2, 2), 2): -0.9526398611771855, ((2, 5), (1, 3), 1): 1, ((3, 2), (1, 5), 2): 1, ((1, 3), (4, 5), 1): 1.0, ((2, 1), (1, 4), 1): 1, ((2, 4), (1, 4), 1): 0.9270547734465683, ((1, 3), (3, 1), 1): 0.6800733237379744, ((2, 5), (3, 2), 1): 0.9958043867467502, ((4, 2), (2, 5), 1): 1, ((1, 1), (4, 1), 2): 1, ((3, 5), (1, 2), 2): 1.0, ((3, 4), (1, 3), 2): 1.0, ((2, 2), (1, 5), 1): 1, ((3, 3), (4, 3), 2): 1, ((1, 3), (3, 5), 2): -0.3223179053080856, ((3, 5), (3, 1), 1): 0.8826463290439981, ((4, 2), (1, 5), 2): 1, ((4, 3), (3, 2), 1): 0.08798964930848095, ((1, 2), (3, 2), 2): -0.9186158604639474, ((4, 2), (4, 3), 2): -0.25382079894032494, ((4, 1), (3, 5), 2): 1, ((1, 2), (2, 4), 1): 0.12918890712457862, ((3, 4), (1, 1), 1): 0.7262978512513768, ((3, 2), (2, 2), 2): -0.9094214973041405, ((4, 2), (2, 4), 2): -0.34058351287001815, ((3, 5), (4, 1), 2): 1, ((3, 3), (3, 1), 2): -1.0188855970887012, ((2, 5), (3, 5), 1): 0.9868974278893402, ((1, 3), (2, 5), 2): -0.19448882910457235, ((1, 4), (2, 4), 1): 0.044891965455836985, ((1, 1), (2, 2), 1): 0.018169075524547138, ((4, 5), (3, 1), 2): -1.0325897621771893, ((3, 4), (2, 2), 1): 0.8440660506128214}

optimal policy for playerA by Littman pour player 0 :

{((2, 2), (1, 2), 2): {'W': 0.0, 'E': 0.7353803089598933, 'stand': 0.26461969104010674, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 5), (4, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 1), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 5), (1, 4), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (3, 3), 1): {'W': 0.3726516944364865, 'E': 0.6273483055635135, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (1, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (4, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 1), (1, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (4, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 3), (4, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 2): {'W': 0.0, 'E': 0.10361899403498864, 'stand': 0.8963810059650114, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 3), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (1, 2), 2): {'E': 0.7529035855283303, 'stand': 0.02367161276416101, 'S': 0.22342480170750867, 'N': 0.0}, ((4, 5), (2, 1), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 1), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 3), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (1, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (3, 5), 1): {'W': 0.39819625107090223, 'E': 0.4312825194610906, 'stand': 0.17052122946800724, 'N': 0.0}, ((3, 1), (1, 1), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (4, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (3, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 1), (4, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (2, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 5), (3, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 1), (2, 3), 2): {'E': 0.12195604655412912, 'stand': 0.8780439534458708, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (1, 1), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 5), (3, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 2), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (3, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3133790128105538, 'S': 0.6866209871894462, 'N': 0.0}, ((3, 2), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 4), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 5), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (1, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 2), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 5), (4, 3), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 2), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (3, 3), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 1), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 1), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 2): {'E': 0.37346052404857766, 'stand': 0.0, 'S': 0.0, 'N': 0.6265394759514223}, ((4, 5), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 2), 1): {'W': 0.0, 'E': 0.10995134456017153, 'stand': 0.0, 'S': 0.0, 'N': 0.8900486554398285}, ((4, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 1), (1, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 3), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 3), (2, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 1): {'W': 0.0871301268758794, 'E': 0.9128698731241206, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (2, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (3, 5), 2): {'W': 0.0, 'E': 0.41773442852260556, 'stand': 0.0, 'S': 0.0, 'N': 0.5822655714773944}, ((1, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 2), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (4, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 4), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 2), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (2, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (4, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 3), (4, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 2): {'W': 0.8643017278588565, 'E': 0.0, 'stand': 0.0, 'S': 0.13569827214114352, 'N': 0.0}, ((2, 1), (4, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 1), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 5), (1, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 3), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.4391477559496042, 'S': 0.0, 'N': 0.5608522440503958}, ((1, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 5), 2): {'W': 0.8238459412733797, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.17615405872662027}, ((3, 5), (1, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 1), (2, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (3, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (4, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (1, 4), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (1, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (3, 3), 1): {'W': 0.0, 'E': 0.23715787956347234, 'stand': 0.0, 'S': 0.0, 'N': 0.7628421204365277}, ((2, 4), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (3, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 1), (1, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 5), 2): {'W': 0.6690905945040844, 'E': 0.0, 'stand': 0.0, 'S': 0.3309094054959156, 'N': 0.0}, ((3, 1), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (1, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.7280989772229522, 'S': 0.0, 'N': 0.2719010227770477}, ((1, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 1), (1, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.55815982522585, 'S': 0.4418401747741501, 'N': 0.0}, ((4, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 1): {'W': 0.0, 'E': 0.23506493542989937, 'stand': 0.0, 'S': 0.0, 'N': 0.7649350645701006}, ((2, 5), (1, 1), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (3, 4), 1): {'W': 0.32735410660462955, 'E': 0.27284445825862264, 'stand': 0.39980143513674776, 'N': 0.0}, ((1, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.32877569997896694, 'S': 0.6712243000210331, 'N': 0.0}, ((2, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (3, 3), 1): {'W': 0.0016761637618838189, 'E': 0.3709335163996786, 'stand': 0.6273903198384376, 'N': 0.0}, ((1, 4), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 1), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (2, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (2, 3), 1): {'W': 0.01178286364480885, 'E': 0.9882171363551912, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 5), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (2, 3), 1): {'W': 0.03544696560633874, 'E': 0.0, 'stand': 0.9645530343936612, 'S': 0.0}, ((3, 1), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (3, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (1, 2), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 1), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 5), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 1), (1, 2), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (4, 1), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (1, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (1, 4), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 1), (2, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 3), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 5), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 4), 1): {'W': 0.46037397479968356, 'E': 0.5396260252003164, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 2), (4, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (3, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 1), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (4, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (1, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (4, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 1), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 1), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 3), (4, 1), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 2), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (4, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (4, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 1), (2, 2), 1): {'W': 0.0, 'E': 0.09075597568745564, 'stand': 0.0, 'S': 0.9092440243125444, 'N': 0.0}, ((1, 5), (2, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 5), (1, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 5), (4, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (3, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (2, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 5), (4, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (1, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (1, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (4, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 5), (3, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (1, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 1), (1, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (1, 3), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.47971658308918685, 'S': 0.0, 'N': 0.5202834169108131}, ((1, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (2, 5), 1): {'W': 0.21308665506284735, 'E': 0.6420586105907055, 'stand': 0.1448547343464472, 'S': 0.0}, ((1, 3), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (2, 4), 1): {'W': 0.02997683147827181, 'E': 0.5463219811681241, 'stand': 0.42370118735360407, 'S': 0.0}, ((4, 4), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (1, 3), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 4), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 1), (3, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.6685084460126668, 'S': 0.0, 'N': 0.3314915539873332}, ((4, 1), (2, 2), 2): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.2265992987429961, 'N': 0.7734007012570039}, ((3, 5), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (4, 2), 2): {'E': 0.7471233881375413, 'stand': 0.1366376335785282, 'S': 0.0, 'N': 0.11623897828393048}, ((3, 5), (2, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (3, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (1, 1), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (4, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (2, 3), 1): {'W': 0.0, 'E': 0.2169914299385255, 'stand': 0.0, 'S': 0.7830085700614745, 'N': 0.0}, ((3, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.42387076829787484, 'S': 0.5761292317021252, 'N': 0.0}, ((4, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (3, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 1), (2, 4), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (3, 2), 1): {'E': 0.13384787439291146, 'stand': 0.8525412404989678, 'N': 0.0136108851081207}, ((3, 1), (2, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (2, 5), 2): {'W': 0.0, 'E': 0.20034780195996782, 'stand': 0.0, 'S': 0.7996521980400322, 'N': 0.0}, ((1, 2), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (2, 4), 2): {'W': 0.0, 'E': 0.1094678484483716, 'stand': 0.8905321515516285, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (4, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (4, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.6730541529827978, 'S': 0.32694584701720225, 'N': 0.0}, ((1, 2), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 5), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (1, 1), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (4, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 3), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 3), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (1, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (2, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (3, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 2), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 3), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 2), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (3, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.5599061320301673, 'S': 0.0, 'N': 0.44009386796983274}, ((2, 4), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (2, 3), 2): {'W': 0.8322433477490426, 'E': 0.0, 'stand': 0.0, 'S': 0.16775665225095737, 'N': 0.0}, ((4, 3), (1, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (1, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (1, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (2, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (1, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (2, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (2, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (4, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (1, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (4, 3), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 4), 2): {'W': 0.821812726346477, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.17818727365352302}, ((2, 1), (4, 2), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (4, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (4, 2), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (3, 4), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (3, 3), 2): {'W': 0.8338416682206201, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.16615833177937986}, ((2, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (4, 1), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 5), (1, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 1), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 3), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 4), 1): {'W': 0.19490336333788527, 'E': 0.8050966366621147, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 2), 1): {'E': 0.21162474138296325, 'stand': 0.7746777811713413, 'S': 0.013697477445695432}, ((4, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}}

ecart entre new\_V et val de littman :

(1.929709079711901, 275.41822312691977)

ecart entre val de player 0 trouve par shpaley et val de player 0 trouve par littman

(1.8999999999991646, 365.6214821497234)

Petit Analyse :

Exactement la meme analyse que pour apprentissage contre Shpaley player en utilisant la fonction de choix de type 1 ,

Comme on peut le voir écart n’as pas trop chargé donc changent de fonction de choix n’a aucun influence sur procès d’apprentissage

Test

Test Shapley player with Littman player (apprentissage contre policy trouve par Shapley pour player 1 avec fonction de choix de l’action de player 1 de type 1 1000000 fois

p0 littman player (apprentissage contre Shapley player avec fonction type 1 et p1 avec Shapley player

total\_rewards

{0: 0.259066246154626, 1: -0.259066246154626}

winers : {0: 0.44493786978168226, 1: 0.5550621302183177} nombre fois arrive en etat but 72509

Analyse : de maniér remarquable Shapley player gagner . 1 million step de apprentissage n’est pas suffisant

Test Shapley player with Littman player (apprentissage contre policy trouve par shapler pour player B avec fonction type 3 1000000 fois

p0 avec Littman player (apprentissage contre shapley player avec fonction type 3 et p1 avec Shapley player

total\_rewards

{0: -0.7459876134268736, 1: 0.7459876134268736}

winers : {0: 0.47818932645602263, 1: 0.5218106735439774} nombre fois arrive en etat but 63203

Analyse : encore Shapley player gagner mais le fait de utilisé fonction type 3 pour choisir action de player 1 à chaque tapa d’apprentissage à permet de apprendre mieux et perdre mon pour player 0

Test Shapley player with Littman player (apprentissage contre random player) 1000000 fois

p0 avec littman player (apprentissage contre random player) et p1 avec shapley player

total\_rewards

{0: -0.00040009220425986727, 1: 0.00040009220425986727}

winers : {0: 0.4500314912190764, 1: 0.5499685087809236} nombre fois arrive en etat but 68273

Analyse : la meme chose que avant , 1 million step (itération) de apprentissage n’est pas suffisant

Pour les deux dernier test :

C’est intéressant que même si après 1 millions itération on est pas complément convergé donc probablement stratégie mixte trouvé n’est pas très optimal mais comportement contre player SHpaley n’est pas trop mouvais

Test shapley player contre random player 1000000 fois

p0 shapley player et p1 random player

total\_rewards

{0: 0.45111880227553847, 1: -0.45111880227553847}

winers : {0: 0.9889125840723336, 1: 0.011087415927666431} nombre fois arrive en etat but 103631

Analyse : Stratégie mixte trouvé par Shapley est trop efficace contre un random player (bine :-) )

Test Littman player (apprentissage contre random player) contre random player 1000000 fois

p0 littman player (apprentissage contre random player) et p1 random player

total\_rewards

{0: 0.44728092262341834, 1: -0.44728092262341834}

winers : {0: 0.9877311116183519, 1: 0.012268888381648026} nombre fois arrive en etat but 105144

Analyse : Encore Stratégie mixte trouvé par Littman est trop efficace un random player (bine :-) )

C’est intéressant que même si après 1 millions itération on est pas complément convergé donc probablement stratégie mixte trouvé n’est pas très optimal mais comportement contre player random est trop bien

Test littman player (apprentissage contre shapley player avec fonction type 1) contre random player 1000000 fois

p0 littman player (apprentissage contre shapley player avec fonction type 1) et p1 random player

total\_rewards

{0: -0.011700714787010798, 1: 0.011700714787010798}

winers : {0: 0.8204813085156303, 1: 0.17951869148436977} nombre fois arrive en etat but 44753

Analyse : on veut encore que contre random player en utilisant stratégie mixte trouve en apprentissage contre Shapley player est efficace mais clairement moins

Test Littman player (apprentissage contre shapley player avec fonction type 3) contre random player 1000000 fois

p0 littman player (apprentissage contre shapley player avec fonction type 3) et p1 random player

total\_rewards

{0: 0.3587755385447341, 1: -0.3587755385447341}

winers : {0: 0.8997145708932355, 1: 0.1002854291067645} nombre fois arrive en etat but 57107

Analyse : on voit encore que contre random player en utilisant stratégie mixte trouve en apprentissage contre Shapley player est efficace mais clairement moins

Test shapley player contre shapley player 1000000 fois

p0 shapley player et p1 shapley player

total\_rewards

{0: 0.3546278018007291, 1: -0.3546278018007291}

winers : {0: 0.500518276050191, 1: 0.49948172394980905} nombre fois arrive en etat but 73320

Analyse : c’est la meilleur résultat que on obtenu jusqu’à now car ca montre bien que stratégie trouvé par SHpaley est bien optimal car les deux player 0 et 1 ont presque meme pourcentage de gagner c’est parfait

Test avec 2 \* 10 \*\* 7 iteration de Littman : et 10 \*\* 6 fois jouer et epsilon = 10 \*\* -13

(20 fois plus nombre itération de Littman les autres paramètres non changé )

Comme on a vu en dernier test que apprendre contre stratégie optimal trouve par Shapley en utilisant fonction de choix de type 1 n’est pas trop efficace , c’est fois on va lancer que avec fonction de choix de type 3

On vas écrire just les valeur de jeu et stratégie mixte trouve par Littman (car c’est le seul chose qui vas changer à cause ce changent de nombre itération de Littman)

Il faut dire que c’est trop probable que autant nombre itération n’est pas nécessaire, autrement dit peut être que on converge vers équilibre de Nash avec Littman ca arrive plus vite mais peut être sur et comme on ne peut pas trop verifier on lance autant itération ,

En Shapley c’est facile à verifier si o nest arrivé vers EN ou pas mais en Littman ce n’est pas si facile que ca

apprentissage pour player 0 , contre player random (player 1 jeu completment random). Fonction utilisé pour choisir action de player 1 à chaque step est suivant :

def choiceActOfPlayerType2(game,s,pi\_playerB):

return random.choice(game.actions(p1,s))

Run Littman with 20000000 iteration

aperentissage pour player 0 contre random choice pour player 1

iteration : 20000000

learnin rate at the end of the run : 0.009999997688153527

Time Littman : 27249.64259004593

Game value by Littman pour player 0 :

{((2, 2), (1, 2), 2): -0.16475960306433052, ((2, 5), (2, 1), 2): -1.040773231699058, ((1, 4), (4, 1), 1): 0.7568359580285876, ((1, 5), (2, 3), 1): 0.8503930915189827, ((3, 1), (4, 1), 2): -0.13207607145953823, ((3, 5), (1, 3), 1): 0.9584123067395562, ((1, 1), (1, 2), 2): -0.310527493706839, ((3, 1), (1, 2), 2): -0.3125920874177366, ((1, 2), (3, 4), 2): -0.33136027641152216, ((1, 4), (4, 5), 1): 0.3005461091692455, ((1, 5), (4, 3), 1): 0.8527675152035571, ((2, 1), (4, 4), 1): 0.1563387489911638, ((3, 5), (3, 2), 1): 0.9584174210887404, ((3, 2), (4, 3), 1): 0.1900168416329561, ((2, 1), (2, 4), 2): -0.24714836872506543, ((4, 4), (4, 1), 2): -0.9494911035974116, ((2, 2), (1, 1), 2): -0.150947431653926, ((4, 3), (4, 4), 2): -0.1926839863872491, ((2, 3), (2, 2), 2): -0.934438054402941, ((1, 2), (1, 4), 2): -0.20224787527705357, ((1, 4), (2, 2), 1): 0.7588561344518661, ((4, 3), (2, 5), 2): -0.28283619951885197, ((1, 4), (4, 2), 1): 0.7593693719821762, ((2, 5), (1, 4), 2): -0.16600739524816208, ((3, 4), (3, 3), 2): -0.8298180330634226, ((2, 3), (3, 5), 2): -0.19622491267731387, ((4, 3), (3, 3), 1): 0.025864811031005033, ((4, 5), (1, 4), 1): 0.858923550657173, ((2, 2), (2, 1), 1): 0.6868242997046461, ((4, 5), (2, 4), 1): 0.8545934750060248, ((3, 4), (2, 3), 1): 0.8533212581435983, ((1, 5), (4, 1), 2): -0.9595638971926495, ((1, 1), (2, 3), 1): 0.08107469707016716, ((2, 4), (1, 5), 2): -0.10385019303524398, ((4, 2), (3, 4), 2): -0.24431040245998706, ((2, 3), (4, 3), 2): -0.15038794094371175, ((2, 3), (3, 4), 1): 0.29559189183131857, ((1, 5), (1, 2), 2): -0.856749285765204, ((2, 4), (1, 1), 2): -0.9440651261441314, ((2, 1), (4, 5), 2): -0.18031988301685656, ((1, 1), (1, 4), 2): -0.22010649669797955, ((1, 1), (4, 3), 2): -0.28228569426570815, ((2, 3), (4, 1), 1): 0.7696354811582754, ((3, 5), (2, 5), 2): -0.66677168532652, ((3, 2), (3, 4), 2): -0.2278480855410568, ((1, 4), (3, 2), 2): -0.9561227348352705, ((2, 1), (1, 5), 2): -0.17505367209430614, ((2, 3), (4, 4), 2): -0.1941009527619562, ((2, 1), (1, 2), 2): -0.16271722029030936, ((4, 5), (2, 1), 2): -1.0537494529713771, ((2, 4), (2, 3), 1): 0.8514656976304831, ((3, 5), (1, 1), 2): -0.9497190487835161, ((3, 3), (4, 5), 2): -0.15418279810634514, ((1, 5), (2, 2), 1): 0.8506572784311924, ((2, 4), (4, 4), 2): -0.14330409117706636, ((2, 5), (1, 3), 2): -0.7499967556362004, ((2, 4), (3, 3), 2): -0.8266154162401813, ((2, 4), (1, 4), 2): -0.14660752768180785, ((2, 3), (1, 1), 1): 0.7689644018320425, ((4, 1), (4, 4), 1): 0.09134114571255383, ((2, 4), (4, 3), 2): -0.743792962279028, ((3, 3), (4, 1), 2): -0.9144027258160141, ((2, 5), (3, 1), 1): 0.9738739013215463, ((4, 1), (2, 2), 1): 0.08681781754475422, ((3, 1), (4, 3), 1): 0.12323828244669949, ((4, 4), (3, 5), 1): 0.022302909305496145, ((3, 1), (1, 1), 2): -0.14707909839475802, ((2, 2), (2, 5), 2): -0.1964467021020911, ((3, 3), (1, 4), 1): 0.7673877640614417, ((3, 4), (3, 2), 1): 0.8582309659504685, ((1, 2), (2, 4), 2): -0.24459426983884003, ((2, 4), (3, 5), 2): -0.25717038800280906, ((1, 2), (2, 1), 1): 0.02745106342951086, ((2, 5), (2, 4), 1): 0.9590327185401337, ((4, 2), (4, 1), 2): -0.9214473552286407, ((4, 2), (3, 5), 2): -0.20050713667876538, ((3, 4), (4, 2), 2): -0.8275734199125174, ((1, 3), (3, 2), 2): -0.923375375644357, ((4, 5), (4, 3), 1): 0.8533813798454523, ((1, 1), (3, 1), 2): -1.0677455810132426, ((1, 3), (4, 5), 2): -0.1729410840895393, ((1, 4), (3, 3), 2): -0.8459128189195184, ((4, 3), (1, 1), 1): 0.682726722827618, ((2, 3), (3, 1), 2): -1.0152388574230764, ((2, 5), (2, 1), 1): 0.9553052644577689, ((3, 2), (2, 4), 2): -0.24701419876372724, ((1, 5), (1, 3), 2): -0.775133966428712, ((1, 2), (3, 1), 1): 0.5892798858953727, ((1, 2), (3, 4), 1): 0.12504451687122156, ((4, 2), (2, 3), 1): 0.12218803606935791, ((1, 5), (4, 3), 2): -0.7733546496079295, ((2, 1), (4, 4), 2): -0.21847390044984127, ((4, 3), (1, 4), 2): -0.28081818883463916, ((4, 1), (3, 2), 2): -0.38959171049713653, ((2, 3), (4, 2), 1): 0.7670754373543713, ((2, 1), (2, 5), 2): -0.2022433011042685, ((2, 5), (3, 3), 2): -0.8436145446167662, ((1, 2), (4, 3), 2): -0.33260564607290727, ((1, 4), (2, 2), 2): -0.9328619826390044, ((2, 4), (2, 3), 2): -0.8353929749524379, ((2, 2), (3, 4), 2): -0.24794882265909052, ((4, 1), (1, 4), 1): 0.10884424877175403, ((2, 1), (2, 3), 2): -0.28475657499078794, ((4, 3), (2, 5), 1): 0.18410427821201159, ((1, 4), (3, 4), 1): 0.02946555103051933, ((3, 4), (4, 5), 2): -0.09494204124006712, ((4, 1), (4, 3), 1): 0.08556641191802337, ((2, 5), (4, 5), 2): -0.14885850245571247, ((2, 5), (1, 4), 1): 0.9572992840139024, ((3, 4), (1, 5), 1): 0.855689511490084, ((1, 5), (1, 1), 2): -0.9239777312837101, ((3, 5), (3, 3), 2): -0.8279309386304847, ((3, 4), (2, 5), 2): -0.2325213666169089, ((3, 2), (1, 1), 1): 0.6877576610607411, ((4, 1), (3, 5), 1): 0.10352847160778465, ((3, 2), (2, 3), 2): -0.3744090357150751, ((4, 1), (3, 4), 2): -0.2531059485086355, ((2, 3), (2, 4), 1): 0.20891433157734585, ((3, 2), (4, 5), 1): 0.18304796534576906, ((3, 5), (2, 1), 1): 0.9612728164925342, ((1, 5), (4, 2), 1): 0.8533283491610796, ((1, 4), (1, 3), 1): 0.758847552318503, ((4, 4), (1, 4), 2): -0.6746831426292725, ((1, 4), (3, 2), 1): 0.7617788358265872, ((1, 3), (2, 1), 1): 0.6742745122316416, ((2, 4), (3, 3), 1): 0.8471528836675978, ((3, 1), (2, 1), 1): 0.6145604238702378, ((4, 4), (1, 5), 2): -0.23303063466236534, ((1, 5), (4, 5), 1): 0.8590441116470832, ((3, 2), (1, 2), 2): -0.1847815394220118, ((3, 5), (1, 1), 1): 0.9630584099197432, ((4, 5), (3, 2), 1): 0.8566899217328905, ((3, 3), (1, 1), 2): -0.9219977441831043, ((2, 4), (4, 4), 1): 0.8604502969376485, ((4, 4), (3, 3), 2): -0.8278064338186543, ((2, 3), (3, 4), 2): -0.33874268968727095, ((2, 3), (1, 1), 2): -0.9243979210111108, ((4, 4), (1, 2), 1): 0.7673663564563393, ((3, 4), (4, 1), 2): -0.922886400007339, ((1, 1), (1, 3), 2): -0.2531470508009519, ((1, 2), (4, 4), 2): -0.2188989833449522, ((4, 3), (2, 4), 1): 0.18502930424064357, ((2, 5), (3, 1), 2): -1.0499298817052696, ((4, 4), (4, 3), 2): -0.7453420723750398, ((4, 5), (4, 3), 2): -0.7634123444723426, ((2, 3), (1, 4), 2): -0.12839245554327275, ((3, 1), (1, 1), 1): 0.6151036712555167, ((2, 2), (3, 5), 1): 0.18538840400836357, ((1, 3), (4, 3), 1): 0.6728006317934514, ((3, 2), (4, 3), 2): -0.13229284459055962, ((3, 4), (2, 1), 2): -1.0327739118592736, ((3, 3), (1, 4), 2): -0.19527669890569815, ((1, 1), (3, 3), 1): 0.046525169785783825, ((3, 1), (2, 3), 1): 0.12647809223370873, ((2, 5), (1, 2), 1): 0.955499314471437, ((2, 1), (4, 1), 1): 0.6101443751759151, ((2, 4), (3, 5), 1): 0.4021644499705446, ((3, 1), (1, 5), 2): -0.17858419423199207, ((4, 3), (2, 1), 2): -1.0153516485715381, ((2, 5), (4, 1), 1): 0.9581289812792227, ((2, 3), (3, 1), 1): 0.7668477598301562, ((3, 1), (3, 3), 2): -0.28926009655327156, ((4, 5), (2, 5), 1): 0.14446937732248005, ((2, 3), (1, 3), 2): -0.16107402471355906, ((3, 1), (3, 2), 1): 0.1040219428005216, ((4, 1), (3, 3), 1): 0.08847195540738173, ((3, 4), (1, 4), 1): 0.8580501484463723, ((1, 4), (2, 3), 2): -0.8518847951936446, ((4, 2), (1, 1), 1): 0.599068117096111, ((4, 3), (4, 2), 1): 0.6784748894985427, ((3, 1), (1, 3), 1): 0.16443444867545237, ((4, 1), (1, 4), 2): -0.22818949822262635, ((4, 1), (1, 5), 1): 0.1373944345105501, ((4, 3), (1, 2), 2): -0.8343470413929143, ((3, 3), (2, 1), 1): 0.7682711754342194, ((1, 5), (2, 4), 2): -0.7746962231301141, ((2, 5), (2, 2), 1): 0.9598100186271649, ((1, 2), (2, 2), 1): 0.02560307034106591, ((1, 5), (1, 3), 1): 0.8522103371274172, ((3, 4), (3, 1), 2): -1.045326448678266, ((3, 4), (1, 2), 2): -0.8344571501212412, ((4, 1), (2, 5), 2): -0.23055237732385167, ((3, 3), (3, 5), 2): -0.17778564078224676, ((1, 4), (1, 1), 2): -0.9304394388501434, ((2, 5), (3, 4), 1): 0.9624256379982769, ((4, 3), (1, 4), 1): 0.2505542336432904, ((1, 2), (2, 5), 1): 0.12387373346749093, ((1, 5), (3, 4), 1): 0.8513729340343166, ((2, 3), (4, 2), 2): -0.8287297554227776, ((1, 3), (2, 2), 1): 0.04509220814682489, ((3, 2), (3, 5), 1): 0.18440576074310117, ((2, 1), (2, 5), 1): 0.1256829316982226, ((1, 5), (2, 1), 1): 0.8583691852555234, ((4, 5), (1, 2), 1): 0.8569503301223619, ((2, 4), (3, 4), 1): 0.845059995601921, ((3, 2), (2, 1), 2): -1.0403353820084709, ((4, 4), (2, 1), 2): -1.0557500974707719, ((4, 2), (4, 5), 1): 0.15753571459298182, ((3, 4), (4, 5), 1): 0.31911263840455173, ((1, 1), (4, 5), 1): 0.08165497133572468, ((3, 4), (1, 5), 2): -0.15267959613880003, ((1, 1), (4, 2), 1): 0.05101329501506115, ((1, 4), (1, 2), 1): 0.762910809886349, ((1, 2), (4, 2), 1): 0.5986864342128998, ((4, 2), (2, 1), 1): 0.600569008446849, ((3, 1), (2, 4), 1): 0.1305676356562125, ((2, 4), (4, 2), 2): -0.8296130829938849, ((3, 5), (3, 3), 1): 0.9675355598982388, ((1, 1), (2, 4), 2): -0.2527423359893344, ((1, 3), (4, 4), 1): 0.23772590067716232, ((2, 2), (3, 2), 1): 0.6877845154312968, ((1, 2), (2, 3), 2): -0.3580524872951324, ((4, 1), (3, 1), 1): 0.01774020085860791, ((4, 1), (1, 3), 2): -0.27978376226977636, ((3, 3), (2, 3), 1): 0.7673405799042236, ((2, 3), (2, 4), 2): -0.21827364292144147, ((2, 1), (4, 3), 2): -0.2567427820241237, ((1, 5), (3, 3), 2): -0.8634654863305372, ((2, 4), (3, 2), 1): 0.850791339055673, ((3, 3), (1, 5), 1): 0.2949634906796076, ((4, 1), (1, 1), 2): -0.9177008410400184, ((4, 5), (1, 4), 2): -0.6952050852969711, ((1, 3), (1, 1), 2): -0.921724362138066, ((2, 3), (3, 3), 1): 0.7668115126887906, ((3, 3), (3, 4), 1): 0.21030680345095226, ((1, 4), (1, 3), 2): -0.7503002888981208, ((3, 4), (3, 5), 2): -0.17159349387934542, ((3, 5), (1, 3), 2): -0.7767309377448701, ((4, 1), (2, 1), 2): -1.0501549334672138, ((1, 3), (1, 2), 1): 0.6774057075302301, ((4, 2), (1, 4), 1): 0.16593156664346312, ((1, 5), (3, 4), 2): -0.7820015437672152, ((1, 4), (3, 1), 1): 0.7609596384266742, ((3, 5), (4, 3), 2): -0.7446596989516693, ((3, 5), (1, 4), 2): -0.6745270115234557, ((4, 4), (1, 5), 1): 0.3089347016077487, ((3, 2), (4, 2), 1): 0.6914964117164529, ((3, 2), (3, 3), 1): 0.1500029127950036, ((2, 4), (2, 2), 2): -0.9421283879232465, ((4, 4), (3, 3), 1): 0.03543257948137274, ((3, 2), (1, 5), 1): 0.21937723313890878, ((1, 5), (2, 1), 2): -1.0192518236671506, ((3, 1), (3, 5), 1): 0.12803121886484492, ((1, 3), (3, 1), 2): -1.015664424697867, ((4, 3), (1, 5), 2): -0.17280350067479722, ((3, 4), (4, 1), 1): 0.8606470271758095, ((1, 1), (4, 1), 1): 0.5111529521458396, ((1, 3), (1, 1), 1): 0.6799003829461984, ((2, 2), (4, 3), 2): -0.24510264581764296, ((3, 4), (1, 3), 1): 0.8528533301312465, ((3, 3), (4, 4), 2): -0.1149185430162555, ((4, 4), (2, 3), 2): -0.835845028523081, ((3, 5), (3, 1), 2): -1.0384835696332153, ((4, 3), (3, 5), 2): -0.19244443066486153, ((3, 4), (4, 4), 2): -0.12810572722853983, ((4, 2), (1, 2), 2): -0.8285275141603882, ((3, 1), (2, 3), 2): -0.313233167944147, ((4, 5), (4, 2), 1): 0.855232583254057, ((2, 1), (1, 1), 2): -0.15018314168152147, ((2, 5), (2, 3), 2): -0.8510753063951733, ((2, 4), (2, 5), 2): -0.17144845288823615, ((3, 1), (1, 5), 1): 0.16281198058484256, ((2, 5), (1, 5), 2): -0.12962535924588506, ((4, 3), (2, 1), 1): 0.6818254668685539, ((1, 1), (3, 4), 2): -0.28059175608246045, ((4, 1), (4, 2), 2): -0.3097714075351162, ((2, 2), (1, 3), 1): 0.20677234367345157, ((3, 1), (3, 3), 1): 0.10604765722823122, ((1, 3), (4, 1), 1): 0.6687613704640488, ((4, 3), (3, 5), 1): 0.18348124437942884, ((3, 1), (2, 5), 2): -0.2197961924048427, ((1, 1), (1, 2), 1): 0.0974961236213647, ((2, 3), (2, 5), 1): 0.21103609143322966, ((4, 1), (3, 3), 2): -0.31028922852141927, ((3, 3), (3, 5), 1): 0.20814245656823321, ((2, 5), (1, 1), 2): -0.9493441347591087, ((4, 3), (3, 4), 1): 0.025833730354266796, ((1, 3), (2, 5), 1): 0.1824359865426403, ((3, 2), (4, 4), 1): 0.18494363436354347, ((4, 1), (1, 5), 2): -0.20102479041416776, ((3, 2), (2, 5), 2): -0.203979813295154, ((3, 3), (2, 1), 2): -1.0339403507473242, ((1, 4), (4, 1), 2): -0.9363282197658673, ((2, 4), (2, 5), 1): 0.2798401578882316, ((2, 3), (3, 2), 1): 0.7675003435410112, ((2, 5), (2, 2), 2): -0.946525742297509, ((3, 5), (3, 4), 1): 0.9360746172714611, ((4, 3), (2, 3), 1): 0.03287938835950747, ((3, 4), (1, 2), 1): 0.8565675792982613, ((3, 5), (2, 5), 1): 0.9513991117137949, ((4, 2), (4, 4), 1): 0.1249972720513272, ((1, 4), (4, 5), 2): -0.2269966751573442, ((4, 2), (3, 3), 1): 0.018149379265542817, ((1, 4), (4, 3), 2): -0.7592498982367337, ((2, 1), (2, 4), 1): 0.12106086703365647, ((3, 2), (3, 5), 2): -0.19623473267176933, ((2, 5), (4, 2), 2): -0.8473074135194907, ((2, 3), (2, 2), 1): 0.7664700526896459, ((2, 1), (3, 5), 1): 0.15430855234577395, ((3, 1), (4, 2), 1): 0.1571889936731903, ((1, 1), (2, 5), 1): 0.07500816166898952, ((1, 2), (3, 3), 1): 0.12460983859434215, ((1, 3), (2, 3), 1): 0.03995471155996824, ((1, 2), (4, 2), 2): -0.8298503828716064, ((4, 2), (4, 1), 1): 0.6152574831004869, ((4, 2), (2, 1), 2): -1.0276133854842067, ((3, 5), (2, 4), 2): -0.7495780947348234, ((1, 3), (1, 5), 2): -0.1605572570184496, ((3, 5), (4, 2), 1): 0.962639395515733, ((2, 4), (4, 1), 2): -0.9363597647300792, ((1, 3), (2, 2), 2): -0.9198841401013809, ((1, 2), (2, 3), 1): 0.021994129207228555, ((3, 1), (4, 5), 1): 0.15490057199963353, ((4, 2), (3, 4), 1): 0.12450178894751515, ((1, 5), (3, 1), 2): -1.0865399086494478, ((2, 4), (4, 5), 2): -0.1520584380975912, ((1, 5), (1, 2), 1): 0.8583049504209765, ((2, 1), (4, 3), 1): 0.15893396607402732, ((3, 1), (2, 2), 2): -0.40431291871360664, ((2, 4), (3, 2), 2): -0.9343885532799951, ((3, 5), (4, 4), 1): 0.9589825333747917, ((4, 5), (1, 5), 1): 0.8596610760370651, ((4, 1), (1, 2), 2): -0.3828334967951017, ((3, 2), (1, 4), 2): -0.2044420479871584, ((3, 3), (1, 2), 2): -0.8274641215184002, ((2, 3), (3, 3), 2): -0.8301538874271924, ((4, 5), (3, 3), 1): 0.8531297350409719, ((3, 3), (4, 2), 1): 0.7708899566012014, ((2, 2), (4, 2), 2): -0.17441317514111074, ((2, 2), (3, 1), 1): 0.6864753363661554, ((1, 3), (1, 2), 2): -0.8351087460903773, ((4, 5), (4, 1), 2): -0.9620033342627214, ((3, 1), (1, 4), 1): 0.16565496135026944, ((4, 2), (1, 4), 2): -0.21946080130461604, ((2, 1), (1, 5), 1): 0.15583734650951228, ((1, 4), (3, 1), 2): -1.0645899298656158, ((2, 3), (4, 4), 1): 0.7663895611902761, ((4, 1), (4, 2), 1): 0.09608433485961862, ((4, 4), (4, 5), 1): 0.241102284082782, ((3, 3), (4, 5), 1): 0.24460838969799412, ((3, 1), (1, 2), 1): 0.6155136524558964, ((3, 3), (2, 5), 1): 0.2514791163366974, ((2, 1), (3, 3), 2): -0.31300893732273055, ((4, 4), (2, 5), 2): -0.6683095249756948, ((4, 2), (3, 2), 1): 0.018342978297097426, ((2, 5), (3, 3), 1): 0.9313738822164757, ((4, 3), (4, 1), 1): 0.6829663815181941, ((3, 3), (4, 1), 1): 0.7701679958408243, ((1, 4), (1, 5), 2): -0.15225190766701768, ((2, 4), (1, 2), 2): -0.8368700003251621, ((3, 3), (4, 4), 1): 0.25654198712689963, ((1, 2), (4, 1), 2): -0.9356353375973099, ((3, 3), (2, 4), 1): 0.2858215141451245, ((2, 1), (3, 1), 1): 0.6117056252403522, ((4, 3), (4, 5), 1): 0.18270936138229274, ((2, 2), (2, 5), 1): 0.1841174146021702, ((2, 2), (4, 5), 1): 0.21474190305941623, ((1, 1), (1, 5), 1): 0.07880317192269704, ((2, 4), (2, 1), 1): 0.8652138887194957, ((3, 4), (3, 2), 2): -0.9234289567791895, ((4, 1), (2, 4), 2): -0.2793970043822476, ((1, 2), (2, 1), 2): -1.019975386322495, ((1, 5), (1, 4), 1): 0.8502899954956634, ((4, 1), (2, 4), 1): 0.10948789685798821, ((1, 3), (4, 1), 2): -0.932748154113271, ((3, 2), (3, 1), 1): 0.6866839143549368, ((1, 3), (3, 2), 1): 0.6705717379499442, ((4, 4), (1, 3), 1): 0.766536964650161, ((3, 5), (4, 5), 1): 0.977995074936826, ((1, 4), (3, 3), 1): 0.7636625457092234, ((1, 2), (1, 3), 1): 0.12262171156393906, ((4, 4), (3, 4), 1): 0.02010043103664768, ((3, 2), (2, 4), 1): 0.18909822693740763, ((3, 5), (3, 4), 2): -0.7448292070145012, ((1, 1), (2, 1), 1): 0.019689758926277404, ((4, 5), (3, 2), 2): -0.9813823586632047, ((3, 2), (4, 1), 1): 0.6886971073219939, ((3, 2), (2, 1), 1): 0.6879285001346188, ((3, 3), (1, 3), 2): -0.18453478745141322, ((2, 3), (3, 5), 1): 0.24862128837127326, ((1, 3), (3, 4), 1): 0.18193432282382738, ((1, 4), (4, 3), 1): 0.763499073034192, ((3, 5), (2, 2), 1): 0.9559472005366034, ((4, 4), (4, 3), 1): 0.7618820869594556, ((2, 1), (1, 3), 1): 0.12066981848774927, ((4, 2), (2, 5), 2): -0.22024874889941892, ((2, 1), (3, 5), 2): -0.21883387360332546, ((4, 5), (3, 1), 1): 0.8557875343605427, ((4, 1), (1, 1), 1): 0.5141532422441947, ((1, 4), (3, 4), 2): -0.7473126728825514, ((2, 2), (4, 4), 1): 0.24212363364743256, ((4, 1), (4, 3), 2): -0.25343891096655247, ((1, 2), (3, 3), 2): -0.8294720293876492, ((2, 4), (3, 1), 2): -1.0179953828519683, ((2, 1), (4, 2), 2): -0.31076053399640297, ((3, 5), (2, 4), 1): 0.9597692823179141, ((3, 1), (4, 4), 1): 0.12650132236671513, ((1, 3), (1, 5), 1): 0.1843979160852779, ((1, 4), (2, 5), 2): -0.2723525431300855, ((4, 5), (3, 5), 2): -0.680688680559272, ((2, 3), (2, 1), 1): 0.7677980506813479, ((2, 5), (4, 4), 1): 0.9655703143469615, ((3, 1), (4, 5), 2): -0.1733664288419525, ((1, 3), (2, 4), 2): -0.3017185476968208, ((2, 2), (1, 4), 2): -0.19645214808006636, ((1, 5), (3, 1), 1): 0.8553392220669713, ((2, 1), (3, 4), 1): 0.1258763626409983, ((3, 5), (1, 5), 2): -0.1543503158604341, ((4, 5), (1, 5), 2): -0.6183749600803992, ((3, 2), (4, 5), 2): -0.15912811071548907, ((3, 2), (1, 4), 1): 0.25691752787651284, ((2, 3), (1, 5), 1): 0.2470611645602333, ((1, 5), (4, 2), 2): -0.8659164541325299, ((4, 5), (3, 3), 2): -0.8608005024810074, ((1, 1), (3, 5), 2): -0.22918294316024915, ((2, 2), (4, 2), 1): 0.6870239191353136, ((4, 4), (1, 4), 1): 0.7684076861100285, ((2, 2), (3, 3), 2): -0.38508282630239077, ((4, 5), (4, 1), 1): 0.8533744120589584, ((4, 4), (3, 1), 1): 0.7631984546160618, ((1, 2), (3, 5), 2): -0.21928618898246538, ((4, 4), (2, 3), 1): 0.7667509669506041, ((4, 2), (1, 5), 1): 0.1633074070037433, ((1, 5), (4, 1), 1): 0.8571187186849392, ((3, 4), (2, 4), 1): 0.8546205579443535, ((1, 2), (3, 2), 1): 0.028268015114478823, ((1, 1), (2, 5), 2): -0.22108044254557224, ((2, 3), (4, 1), 2): -0.924712066072551, ((4, 4), (4, 5), 2): -0.15203096024438545, ((3, 3), (2, 5), 2): -0.1961680234515265, ((1, 3), (4, 2), 2): -0.8311143187047867, ((4, 2), (2, 4), 1): 0.1297622726786259, ((3, 5), (2, 3), 1): 0.960705497159209, ((1, 1), (1, 3), 1): 0.09092971595636362, ((4, 2), (3, 2), 2): -0.9217078667262484, ((1, 1), (4, 2), 2): -0.3811793400284842, ((1, 2), (4, 4), 1): 0.1532283977826186, ((4, 4), (2, 2), 2): -0.9578432334249499, ((4, 2), (4, 4), 2): -0.20210653343885432, ((1, 2), (4, 1), 1): 0.587589723467093, ((3, 5), (4, 2), 2): -0.8340582304743643, ((1, 4), (2, 4), 2): -0.7485545087647247, ((2, 2), (3, 5), 2): -0.20379424600966461, ((2, 1), (3, 1), 2): -1.0357547822395146, ((1, 1), (4, 4), 2): -0.22992965997706286, ((3, 4), (2, 2), 2): -0.93082171956391, ((2, 2), (4, 5), 2): -0.17392622922209114, ((1, 1), (3, 3), 2): -0.37458738414589454, ((2, 4), (2, 1), 2): -1.030256468545944, ((2, 5), (1, 2), 2): -0.8556249975856968, ((2, 1), (2, 2), 1): 0.10458120895218814, ((1, 5), (2, 3), 2): -0.8611807291792968, ((4, 2), (2, 2), 2): -0.9172201346180251, ((4, 5), (4, 4), 1): 0.8535937010185373, ((1, 5), (1, 4), 2): -0.6873476810886859, ((2, 5), (4, 1), 2): -0.9259915751528027, ((3, 4), (1, 1), 2): -0.9267521626846755, ((3, 2), (3, 1), 2): -1.0245636631906627, ((3, 5), (3, 2), 2): -0.9462845884774388, ((4, 5), (2, 5), 2): -0.6828777977464813, ((2, 3), (1, 3), 1): 0.7653436709187852, ((3, 5), (4, 5), 2): -0.11898801023947117, ((1, 2), (1, 1), 1): 0.598480050761241, ((3, 4), (1, 4), 2): -0.1637082291037232, ((4, 2), (1, 1), 2): -0.9279723559872536, ((2, 5), (4, 3), 2): -0.7569474768728984, ((1, 2), (1, 4), 1): 0.1261994869809354, ((4, 3), (1, 5), 1): 0.21883589292134814, ((1, 4), (4, 2), 2): -0.8468878350233782, ((4, 5), (2, 2), 2): -0.9422389803846912, ((1, 2), (4, 5), 2): -0.18089935027428586, ((4, 5), (1, 1), 1): 0.8577616592178863, ((1, 1), (3, 1), 1): 0.025197260119139624, ((3, 4), (3, 1), 1): 0.8571745160061597, ((3, 3), (3, 2), 1): 0.7682901549939086, ((4, 3), (3, 3), 2): -0.8308738655326571, ((1, 4), (1, 1), 1): 0.7652500116080729, ((1, 5), (4, 4), 2): -0.688200963290763, ((2, 5), (3, 4), 2): -0.7452023116655588, ((3, 3), (1, 3), 1): 0.7675580200223638, ((2, 2), (2, 1), 2): -1.039759930628116, ((1, 3), (3, 4), 2): -0.7438066516549816, ((1, 3), (3, 5), 1): 0.1846161186591285, ((1, 2), (2, 5), 2): -0.19972197601310818, ((1, 5), (3, 5), 2): -0.6818343629600749, ((1, 1), (2, 3), 2): -0.309927970082461, ((4, 2), (1, 3), 2): -0.33646460260371536, ((3, 1), (1, 4), 2): -0.2203448998431853, ((2, 1), (1, 3), 2): -0.24715986781700056, ((2, 3), (4, 3), 1): 0.7679200347637206, ((4, 5), (4, 4), 2): -0.6791851776257468, ((2, 1), (4, 5), 1): 0.14973348801509626, ((3, 2), (1, 3), 1): 0.6900464459990988, ((1, 4), (4, 4), 1): 0.7594630022842815, ((4, 4), (2, 1), 1): 0.7659017395012382, ((2, 3), (1, 2), 2): -0.20174917941322032, ((4, 5), (1, 3), 1): 0.8549492046981547, ((2, 4), (3, 1), 1): 0.8610085565179054, ((3, 2), (3, 4), 1): 0.1521017833640384, ((1, 3), (3, 3), 2): -0.8265012209464182, ((4, 4), (3, 2), 1): 0.7649877343730966, ((1, 4), (2, 5), 1): 0.03193508499055511, ((1, 3), (4, 4), 2): -0.27489545730267667, ((2, 4), (1, 3), 2): -0.18891300326471022, ((2, 1), (1, 2), 1): 0.1348905647988725, ((2, 5), (4, 4), 2): -0.6753582367787425, ((4, 5), (2, 1), 1): 0.860037888302055, ((1, 3), (2, 4), 1): 0.03937664830729021, ((4, 4), (1, 1), 2): -0.9431835072887192, ((3, 2), (2, 3), 1): 0.17819813690984065, ((4, 1), (1, 3), 1): 0.11023037090040567, ((3, 3), (2, 2), 2): -0.9287704004626685, ((3, 5), (1, 5), 1): 0.9628154494513814, ((1, 5), (3, 2), 1): 0.8516459178575321, ((3, 3), (1, 5), 2): -0.1604349130328766, ((1, 2), (1, 3), 2): -0.24530383297105446, ((2, 3), (1, 5), 2): -0.15421171238447173, ((3, 4), (4, 3), 1): 0.8622647789312394, ((4, 1), (4, 4), 2): -0.21935995933580754, ((1, 1), (3, 5), 1): 0.07288584656942834, ((3, 4), (3, 5), 1): 0.2789089248464344, ((4, 1), (2, 2), 2): -0.9163596363053126, ((2, 2), (3, 3), 1): 0.2112323081187369, ((4, 2), (3, 3), 2): -0.34977701371309766, ((3, 5), (4, 3), 1): 0.9664924058570509, ((1, 2), (3, 5), 1): 0.15585134698690298, ((3, 2), (4, 2), 2): -0.1557689286253713, ((3, 5), (1, 4), 1): 0.9498791752779733, ((3, 4), (2, 4), 2): -0.7404536285699157, ((4, 3), (1, 3), 1): 0.6868251810433041, ((3, 1), (3, 4), 1): 0.12341163845772135, ((4, 5), (2, 3), 2): -0.8652934207925137, ((2, 5), (2, 4), 2): -0.7591940109268036, ((1, 3), (4, 2), 1): 0.6686179190200489, ((2, 1), (3, 2), 2): -0.45825579073317385, ((3, 1), (4, 2), 2): -0.14965763704100665, ((3, 5), (2, 3), 2): -0.8361125846983598, ((2, 5), (3, 5), 2): -0.6689099697121527, ((4, 5), (1, 3), 2): -0.7800438879994629, ((3, 1), (3, 5), 2): -0.2025876316727659, ((4, 4), (1, 3), 2): -0.7545086744264048, ((1, 4), (1, 2), 2): -0.8355333991347084, ((2, 2), (3, 4), 1): 0.1844326640260009, ((2, 2), (4, 3), 1): 0.6881487178215899, ((4, 5), (3, 4), 2): -0.7542864138601878, ((4, 5), (1, 1), 2): -0.9732539827005573, ((2, 4), (1, 5), 1): 0.3011830341156595, ((4, 1), (1, 2), 1): 0.08224402661199907, ((4, 4), (1, 2), 2): -0.8406090289590588, ((2, 4), (1, 1), 1): 0.8576899133331094, ((4, 3), (1, 1), 2): -0.930734395413031, ((1, 1), (4, 4), 1): 0.07476861853854226, ((2, 2), (2, 3), 1): 0.1498173345408027, ((3, 4), (4, 4), 1): 0.8606912568048228, ((4, 2), (1, 2), 1): 0.6057607718605237, ((2, 1), (1, 1), 1): 0.6181452699455585, ((2, 1), (2, 2), 2): -0.34666781736944197, ((4, 2), (2, 2), 1): 0.018612615856105318, ((2, 3), (4, 5), 2): -0.15888798006801963, ((1, 2), (3, 1), 2): -1.017797785952222, ((2, 5), (1, 5), 1): 0.9588648600409884, ((1, 3), (2, 3), 2): -0.8321384119394005, ((1, 1), (3, 4), 1): 0.08328848824049494, ((3, 1), (2, 4), 2): -0.2551915752199447, ((2, 2), (1, 3), 2): -0.1506309249176907, ((1, 4), (3, 5), 1): 0.24079281106304629, ((4, 2), (2, 3), 2): -0.8203576956047639, ((4, 1), (3, 2), 1): 0.013008692361320302, ((3, 1), (2, 5), 1): 0.1637124508134646, ((2, 3), (2, 5), 2): -0.18049228658004282, ((1, 2), (1, 1), 2): -0.922835285127209, ((2, 2), (2, 4), 2): -0.22893456755136016, ((2, 5), (1, 1), 1): 0.9645340480989665, ((1, 4), (2, 1), 2): -0.9828394779389373, ((4, 3), (3, 4), 2): -0.28384808884886314, ((2, 5), (4, 3), 1): 0.9604537878396746, ((1, 2), (4, 3), 1): 0.16081162596898066, ((2, 4), (4, 3), 1): 0.8471108955978224, ((1, 5), (2, 5), 1): 0.02015053075467255, ((2, 1), (2, 3), 1): 0.10512702128627663, ((1, 2), (1, 5), 1): 0.15728909428928445, ((2, 3), (3, 2), 2): -0.9249467588294784, ((1, 2), (4, 5), 1): 0.15090785786500557, ((2, 5), (4, 5), 1): 0.9687709704831072, ((4, 3), (2, 3), 2): -0.8342297066018932, ((3, 3), (3, 2), 2): -0.924545084720873, ((1, 1), (3, 2), 1): 0.07369989840959489, ((1, 5), (1, 1), 1): 0.8555992074706281, ((3, 5), (1, 2), 1): 0.9472788681435321, ((1, 5), (4, 4), 1): 0.8569826489925467, ((3, 1), (4, 3), 2): -0.24749331356663173, ((4, 4), (2, 4), 2): -0.748356886498863, ((4, 5), (2, 2), 1): 0.8538598228388689, ((3, 4), (2, 5), 1): 0.3040861122249956, ((1, 5), (3, 5), 1): 0.021744627049952562, ((3, 2), (1, 1), 2): -0.9062695567379587, ((4, 2), (1, 3), 1): 0.16754291402259458, ((2, 2), (1, 1), 1): 0.6885573539113946, ((2, 5), (4, 2), 1): 0.9715647532426064, ((3, 2), (1, 3), 2): -0.2467474719672211, ((4, 2), (3, 1), 2): -1.0227229604167605, ((1, 4), (4, 4), 2): -0.6760797654411986, ((4, 3), (3, 1), 1): 0.6810354986221295, ((3, 5), (2, 1), 2): -1.0486332425818585, ((4, 3), (2, 2), 1): 0.6846750119224495, ((2, 3), (1, 2), 1): 0.7659816439237037, ((4, 4), (3, 5), 2): -0.22070395423965936, ((1, 3), (3, 3), 1): 0.044582430668243446, ((1, 3), (2, 1), 2): -1.0346155810138726, ((2, 4), (4, 1), 1): 0.8609762664843718, ((2, 4), (1, 3), 1): 0.8480264997837139, ((4, 1), (4, 5), 2): -0.18198793284185796, ((4, 4), (4, 2), 2): -0.8312376972912942, ((3, 1), (2, 1), 2): -0.995960813332156, ((4, 4), (1, 1), 1): 0.7674131783971239, ((1, 5), (4, 5), 2): -0.6231749463600774, ((2, 4), (4, 5), 1): 0.8607062035385884, ((3, 3), (2, 2), 1): 0.768145042336463, ((4, 1), (2, 3), 2): -0.3927624793574589, ((3, 2), (1, 2), 1): 0.6891451213390448, ((1, 5), (3, 2), 2): -0.9567166212357374, ((2, 2), (4, 1), 1): 0.6863528734816267, ((3, 3), (1, 1), 1): 0.7721842885296444, ((3, 5), (4, 4), 2): -0.1434415767781669, ((2, 1), (1, 4), 2): -0.2046304727404792, ((3, 3), (1, 2), 1): 0.7674028352937746, ((4, 5), (2, 4), 2): -0.766739572917043, ((1, 3), (1, 4), 2): -0.19438420344837246, ((2, 5), (3, 2), 2): -0.951516624265771, ((3, 3), (4, 2), 2): -0.1767947088514901, ((4, 3), (2, 4), 2): -0.7418248500264092, ((2, 2), (1, 5), 2): -0.16210148440072564, ((2, 2), (3, 1), 2): -1.0371993387853964, ((2, 3), (1, 4), 1): 0.25904396054917456, ((3, 4), (4, 3), 2): -0.1489953473612612, ((1, 3), (4, 3), 2): -0.747423793594453, ((3, 4), (2, 1), 1): 0.8614576189377181, ((4, 3), (3, 2), 2): -0.9213488608407214, ((4, 3), (1, 3), 2): -0.7487425854261205, ((3, 2), (4, 4), 2): -0.19637799871177672, ((3, 1), (3, 4), 2): -0.24730125412174261, ((4, 5), (2, 3), 1): 0.8540919189084114, ((3, 2), (2, 2), 1): 0.6894637986565401, ((2, 1), (3, 3), 1): 0.1198441062251783, ((2, 1), (3, 2), 1): 0.17281232599671792, ((3, 1), (2, 2), 1): 0.1384208065219137, ((4, 4), (2, 5), 1): 0.24316985935781418, ((3, 4), (4, 2), 1): 0.8575848801748217, ((3, 2), (2, 5), 1): 0.18573042919461785, ((3, 5), (4, 1), 1): 0.9546755991428963, ((4, 3), (4, 1), 2): -0.9215792839501213, ((1, 4), (1, 5), 1): 0.24213065013595425, ((4, 5), (3, 4), 1): 0.033069344780767215, ((3, 1), (3, 2), 2): -0.3473702819100656, ((2, 4), (1, 2), 1): 0.8580119103444928, ((2, 5), (2, 3), 1): 0.9438619403831111, ((1, 4), (2, 3), 1): 0.021405548254185836, ((3, 3), (2, 4), 2): -0.3055423066612101, ((4, 5), (4, 2), 2): -0.8649293529004211, ((4, 3), (4, 2), 2): -0.8332006543334528, ((1, 1), (2, 2), 2): -0.37984769552239595, ((4, 3), (4, 5), 2): -0.15878988633145233, ((2, 2), (2, 3), 2): -0.2744289647673289, ((4, 3), (1, 2), 1): 0.6846622858877243, ((1, 1), (1, 5), 2): -0.1788800481200699, ((2, 2), (1, 2), 1): 0.6892533424360254, ((1, 5), (2, 4), 1): 0.01999502415043397, ((3, 1), (4, 1), 1): 0.6175834926748399, ((1, 2), (2, 2), 2): -0.9294802918501341, ((2, 3), (4, 5), 1): 0.3119604323521401, ((4, 4), (3, 4), 2): -0.7458504635883448, ((4, 1), (2, 5), 1): 0.10331834359952671, ((3, 1), (1, 3), 2): -0.2547154521031861, ((4, 2), (3, 5), 1): 0.12644499758397645, ((1, 4), (3, 5), 2): -0.6700356875209996, ((1, 1), (2, 1), 2): -1.0256943125465179, ((2, 1), (4, 1), 2): -0.24082364554577707, ((2, 2), (2, 4), 1): 0.15204951325778082, ((1, 4), (2, 1), 1): 0.762312425804034, ((4, 3), (4, 4), 1): 0.18353765080021087, ((4, 4), (3, 2), 2): -0.9717683703156577, ((4, 4), (3, 1), 2): -1.0995032588171252, ((1, 5), (2, 5), 2): -0.6823287998558748, ((2, 4), (3, 4), 2): -0.7448969963750302, ((3, 3), (4, 3), 1): 0.7714176622812113, ((1, 2), (1, 5), 2): -0.17392840509139976, ((4, 2), (4, 5), 2): -0.17313514796652787, ((1, 1), (4, 5), 2): -0.20423484354248708, ((3, 4), (3, 3), 1): 0.8537283671067419, ((1, 1), (3, 2), 2): -0.9210376004309111, ((3, 2), (4, 1), 2): -0.20818714542809677, ((2, 4), (4, 2), 1): 0.861203127186085, ((4, 4), (2, 4), 1): 0.018796318468733735, ((1, 1), (2, 4), 1): 0.0644537448642435, ((3, 4), (2, 3), 2): -0.835451935526241, ((2, 2), (3, 2), 2): -0.9205329779337316, ((3, 5), (2, 2), 2): -0.9641171956065349, ((4, 1), (3, 1), 2): -1.023836087705908, ((3, 3), (2, 3), 2): -0.8208429760399385, ((1, 5), (3, 3), 1): 0.8490936707461932, ((1, 1), (1, 4), 1): 0.08338002658828439, ((2, 4), (2, 2), 1): 0.851080479691137, ((4, 2), (3, 1), 1): 0.018175770026572804, ((4, 5), (1, 2), 2): -0.8684010117857414, ((4, 3), (3, 1), 2): -1.0297138025444807, ((1, 1), (4, 3), 1): 0.08790232271527403, ((2, 2), (4, 4), 2): -0.20298339807640178, ((4, 3), (2, 2), 2): -0.9308393513331911, ((4, 2), (4, 3), 1): 0.12293148244512166, ((3, 3), (3, 4), 2): -0.2182745235769785, ((2, 1), (4, 2), 1): 0.6127189672255249, ((4, 1), (2, 1), 1): 0.01948509741436662, ((4, 4), (2, 2), 1): 0.7658746217170431, ((1, 3), (1, 4), 1): 0.18308221879111133, ((3, 1), (4, 4), 2): -0.2033385951528493, ((4, 5), (3, 5), 1): 0.016258069470278476, ((2, 3), (2, 1), 2): -1.0511223009809232, ((4, 1), (4, 5), 1): 0.07781389694416364, ((3, 3), (3, 1), 1): 0.7681528297894301, ((4, 4), (4, 1), 1): 0.7621536543930627, ((4, 4), (4, 2), 1): 0.7619122371549154, ((2, 2), (1, 4), 1): 0.18449840066326234, ((4, 1), (3, 4), 1): 0.08766076301967948, ((3, 2), (3, 3), 2): -0.27544372923738825, ((2, 1), (3, 4), 2): -0.2588736511234891, ((4, 1), (2, 3), 1): 0.0912204720758413, ((2, 2), (4, 1), 2): -0.9144902829706277, ((1, 5), (2, 2), 2): -0.9365274954309322, ((2, 5), (1, 3), 1): 0.9479051788340217, ((3, 2), (1, 5), 2): -0.1745251164051238, ((1, 3), (4, 5), 1): 0.2146639989740788, ((2, 1), (1, 4), 1): 0.12641392002053412, ((2, 4), (1, 4), 1): 0.8563912134029784, ((1, 3), (3, 1), 1): 0.6708585430922608, ((2, 5), (3, 2), 1): 0.9556905579435488, ((4, 2), (2, 5), 1): 0.16330064932483654, ((1, 1), (4, 1), 2): -0.9209077126113453, ((3, 5), (1, 2), 2): -0.8396748824807712, ((3, 4), (1, 3), 2): -0.7484781825818488, ((2, 2), (1, 5), 1): 0.18513221499659768, ((3, 3), (4, 3), 2): -0.14311727420601683, ((1, 3), (3, 5), 2): -0.2739147582295955, ((3, 5), (3, 1), 1): 0.9719019482225697, ((4, 2), (1, 5), 2): -0.17902969928022988, ((4, 3), (3, 2), 1): 0.024534209347583415, ((1, 2), (3, 2), 2): -0.9207986148127639, ((4, 2), (4, 3), 2): -0.24283285119910783, ((4, 1), (3, 5), 2): -0.22034461600890884, ((1, 2), (2, 4), 1): 0.12315037340829406, ((3, 4), (1, 1), 1): 0.8595478806182884, ((3, 2), (2, 2), 2): -0.9171005798457625, ((4, 2), (2, 4), 2): -0.3433537487385496, ((3, 5), (4, 1), 2): -0.9471417207084306, ((3, 3), (3, 1), 2): -1.0230295630358546, ((2, 5), (3, 5), 1): 0.9626644999247304, ((1, 3), (2, 5), 2): -0.19317666109954382, ((1, 4), (2, 4), 1): 0.02936371959898802, ((1, 1), (2, 2), 1): 0.017583976495540235, ((4, 5), (3, 1), 2): -1.075667780987709, ((3, 4), (2, 2), 1): 0.8542410365823527}

optimal policy for playerA by Littman pour player 0:

{((2, 2), (1, 2), 2): {'W': 0.3333638488354229, 'E': 0.0, 'stand': 0.6666361511645771, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (3, 3), 1): {'W': 0.10293117469903834, 'E': 0.8970688253009617, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 5), 2): {'W': 0.0, 'E': 0.12986787253631094, 'stand': 0.690248196034088, 'S': 0.0, 'N': 0.17988393142960105}, ((4, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (1, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 2): {'W': 0.0, 'E': 0.08574569715713991, 'stand': 0.9142543028428601, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (1, 2), 2): {'E': 0.6929157880182369, 'stand': 0.23221558302162937, 'S': 0.0, 'N': 0.07486862896013372}, ((4, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (1, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (1, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 5), 1): {'W': 0.045238131320788785, 'E': 0.7245804734354093, 'stand': 0.23018139524380188, 'N': 0.0}, ((3, 1), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (4, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 4), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (2, 3), 2): {'E': 0.30791022307953453, 'stand': 0.0, 'S': 0.6920897769204655, 'N': 0.0}, ((4, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (4, 5), 2): {'W': 0.0, 'E': 0.1341111699858966, 'stand': 0.7414029391069867, 'S': 0.12448589090711668, 'N': 0.0}, ((4, 1), (4, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0009903621976072863, 'stand': 0.0, 'S': 0.0, 'N': 0.9990096378023927}, ((3, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 5), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.35630929350075535, 'S': 0.6436907064992446, 'N': 0.0}, ((3, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (1, 2), 2): {'W': 0.2462436083135361, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.7537563916864639}, ((3, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (3, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 5), (4, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 2): {'W': 0.0, 'E': 0.2392528908233924, 'stand': 0.6079643832301619, 'S': 0.0, 'N': 0.1527827259464457}, ((3, 1), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 3), 2): {'W': 0.0, 'E': 0.6003161251698605, 'stand': 0.3058157429514686, 'S': 0.0938681318786708, 'N': 0.0}, ((3, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 2): {'E': 0.3736125659061509, 'stand': 0.0, 'S': 0.0, 'N': 0.6263874340938491}, ((4, 5), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 3), 2): {'W': 0.7478031082031981, 'E': 0.0, 'stand': 0.25219689179680194, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.23950336429572283, 'S': 0.0, 'N': 0.7604966357042772}, ((4, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 5), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 1): {'W': 0.11570978929500131, 'E': 0.8842902107049987, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 5), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 2): {'W': 0.0, 'E': 0.07762610124665514, 'stand': 0.9223738987533449, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 2): {'W': 0.8241920984562352, 'E': 0.0, 'stand': 0.0, 'S': 0.17580790154376477, 'N': 0.0}, ((2, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 5), (1, 4), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.32429483442973317, 'S': 0.0, 'N': 0.6757051655702668}, ((1, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (3, 5), 2): {'W': 0.8332525158574441, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.1667474841425559}, ((3, 5), (1, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (2, 1), 2): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (3, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.42258636680275175, 'S': 0.0, 'N': 0.5774136331972483}, ((2, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 1), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 4), 2): {'W': 0.0, 'E': 0.4494394440904729, 'stand': 0.4510988696973778, 'S': 0.0994616862121494, 'N': 0.0}, ((4, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (3, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 4), 2): {'W': 0.8059247166382388, 'E': 0.0, 'stand': 0.19407528336176116, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (2, 5), 2): {'W': 0.8050039462801852, 'E': 0.0, 'stand': 0.0, 'S': 0.19499605371981482, 'N': 0.0}, ((3, 1), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 1): {'W': 0.0, 'E': 0.09381784291423004, 'stand': 0.27217235712009746, 'S': 0.0, 'N': 0.6340097999656725}, ((1, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (1, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (2, 5), 1): {'W': 0.0, 'E': 0.21230489656746698, 'stand': 0.0, 'S': 0.787695103432533, 'N': 0.0}, ((4, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 1): {'W': 0.0, 'E': 0.17317104273797868, 'stand': 0.0, 'S': 0.0, 'N': 0.8268289572620213}, ((2, 5), (1, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 4), 1): {'W': 0.0977368147835676, 'E': 0.5272116970683149, 'stand': 0.37505148814811745, 'N': 0.0}, ((1, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 5), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.43789602235510205, 'S': 0.562103977644898, 'N': 0.0}, ((2, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 3), 1): {'W': 0.012100978433357305, 'E': 0.44537239157322944, 'stand': 0.5425266299934132, 'N': 0.0}, ((1, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (2, 3), 1): {'W': 0.24034436727039854, 'E': 0.7596556327296015, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 5), (2, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (2, 3), 1): {'W': 0.07069610885566321, 'E': 0.38129929874731583, 'stand': 0.5480045923970209, 'S': 0.0}, ((3, 1), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (3, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (1, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (4, 1), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (3, 2), 1): {'W': 0.030995646433387702, 'E': 0.9690043535666123, 'stand': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 1), (2, 4), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 4), 1): {'W': 0.034483776230110785, 'E': 0.9655162237698892, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 2): {'W': 0.28692421652739875, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.7130757834726013}, ((2, 3), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (1, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (1, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (4, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 3), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 1): {'W': 0.0, 'E': 0.9908064480951027, 'stand': 0.009193551904897346, 'S': 0.0}, ((1, 1), (2, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (3, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.2439094570005763, 'S': 0.7560905429994237, 'N': 0.0}, ((1, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 5), (4, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (1, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (4, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 5), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (1, 4), 2): {'W': 0.5697689373811146, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.4302310626188855}, ((4, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 1), 1): {'E': 0.9997898985883167, 'stand': 0.0, 'S': 0.0002101014116833629}, ((3, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (4, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (1, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (1, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 1): {'W': 0.0, 'E': 0.04948144888610123, 'stand': 0.40997930107457375, 'S': 0.0, 'N': 0.540539250039325}, ((1, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (2, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (2, 4), 1): {'W': 0.1771380392790115, 'E': 0.49471597484201935, 'stand': 0.32814598587896915, 'S': 0.0}, ((4, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 3), 1): {'W': 0.0, 'E': 0.5096772324169809, 'stand': 0.0, 'S': 0.0, 'N': 0.4903227675830191}, ((4, 1), (1, 3), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (1, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 5), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.5777286241125477, 'S': 0.0, 'N': 0.42227137588745234}, ((4, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 2), 2): {'W': 0.37657845962786224, 'E': 0.0, 'stand': 0.6234215403721377, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (2, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (4, 2), 2): {'E': 0.6897651838518553, 'stand': 0.21338172141325473, 'S': 0.09685309473488996, 'N': 0.0}, ((3, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 1), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (4, 4), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.4486513013229949, 'S': 0.5513486986770051, 'N': 0.0}, ((3, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 1), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.45068004717204724, 'S': 0.5493199528279528, 'N': 0.0}, ((4, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (3, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 2): {'W': 0.0, 'E': 0.42500900983936435, 'stand': 0.45676460945540126, 'S': 0.0, 'N': 0.11822638070523445}, ((1, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 2), 1): {'E': 0.2706354934426018, 'stand': 0.7197410290266131, 'N': 0.009623477530785058}, ((3, 1), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 5), 2): {'W': 0.0, 'E': 0.07375118306848885, 'stand': 0.9262488169315112, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (2, 4), 2): {'W': 0.0, 'E': 0.08163249642445214, 'stand': 0.9183675035755479, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 5), 1): {'W': 0.9995487526084043, 'stand': 0.0, 'S': 0.0004512473915957484}, ((2, 1), (2, 3), 1): {'W': 0.0, 'E': 0.13286970268036113, 'stand': 0.0, 'S': 0.8671302973196389, 'N': 0.0}, ((1, 2), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (1, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 3), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 5), 1): {'W': 0.0, 'E': 0.4610230011496258, 'stand': 0.0, 'S': 0.0, 'N': 0.5389769988503742}, ((1, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (3, 3), 1): {'W': 0.0, 'E': 0.826533325890932, 'stand': 0.17346667410906802, 'S': 0.0}, ((1, 3), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 5), (4, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (1, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 3), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (4, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (4, 4), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.5354869549803791, 'S': 0.0, 'N': 0.46451304501962093}, ((2, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 1): {'W': 0.6659571622867486, 'E': 0.0, 'stand': 0.3340428377132514, 'S': 0.0}, ((3, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 3), 2): {'W': 0.7840636076861693, 'E': 0.0, 'stand': 0.0, 'S': 0.21593639231383066, 'N': 0.0}, ((4, 3), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (1, 5), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 4), 1): {'W': 0.7054996758953828, 'stand': 0.2941093195287249, 'S': 0.00039100457589236334}, ((3, 1), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (2, 5), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (1, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 2), (2, 4), 1): {'W': 0.0, 'E': 0.1670047429965651, 'stand': 0.0, 'S': 0.8329952570034349, 'N': 0.0}, ((1, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 5), (2, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (4, 5), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (3, 1), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (1, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 3), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 4), 2): {'W': 0.8477530412521637, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.15224695874783628}, ((2, 1), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (4, 5), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (3, 3), 2): {'W': 0.8067310308779845, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.19326896912201555}, ((2, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (2, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (1, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 2): {'W': 0.5482818416039368, 'E': 0.0, 'stand': 0.4517181583960632, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 5), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 4), 1): {'W': 0.9992755064745688, 'E': 0.0007244935254312885, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 2), 1): {'E': 0.2920279506685369, 'stand': 0.700819920658156, 'S': 0.007152128673307212}, ((4, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}}

ecart entre new\_V et val de littman :

(0.10452173925748255, 7.90459644175636)

ecart entre val de player 0 trouve par shpaley et val de player 0 trouve par littman

(0.1347599758504149, 30.925234262001954)

ecart entre new\_V et val de littman :

(0.21796032082940123, 21.57442612149567)

ecart entre val de player 0 trouve par shpaley et val de player 0 trouve par littman

(0.38927602764165714, 53.83291410667564)

Petit Analyse :

1. Shapley converge assez vite mais Littman avec 20 millions itération prendre trop temps environ 8 heures

2. On peur voir que clairement écart entre valeur de jeu trouve par Littman contre player random et valeur de jeu retourné par fonction « new\_V\_and\_pi » et aussi velue de jeu trouvé pour player 0 par Shapley a diminué énormément .

c’est intéressent aussi que premier apprentissage contre player random avec 1 millions itération on avait un écart max 0.21 de somme des écart était 21.57 mais ici après 20 millions écart max est 0.1 et somme des écart est 7.90 (écart entre valeur de jeu trouve par Littman c et valeur de jeu retourné par fonction « new\_V\_and\_pi »),

ça veut dire que avec 20 fois plus d’itération on a mieux converger vers équilibre de Nash , on peut conclure que Algorithme Littman converge bien aussi vers équilibre de NASh mais ça dure très très longtemps . (selon mes calcul on a besoin environ 100 millions itération pour converger complément qui vas durée exactement 5 fois plus ça veut dire 40 heures)

3. J’ai vérifier complément : exactement pour 276 (avec 1 million itération c’était 384 ) état en total et 577 ( avec 1 million itération c’était 842) action en total , probable de ces action en stratégie mixte trouvé par Shapley et par Littman n’est pas la même chose

apprentissage pour player 0 , contre optimal policy trouve pour palyer 1 avec algorithme Shapley. Fonction utilisé pour choisir action de player 1 à chaque step est suivant :

def choiceActOfPlayerType3(game,s,pi\_playerB):

a = pi\_playerB.get(s)

rnd = np.random.rand()

tmp = 0

for s, p in a.items():

tmp += p

if tmp >= rnd:

return s

Run Littman with 1000000 iteration learnin rate at the end of the run : 0.009999997688153527

Time Littman : 27244.263618946075

Game value by Littman pour player 0 :

{((2, 2), (1, 2), 2): 0.9585022222784744, ((2, 5), (2, 1), 2): -1.0016068009074288, ((1, 4), (4, 1), 1): 0.9945589852936856, ((1, 5), (2, 3), 1): 0.8807020751997701, ((3, 1), (4, 1), 2): 0.9163208427626099, ((3, 5), (1, 3), 1): 1.0, ((1, 1), (1, 2), 2): -0.2981625608830988, ((3, 1), (1, 2), 2): 1.0, ((1, 2), (3, 4), 2): -0.3091975706493065, ((1, 4), (4, 5), 1): 0.9155754226810591, ((1, 5), (4, 3), 1): 0.9523986247671314, ((2, 1), (4, 4), 1): 1, ((3, 5), (3, 2), 1): 0.9832424580457846, ((3, 2), (4, 3), 1): 0.20248546955768223, ((2, 1), (2, 4), 2): -0.25239075180520537, ((4, 4), (4, 1), 2): 0.13456765738356596, ((2, 2), (1, 1), 2): 1.0, ((4, 3), (4, 4), 2): -0.18108340948813548, ((2, 3), (2, 2), 2): -0.9099611453151529, ((1, 2), (1, 4), 2): 1, ((1, 4), (2, 2), 1): 0.6994391204967692, ((4, 3), (2, 5), 2): -0.23447470092550365, ((1, 4), (4, 2), 1): 0.9023397147974308, ((2, 5), (1, 4), 2): 1.0, ((3, 4), (3, 3), 2): -0.8161352569009961, ((2, 3), (3, 5), 2): -0.17656631509997164, ((4, 3), (3, 3), 1): 0.10239190203478182, ((4, 5), (1, 4), 1): 0.9002241349227198, ((2, 2), (2, 1), 1): 0.656907607143419, ((4, 5), (2, 4), 1): 0.890930806662498, ((3, 4), (2, 3), 1): 0.8853224471576449, ((1, 5), (4, 1), 2): 0.9081199479705476, ((1, 1), (2, 3), 1): 0.12713451420793986, ((2, 4), (1, 5), 2): 1.0, ((4, 2), (3, 4), 2): -0.2350880529911079, ((2, 3), (4, 3), 2): 1, ((2, 3), (3, 4), 1): 0.3337477661001327, ((1, 5), (1, 2), 2): 0.8114689700691293, ((2, 4), (1, 1), 2): 0.20560088109152028, ((2, 1), (4, 5), 2): 1, ((1, 1), (1, 4), 2): 1, ((1, 1), (4, 3), 2): 1, ((2, 3), (4, 1), 1): 1.0, ((3, 5), (2, 5), 2): -0.6557651129874089, ((3, 2), (3, 4), 2): -0.19764116616278082, ((1, 4), (3, 2), 2): -0.9104726801078339, ((2, 1), (1, 5), 2): 1, ((2, 3), (4, 4), 2): 1.0, ((2, 1), (1, 2), 2): 1, ((4, 5), (2, 1), 2): -1.0336478636387705, ((2, 4), (2, 3), 1): 0.8876182021955958, ((3, 5), (1, 1), 2): 0.5126192757992991, ((3, 3), (4, 5), 2): 1.0, ((1, 5), (2, 2), 1): 0.8757443085124236, ((2, 4), (4, 4), 2): 1, ((2, 5), (1, 3), 2): 0.9317714520741621, ((2, 4), (3, 3), 2): -0.8149727858741272, ((2, 4), (1, 4), 2): 0.8697421852397901, ((2, 3), (1, 1), 1): 1, ((4, 1), (4, 4), 1): 1, ((2, 4), (4, 3), 2): 0.9680937043757176, ((3, 3), (4, 1), 2): 0.11962526392365169, ((2, 5), (3, 1), 1): 0.9940126935837167, ((4, 1), (2, 2), 1): 0.1235890831151069, ((3, 1), (4, 3), 1): 0.8903448086947424, ((4, 4), (3, 5), 1): 0.10209314341864975, ((3, 1), (1, 1), 2): 1, ((2, 2), (2, 5), 2): -0.17840903684141338, ((3, 3), (1, 4), 1): 0.8637195872932834, ((3, 4), (3, 2), 1): 0.8911656892633394, ((1, 2), (2, 4), 2): -0.23682498532860477, ((2, 4), (3, 5), 2): -0.2526731385000236, ((1, 2), (2, 1), 1): 0.04947595359050348, ((2, 5), (2, 4), 1): 0.9908515596196497, ((4, 2), (4, 1), 2): 1.0, ((4, 2), (3, 5), 2): 1, ((3, 4), (4, 2), 2): 0.9070795364094235, ((1, 3), (3, 2), 2): -0.9124636812463586, ((4, 5), (4, 3), 1): 0.9119406976174754, ((1, 1), (3, 1), 2): -1.0148107279658563, ((1, 3), (4, 5), 2): 1, ((1, 4), (3, 3), 2): -0.8165924504460824, ((4, 3), (1, 1), 1): 1, ((2, 3), (3, 1), 2): -1.0110336813503333, ((2, 5), (2, 1), 1): 0.9543596381531194, ((3, 2), (2, 4), 2): -0.2341590701373157, ((1, 5), (1, 3), 2): 0.9544460501755359, ((1, 2), (3, 1), 1): 0.6173425204717279, ((1, 2), (3, 4), 1): 0.1640085520357101, ((4, 2), (2, 3), 1): 0.15979818843223242, ((1, 5), (4, 3), 2): 1, ((2, 1), (4, 4), 2): 1, ((4, 3), (1, 4), 2): 1, ((4, 1), (3, 2), 2): -0.4459033795898806, ((2, 3), (4, 2), 1): 0.8801503640271575, ((2, 1), (2, 5), 2): 1, ((2, 5), (3, 3), 2): -0.8166280096251815, ((1, 2), (4, 3), 2): 1, ((1, 4), (2, 2), 2): -0.9108511853218694, ((2, 4), (2, 3), 2): -0.815901856420293, ((2, 2), (3, 4), 2): -0.22563428343674166, ((4, 1), (1, 4), 1): 1, ((2, 1), (2, 3), 2): -0.2664053299582428, ((4, 3), (2, 5), 1): 0.2034157534949921, ((1, 4), (3, 4), 1): 0.07527494449156333, ((3, 4), (4, 5), 2): 1, ((4, 1), (4, 3), 1): 0.1139688608994552, ((2, 5), (4, 5), 2): 1, ((2, 5), (1, 4), 1): 0.8418152566205173, ((3, 4), (1, 5), 1): 0.9820060628240256, ((1, 5), (1, 1), 2): 0.04828711209695488, ((3, 5), (3, 3), 2): -0.8133280253381866, ((3, 4), (2, 5), 2): -0.21659879126406728, ((3, 2), (1, 1), 1): 1, ((4, 1), (3, 5), 1): 1, ((3, 2), (2, 3), 2): -0.3761673959655566, ((4, 1), (3, 4), 2): 1, ((2, 3), (2, 4), 1): 0.2298293222252523, ((3, 2), (4, 5), 1): 1, ((3, 5), (2, 1), 1): 0.9969978617154357, ((1, 5), (4, 2), 1): 0.965776301927074, ((1, 4), (1, 3), 1): 1.0, ((4, 4), (1, 4), 2): 1, ((1, 4), (3, 2), 1): 0.7952082986308151, ((1, 3), (2, 1), 1): 0.6314640381672997, ((2, 4), (3, 3), 1): 0.898930001551919, ((3, 1), (2, 1), 1): 0.39874878933530816, ((4, 4), (1, 5), 2): 1, ((1, 5), (4, 5), 1): 0.9683889588659347, ((3, 2), (1, 2), 2): 1, ((3, 5), (1, 1), 1): 1, ((4, 5), (3, 2), 1): 0.8633879426222336, ((3, 3), (1, 1), 2): 1.0, ((2, 4), (4, 4), 1): 0.8862728760029439, ((4, 4), (3, 3), 2): -0.8172432819324388, ((2, 3), (3, 4), 2): -0.2531960549522838, ((2, 3), (1, 1), 2): 0.44583973393583276, ((4, 4), (1, 2), 1): 0.9332619212657206, ((3, 4), (4, 1), 2): 0.5196715985356436, ((1, 1), (1, 3), 2): 1, ((1, 2), (4, 4), 2): 1, ((4, 3), (2, 4), 1): 0.20251699486701613, ((2, 5), (3, 1), 2): -1.0296204441765715, ((4, 4), (4, 3), 2): 0.9308852171099143, ((4, 5), (4, 3), 2): 0.9803372661904218, ((2, 3), (1, 4), 2): 1.0, ((3, 1), (1, 1), 1): 1, ((2, 2), (3, 5), 1): 0.20649484101289886, ((1, 3), (4, 3), 1): 0.9277819932191922, ((3, 2), (4, 3), 2): 0.9736534527804517, ((3, 4), (2, 1), 2): -0.9831283427620543, ((3, 3), (1, 4), 2): 1, ((1, 1), (3, 3), 1): 0.12359621223127518, ((3, 1), (2, 3), 1): 0.15766042947770076, ((2, 5), (1, 2), 1): 0.9677682835192268, ((2, 1), (4, 1), 1): 0.9875459594155763, ((2, 4), (3, 5), 1): 0.40202954988996686, ((3, 1), (1, 5), 2): 1, ((4, 3), (2, 1), 2): -1.0086398844739557, ((2, 5), (4, 1), 1): 1.0, ((2, 3), (3, 1), 1): 0.8005012590317226, ((3, 1), (3, 3), 2): -0.2632762316978266, ((4, 5), (2, 5), 1): 0.2849309533741262, ((2, 3), (1, 3), 2): 0.9156623548469445, ((3, 1), (3, 2), 1): 0.1384926216794161, ((4, 1), (3, 3), 1): 0.12505948743488982, ((3, 4), (1, 4), 1): 0.8508499946097206, ((1, 4), (2, 3), 2): -0.8157736107553649, ((4, 2), (1, 1), 1): 1, ((4, 3), (4, 2), 1): 0.8835289393961353, ((3, 1), (1, 3), 1): 1.0, ((4, 1), (1, 4), 2): 1, ((4, 1), (1, 5), 1): 1, ((4, 3), (1, 2), 2): 1, ((3, 3), (2, 1), 1): 0.664238089586478, ((1, 5), (2, 4), 2): -0.7335005109234954, ((2, 5), (2, 2), 1): 0.9946789597284894, ((1, 2), (2, 2), 1): 0.056291382853381935, ((1, 5), (1, 3), 1): 1.0, ((3, 4), (3, 1), 2): -1.022429944241436, ((3, 4), (1, 2), 2): 0.9714759571772075, ((4, 1), (2, 5), 2): 1, ((3, 3), (3, 5), 2): -0.16031379295906878, ((1, 4), (1, 1), 2): 0.21499841181025156, ((2, 5), (3, 4), 1): 0.9853026872815709, ((4, 3), (1, 4), 1): 1.0, ((1, 2), (2, 5), 1): 0.1590475271562972, ((1, 5), (3, 4), 1): 0.8756911344569926, ((2, 3), (4, 2), 2): 0.9186638470270596, ((1, 3), (2, 2), 1): 0.07265241279766697, ((3, 2), (3, 5), 1): 0.20339804395053007, ((2, 1), (2, 5), 1): 0.13685056396599896, ((1, 5), (2, 1), 1): 0.8459579607305223, ((4, 5), (1, 2), 1): 1.0, ((2, 4), (3, 4), 1): 0.8861955184795713, ((3, 2), (2, 1), 2): -1.0008425679621122, ((4, 4), (2, 1), 2): -1.0292796063448888, ((4, 2), (4, 5), 1): 1, ((3, 4), (4, 5), 1): 0.31702453076288795, ((1, 1), (4, 5), 1): 1, ((3, 4), (1, 5), 2): 1.0, ((1, 1), (4, 2), 1): 1, ((1, 4), (1, 2), 1): 0.9738993393675213, ((1, 2), (4, 2), 1): 0.7947221070704905, ((4, 2), (2, 1), 1): 0.5992663568623484, ((3, 1), (2, 4), 1): 0.1656767490604149, ((2, 4), (4, 2), 2): 0.9972768717243973, ((3, 5), (3, 3), 1): 1.0, ((1, 1), (2, 4), 2): 1, ((1, 3), (4, 4), 1): 0.9329905470114351, ((2, 2), (3, 2), 1): 0.7220731507802454, ((1, 2), (2, 3), 2): -0.3439390901102548, ((4, 1), (3, 1), 1): 0.05377534195108041, ((4, 1), (1, 3), 2): 1, ((3, 3), (2, 3), 1): 0.7949033417931273, ((2, 3), (2, 4), 2): -0.1946172659658104, ((2, 1), (4, 3), 2): 1, ((1, 5), (3, 3), 2): -0.8211556499562026, ((2, 4), (3, 2), 1): 0.8976722465736862, ((3, 3), (1, 5), 1): 1.0, ((4, 1), (1, 1), 2): 1, ((4, 5), (1, 4), 2): 1, ((1, 3), (1, 1), 2): 0.7500858137657335, ((2, 3), (3, 3), 1): 0.8092224568162395, ((3, 3), (3, 4), 1): 0.2339359352733841, ((1, 4), (1, 3), 2): 0.9757467133419253, ((3, 4), (3, 5), 2): -0.15386346307216905, ((3, 5), (1, 3), 2): 1, ((4, 1), (2, 1), 2): -1.0022315480238537, ((1, 3), (1, 2), 1): 1.0, ((4, 2), (1, 4), 1): 1, ((1, 5), (3, 4), 2): -0.7372725141795127, ((1, 4), (3, 1), 1): 0.7976707502409301, ((3, 5), (4, 3), 2): 0.9556929454816915, ((3, 5), (1, 4), 2): 1, ((4, 4), (1, 5), 1): 0.8426746518663334, ((3, 2), (4, 2), 1): 0.7996289964759338, ((3, 2), (3, 3), 1): 0.17485233576034548, ((2, 4), (2, 2), 2): -0.9122584617170468, ((4, 4), (3, 3), 1): 0.12145880771910232, ((3, 2), (1, 5), 1): 1, ((1, 5), (2, 1), 2): -1.020211509543217, ((3, 1), (3, 5), 1): 0.1548445643573653, ((1, 3), (3, 1), 2): -1.0218556976892572, ((4, 3), (1, 5), 2): 1, ((3, 4), (4, 1), 1): 1.0, ((1, 1), (4, 1), 1): 0.9906474272809321, ((1, 3), (1, 1), 1): 1, ((2, 2), (4, 3), 2): 0.7891827610031957, ((3, 4), (1, 3), 1): 0.9532231573098793, ((3, 3), (4, 4), 2): 0.9910777969679853, ((4, 4), (2, 3), 2): -0.8175550981768639, ((3, 5), (3, 1), 2): -1.0204444136151087, ((4, 3), (3, 5), 2): -0.17858404420339588, ((3, 4), (4, 4), 2): 0.8992009930376572, ((4, 2), (1, 2), 2): 1, ((3, 1), (2, 3), 2): -0.2977637942685221, ((4, 5), (4, 2), 1): 0.909347715199266, ((2, 1), (1, 1), 2): 1.0, ((2, 5), (2, 3), 2): -0.8180416516210537, ((2, 4), (2, 5), 2): -0.15198470065736308, ((3, 1), (1, 5), 1): 1, ((2, 5), (1, 5), 2): 1.0, ((4, 3), (2, 1), 1): 0.6959992525404401, ((1, 1), (3, 4), 2): 1, ((4, 1), (4, 2), 2): -0.30042143594923926, ((2, 2), (1, 3), 1): 0.19533778904176757, ((3, 1), (3, 3), 1): 0.1372025369320189, ((1, 3), (4, 1), 1): 0.994558963995365, ((4, 3), (3, 5), 1): 0.20348822529422586, ((3, 1), (2, 5), 2): 1, ((1, 1), (1, 2), 1): 0.11557481992554361, ((2, 3), (2, 5), 1): 0.22826119784230392, ((4, 1), (3, 3), 2): -0.310560810019771, ((3, 3), (3, 5), 1): 0.2269853427699806, ((2, 5), (1, 1), 2): 0.021718219278539827, ((4, 3), (3, 4), 1): 0.08926685916085525, ((1, 3), (2, 5), 1): 0.20212453176074113, ((3, 2), (4, 4), 1): 1, ((4, 1), (1, 5), 2): 1, ((3, 2), (2, 5), 2): -0.18686706438563816, ((3, 3), (2, 1), 2): -1.0091384072003506, ((1, 4), (4, 1), 2): 1.0, ((2, 4), (2, 5), 1): 0.32111663041046457, ((2, 3), (3, 2), 1): 0.8067398431533378, ((2, 5), (2, 2), 2): -0.8907402083632011, ((3, 5), (3, 4), 1): 1.0, ((4, 3), (2, 3), 1): 0.07111585142428119, ((3, 4), (1, 2), 1): 0.9296952642670534, ((3, 5), (2, 5), 1): 0.9895737164229612, ((4, 2), (4, 4), 1): 0.1618124891842053, ((1, 4), (4, 5), 2): 1, ((4, 2), (3, 3), 1): 0.05757193020268783, ((1, 4), (4, 3), 2): 1, ((2, 1), (2, 4), 1): 0.15955214320215866, ((3, 2), (3, 5), 2): -0.17810626004507882, ((2, 5), (4, 2), 2): 0.9817788576981368, ((2, 3), (2, 2), 1): 0.7983032028560546, ((2, 1), (3, 5), 1): 1, ((3, 1), (4, 2), 1): 0.23602622467955947, ((1, 1), (2, 5), 1): 1, ((1, 2), (3, 3), 1): 0.1597181053170788, ((1, 3), (2, 3), 1): 0.06284916302820723, ((1, 2), (4, 2), 2): 1, ((4, 2), (4, 1), 1): 0.9937159895329343, ((4, 2), (2, 1), 2): -1.0133484866242541, ((3, 5), (2, 4), 2): -0.7342544354000213, ((1, 3), (1, 5), 2): 1, ((3, 5), (4, 2), 1): 1.0, ((2, 4), (4, 1), 2): 0.3067297068836668, ((1, 3), (2, 2), 2): -0.9004809671258683, ((1, 2), (2, 3), 1): 0.05393467425772688, ((3, 1), (4, 5), 1): 1, ((4, 2), (3, 4), 1): 0.15765396977853577, ((1, 5), (3, 1), 2): -1.0071955468004148, ((2, 4), (4, 5), 2): 1.0, ((1, 5), (1, 2), 1): 0.973899417496094, ((2, 1), (4, 3), 1): 0.798130326139023, ((3, 1), (2, 2), 2): -0.4518054012955342, ((2, 4), (3, 2), 2): -0.9106894676123461, ((3, 5), (4, 4), 1): 0.8784818530811718, ((4, 5), (1, 5), 1): 1.0, ((4, 1), (1, 2), 2): 1, ((3, 2), (1, 4), 2): 1, ((3, 3), (1, 2), 2): 0.9756225654059477, ((2, 3), (3, 3), 2): -0.8147426793629275, ((4, 5), (3, 3), 1): 0.7864266425081522, ((3, 3), (4, 2), 1): 0.8580566454091537, ((2, 2), (4, 2), 2): 1.0, ((2, 2), (3, 1), 1): 0.7140119185577363, ((1, 3), (1, 2), 2): 0.970380078725537, ((4, 5), (4, 1), 2): -0.037408356964768213, ((3, 1), (1, 4), 1): 1, ((4, 2), (1, 4), 2): 1, ((2, 1), (1, 5), 1): 1, ((1, 4), (3, 1), 2): -1.0355233534049555, ((2, 3), (4, 4), 1): 0.8869095444349707, ((4, 1), (4, 2), 1): 0.11888042439811199, ((4, 4), (4, 5), 1): 0.2647364561527825, ((3, 3), (4, 5), 1): 1, ((3, 1), (1, 2), 1): 1.0, ((3, 3), (2, 5), 1): 0.27942250425122017, ((2, 1), (3, 3), 2): -0.3007597551991241, ((4, 4), (2, 5), 2): -0.6561759689405173, ((4, 2), (3, 2), 1): 0.05867754215909111, ((2, 5), (3, 3), 1): 0.989941438755752, ((4, 3), (4, 1), 1): 0.99610196737245, ((3, 3), (4, 1), 1): 1.0, ((1, 4), (1, 5), 2): -0.14355124210043968, ((2, 4), (1, 2), 2): 0.9190060505397832, ((3, 3), (4, 4), 1): 0.2507067500005709, ((1, 2), (4, 1), 2): 1, ((3, 3), (2, 4), 1): 0.33135551739480024, ((2, 1), (3, 1), 1): 0.6161590602202698, ((4, 3), (4, 5), 1): 0.2048721727465671, ((2, 2), (2, 5), 1): 0.20220153404174426, ((2, 2), (4, 5), 1): 1, ((1, 1), (1, 5), 1): 1, ((2, 4), (2, 1), 1): 0.8619295086760047, ((3, 4), (3, 2), 2): -0.911257444975588, ((4, 1), (2, 4), 2): 1, ((1, 2), (2, 1), 2): -1.0015851955617652, ((1, 5), (1, 4), 1): 0.9007753446093363, ((4, 1), (2, 4), 1): 1, ((1, 3), (4, 1), 2): 0.7316447028297071, ((3, 2), (3, 1), 1): 0.7003761826075076, ((1, 3), (3, 2), 1): 0.7035191627859128, ((4, 4), (1, 3), 1): 0.9701931464664492, ((3, 5), (4, 5), 1): 0.9003010982112084, ((1, 4), (3, 3), 1): 0.7811081370484317, ((1, 2), (1, 3), 1): 0.15853827277861068, ((4, 4), (3, 4), 1): 0.10821704568206754, ((3, 2), (2, 4), 1): 0.20926029393407197, ((3, 5), (3, 4), 2): -0.7314984477750197, ((1, 1), (2, 1), 1): 0.04333169170264277, ((4, 5), (3, 2), 2): -0.9082500863413111, ((3, 2), (4, 1), 1): 0.9914355771840069, ((3, 2), (2, 1), 1): 0.5301973417456641, ((3, 3), (1, 3), 2): 1, ((2, 3), (3, 5), 1): 0.28393708371104387, ((1, 3), (3, 4), 1): 0.20276018235466345, ((1, 4), (4, 3), 1): 0.9331776650450225, ((3, 5), (2, 2), 1): 0.9642986884930768, ((4, 4), (4, 3), 1): 0.9052502709543551, ((2, 1), (1, 3), 1): 1, ((4, 2), (2, 5), 2): 1, ((2, 1), (3, 5), 2): 1, ((4, 5), (3, 1), 1): 0.8625768132073671, ((4, 1), (1, 1), 1): 1, ((1, 4), (3, 4), 2): -0.7300321006496174, ((2, 2), (4, 4), 1): 1, ((4, 1), (4, 3), 2): 1.0, ((1, 2), (3, 3), 2): -0.8119313395238149, ((2, 4), (3, 1), 2): -1.012734116191741, ((2, 1), (4, 2), 2): 1.0, ((3, 5), (2, 4), 1): 0.9839753234853945, ((3, 1), (4, 4), 1): 1, ((1, 3), (1, 5), 1): 0.2056285296304528, ((1, 4), (2, 5), 2): -0.2849086921877741, ((4, 5), (3, 5), 2): -0.658399987312279, ((2, 3), (2, 1), 1): 0.7638188030237765, ((2, 5), (4, 4), 1): 0.9063245455351578, ((3, 1), (4, 5), 2): 1, ((1, 3), (2, 4), 2): -0.3165870540303496, ((2, 2), (1, 4), 2): 1.0, ((1, 5), (3, 1), 1): 0.8864394538807511, ((2, 1), (3, 4), 1): 0.1647947151783034, ((3, 5), (1, 5), 2): 1, ((4, 5), (1, 5), 2): 1, ((3, 2), (4, 5), 2): 1, ((3, 2), (1, 4), 1): 1, ((2, 3), (1, 5), 1): 1, ((1, 5), (4, 2), 2): 1, ((4, 5), (3, 3), 2): -0.816010868207673, ((1, 1), (3, 5), 2): 1, ((2, 2), (4, 2), 1): 0.8729178206737671, ((4, 4), (1, 4), 1): 0.9145037038629066, ((2, 2), (3, 3), 2): -0.3569249502174085, ((4, 5), (4, 1), 1): 0.9980316134009496, ((4, 4), (3, 1), 1): 0.7688248276188335, ((1, 2), (3, 5), 2): 1, ((4, 4), (2, 3), 1): 0.8024151707135625, ((4, 2), (1, 5), 1): 1, ((1, 5), (4, 1), 1): 0.9945589840408455, ((3, 4), (2, 4), 1): 0.8913214411217506, ((1, 2), (3, 2), 1): 0.05187652296125862, ((1, 1), (2, 5), 2): 1, ((2, 3), (4, 1), 2): 0.5114205814554534, ((4, 4), (4, 5), 2): -0.1445183969356742, ((3, 3), (2, 5), 2): -0.17488124029809976, ((1, 3), (4, 2), 2): 1, ((4, 2), (2, 4), 1): 0.16565075063712617, ((3, 5), (2, 3), 1): 1.0, ((1, 1), (1, 3), 1): 0.10521271005434411, ((4, 2), (3, 2), 2): -0.9056570541876074, ((1, 1), (4, 2), 2): 1, ((1, 2), (4, 4), 1): 0.9719167203946906, ((4, 4), (2, 2), 2): -0.907454704270218, ((4, 2), (4, 4), 2): 1, ((1, 2), (4, 1), 1): 0.9891474995274644, ((3, 5), (4, 2), 2): 0.9928750290205556, ((1, 4), (2, 4), 2): -0.7304682166781746, ((2, 2), (3, 5), 2): -0.18320845232891933, ((2, 1), (3, 1), 2): -1.0065903991271812, ((1, 1), (4, 4), 2): 1, ((3, 4), (2, 2), 2): -0.9096403669355693, ((2, 2), (4, 5), 2): 1, ((1, 1), (3, 3), 2): -0.3493994015502698, ((2, 4), (2, 1), 2): -1.0246035060645127, ((2, 5), (1, 2), 2): 0.8992044269355517, ((2, 1), (2, 2), 1): 0.1370751148273041, ((1, 5), (2, 3), 2): -0.816315994027398, ((4, 2), (2, 2), 2): -0.9058660154157181, ((4, 5), (4, 4), 1): 0.9231551443141378, ((1, 5), (1, 4), 2): 0.9558862969551754, ((2, 5), (4, 1), 2): 1.0, ((3, 4), (1, 1), 2): 0.49666244510432045, ((3, 2), (3, 1), 2): -1.0294030612987504, ((3, 5), (3, 2), 2): -0.9091040033638278, ((4, 5), (2, 5), 2): 1, ((2, 3), (1, 3), 1): 0.8426443884930128, ((3, 5), (4, 5), 2): 0.9275349326849716, ((1, 2), (1, 1), 1): 1, ((3, 4), (1, 4), 2): 1, ((4, 2), (1, 1), 2): 1, ((2, 5), (4, 3), 2): 1, ((1, 2), (1, 4), 1): 0.15802517428300492, ((4, 3), (1, 5), 1): 1.0, ((1, 4), (4, 2), 2): 1.0, ((4, 5), (2, 2), 2): -0.9102267310509045, ((1, 2), (4, 5), 2): 1, ((4, 5), (1, 1), 1): 1, ((1, 1), (3, 1), 1): 0.05609927151016375, ((3, 4), (3, 1), 1): 0.8843215978157538, ((3, 3), (3, 2), 1): 0.7930775123091419, ((4, 3), (3, 3), 2): -0.8152348241560257, ((1, 4), (1, 1), 1): 1, ((1, 5), (4, 4), 2): 1, ((2, 5), (3, 4), 2): -0.7305698217455987, ((3, 3), (1, 3), 1): 0.9030146448832552, ((2, 2), (2, 1), 2): -1.0082533003366931, ((1, 3), (3, 4), 2): -0.7314880668717193, ((1, 3), (3, 5), 1): 0.2068973046791136, ((1, 2), (2, 5), 2): 1, ((1, 5), (3, 5), 2): 1, ((1, 1), (2, 3), 2): -0.31424583889271585, ((4, 2), (1, 3), 2): 1, ((3, 1), (1, 4), 2): 1, ((2, 1), (1, 3), 2): 1, ((2, 3), (4, 3), 1): 0.8648777697216433, ((4, 5), (4, 4), 2): 0.9545971871946962, ((2, 1), (4, 5), 1): 1, ((3, 2), (1, 3), 1): 0.9837241154785762, ((1, 4), (4, 4), 1): 0.9324840023820046, ((4, 4), (2, 1), 1): 0.7983814318499245, ((2, 3), (1, 2), 2): 0.9705357900887224, ((4, 5), (1, 3), 1): 0.9726249387291557, ((2, 4), (3, 1), 1): 0.8989979363601553, ((3, 2), (3, 4), 1): 0.17513362864466048, ((1, 3), (3, 3), 2): -0.8147067025747446, ((4, 4), (3, 2), 1): 0.7007821978923675, ((1, 4), (2, 5), 1): 0.0646324534497502, ((1, 3), (4, 4), 2): 1, ((2, 4), (1, 3), 2): 0.9223081339163887, ((2, 1), (1, 2), 1): 0.11563461600793887, ((2, 5), (4, 4), 2): 1.0, ((4, 5), (2, 1), 1): 0.8951077021288742, ((1, 3), (2, 4), 1): 0.06085081910937114, ((4, 4), (1, 1), 2): 0.964335930733397, ((3, 2), (2, 3), 1): 0.21409214998767223, ((4, 1), (1, 3), 1): 1, ((3, 3), (2, 2), 2): -0.8966164086190347, ((3, 5), (1, 5), 1): 1.0, ((1, 5), (3, 2), 1): 0.8941779944686354, ((3, 3), (1, 5), 2): 1, ((1, 2), (1, 3), 2): -0.23121302162760188, ((2, 3), (1, 5), 2): 1.0, ((3, 4), (4, 3), 1): 0.8639629784175258, ((4, 1), (4, 4), 2): 1, ((1, 1), (3, 5), 1): 1, ((3, 4), (3, 5), 1): 0.3174987053467302, ((4, 1), (2, 2), 2): -0.9070231106404031, ((2, 2), (3, 3), 1): 0.19315756724679153, ((4, 2), (3, 3), 2): -0.33869212813264105, ((3, 5), (4, 3), 1): 0.9524885113862396, ((1, 2), (3, 5), 1): 1.0, ((3, 2), (4, 2), 2): 0.8541881118459766, ((3, 5), (1, 4), 1): 0.8604094909819061, ((3, 4), (2, 4), 2): -0.7298665072123115, ((4, 3), (1, 3), 1): 1.0, ((3, 1), (3, 4), 1): 0.15765777604937264, ((4, 5), (2, 3), 2): -0.8258026935727567, ((2, 5), (2, 4), 2): -0.7386722686990296, ((1, 3), (4, 2), 1): 0.8980932911171543, ((2, 1), (3, 2), 2): -0.36291633447663557, ((3, 1), (4, 2), 2): 0.9903120034217646, ((3, 5), (2, 3), 2): -0.8174230541222387, ((2, 5), (3, 5), 2): -0.6575745189642199, ((4, 5), (1, 3), 2): 1, ((3, 1), (3, 5), 2): 1, ((4, 4), (1, 3), 2): 1, ((1, 4), (1, 2), 2): 0.9534488154245393, ((2, 2), (3, 4), 1): 0.20348310613356416, ((2, 2), (4, 3), 1): 0.9041175187779159, ((4, 5), (3, 4), 2): -0.7330589390977797, ((4, 5), (1, 1), 2): 0.9537895384087722, ((2, 4), (1, 5), 1): 0.30213469635669377, ((4, 1), (1, 2), 1): 1, ((4, 4), (1, 2), 2): 0.990421325844813, ((2, 4), (1, 1), 1): 1, ((4, 3), (1, 1), 2): 0.8651269127898816, ((1, 1), (4, 4), 1): 1, ((2, 2), (2, 3), 1): 0.17609929197127072, ((3, 4), (4, 4), 1): 0.818680514404033, ((4, 2), (1, 2), 1): 0.8785192397669539, ((2, 1), (1, 1), 1): 1.0, ((2, 1), (2, 2), 2): -0.3312446098881903, ((4, 2), (2, 2), 1): 0.06389836052565426, ((2, 3), (4, 5), 2): 1, ((1, 2), (3, 1), 2): -1.0209880339078452, ((2, 5), (1, 5), 1): 0.8817174405499195, ((1, 3), (2, 3), 2): -0.8110329834071671, ((1, 1), (3, 4), 1): 0.9511469862534098, ((3, 1), (2, 4), 2): -0.2309569568656345, ((2, 2), (1, 3), 2): 1.0, ((1, 4), (3, 5), 1): 0.2653902149937237, ((4, 2), (2, 3), 2): -0.8138868458273809, ((4, 1), (3, 2), 1): 0.04482076051985209, ((3, 1), (2, 5), 1): 1, ((2, 3), (2, 5), 2): -0.16122390696560196, ((1, 2), (1, 1), 2): 1.0, ((2, 2), (2, 4), 2): -0.2053875628296672, ((2, 5), (1, 1), 1): 1, ((1, 4), (2, 1), 2): -1.0129011166590605, ((4, 3), (3, 4), 2): -0.3005677611521846, ((2, 5), (4, 3), 1): 0.9338027280804285, ((1, 2), (4, 3), 1): 0.7978781425802568, ((2, 4), (4, 3), 1): 0.9030425672045597, ((1, 5), (2, 5), 1): 0.06007460458932701, ((2, 1), (2, 3), 1): 0.14008094501045312, ((1, 2), (1, 5), 1): 1, ((2, 3), (3, 2), 2): -0.9033549903477539, ((1, 2), (4, 5), 1): 1, ((2, 5), (4, 5), 1): 1.0, ((4, 3), (2, 3), 2): -0.813637650249052, ((3, 3), (3, 2), 2): -0.9117601816275892, ((1, 1), (3, 2), 1): 0.1226025096896329, ((1, 5), (1, 1), 1): 1, ((3, 5), (1, 2), 1): 1.0, ((1, 5), (4, 4), 1): 0.9336803121451966, ((3, 1), (4, 3), 2): 0.34027750964771414, ((4, 4), (2, 4), 2): -0.7339529809580575, ((4, 5), (2, 2), 1): 0.8913580244129864, ((3, 4), (2, 5), 1): 0.4289765319719137, ((1, 5), (3, 5), 1): 0.11969469062004603, ((3, 2), (1, 1), 2): 0.8259674394548184, ((4, 2), (1, 3), 1): 1.0, ((2, 2), (1, 1), 1): 1, ((2, 5), (4, 2), 1): 1.0, ((3, 2), (1, 3), 2): 1, ((4, 2), (3, 1), 2): -1.0079316203794897, ((1, 4), (4, 4), 2): 1, ((4, 3), (3, 1), 1): 0.5676824081823012, ((3, 5), (2, 1), 2): -0.9807229796502881, ((4, 3), (2, 2), 1): 0.7110481335320298, ((2, 3), (1, 2), 1): 0.9083094473818095, ((4, 4), (3, 5), 2): -0.26509277420185645, ((1, 3), (3, 3), 1): 0.07184731672109003, ((1, 3), (2, 1), 2): -1.0294236272374635, ((2, 4), (4, 1), 1): 0.9945589877993649, ((2, 4), (1, 3), 1): 0.9039942831886304, ((4, 1), (4, 5), 2): 1, ((4, 4), (4, 2), 2): 0.9866587445506985, ((3, 1), (2, 1), 2): -1.0184767140825057, ((4, 4), (1, 1), 1): 1, ((1, 5), (4, 5), 2): 1, ((2, 4), (4, 5), 1): 0.9806196998050258, ((3, 3), (2, 2), 1): 0.7931083575908794, ((4, 1), (2, 3), 2): -0.36302326900443843, ((3, 2), (1, 2), 1): 0.9104843643386593, ((1, 5), (3, 2), 2): -0.9247570429844738, ((2, 2), (4, 1), 1): 0.9945589188927639, ((3, 3), (1, 1), 1): 1, ((3, 5), (4, 4), 2): 1.0, ((2, 1), (1, 4), 2): 1, ((3, 3), (1, 2), 1): 0.9177806880419701, ((4, 5), (2, 4), 2): -0.736642542052252, ((1, 3), (1, 4), 2): -0.18034117095038973, ((2, 5), (3, 2), 2): -0.911777607147614, ((3, 3), (4, 2), 2): 0.8727800051107054, ((4, 3), (2, 4), 2): -0.7294610501126101, ((2, 2), (1, 5), 2): 1, ((2, 2), (3, 1), 2): -1.0098707217629257, ((2, 3), (1, 4), 1): 0.2566203092894169, ((3, 4), (4, 3), 2): 0.9622351579065104, ((1, 3), (4, 3), 2): 1, ((3, 4), (2, 1), 1): 0.8762114963608658, ((4, 3), (3, 2), 2): -0.9056422866805601, ((4, 3), (1, 3), 2): 1, ((3, 2), (4, 4), 2): 1.0, ((3, 1), (3, 4), 2): -0.24140808013611578, ((4, 5), (2, 3), 1): 0.8907564749371153, ((3, 2), (2, 2), 1): 0.7191982365197972, ((2, 1), (3, 3), 1): 0.15853221763719047, ((2, 1), (3, 2), 1): 0.18575883895549986, ((3, 1), (2, 2), 1): 0.23484234598286238, ((4, 4), (2, 5), 1): 0.26369294880594296, ((3, 4), (4, 2), 1): 0.9089695506341718, ((3, 2), (2, 5), 1): 0.2040987360563405, ((3, 5), (4, 1), 1): 1.0, ((4, 3), (4, 1), 2): 0.022629163566202586, ((1, 4), (1, 5), 1): 0.2615254632874314, ((4, 5), (3, 4), 1): 0.09317453543483652, ((3, 1), (3, 2), 2): -0.3324039628830815, ((2, 4), (1, 2), 1): 0.9546111635608467, ((2, 5), (2, 3), 1): 1.0, ((1, 4), (2, 3), 1): 0.07072133733863788, ((3, 3), (2, 4), 2): -0.24423070261643492, ((4, 5), (4, 2), 2): 0.9520029108331467, ((4, 3), (4, 2), 2): 0.8251620992090077, ((1, 1), (2, 2), 2): -0.46999420277855736, ((4, 3), (4, 5), 2): 1, ((2, 2), (2, 3), 2): -0.2604628951492143, ((4, 3), (1, 2), 1): 0.9561831126491338, ((1, 1), (1, 5), 2): 1, ((2, 2), (1, 2), 1): 0.8934570735372399, ((1, 5), (2, 4), 1): 0.05987841384748097, ((3, 1), (4, 1), 1): 0.9794301143343072, ((1, 2), (2, 2), 2): -0.9031441100764511, ((2, 3), (4, 5), 1): 1.0, ((4, 4), (3, 4), 2): -0.7329918294669494, ((4, 1), (2, 5), 1): 1, ((3, 1), (1, 3), 2): 1, ((4, 2), (3, 5), 1): 0.16076196167118842, ((1, 4), (3, 5), 2): -0.6563564572329216, ((1, 1), (2, 1), 2): -1.0046217585006287, ((2, 1), (4, 1), 2): 1.0, ((2, 2), (2, 4), 1): 0.1748234439390267, ((1, 4), (2, 1), 1): 0.7591448853566694, ((4, 3), (4, 4), 1): 0.20138194207988513, ((4, 4), (3, 2), 2): -0.9094774437323561, ((4, 4), (3, 1), 2): -1.0233536783889432, ((1, 5), (2, 5), 2): -0.6584484737851426, ((2, 4), (3, 4), 2): -0.7324398727025895, ((3, 3), (4, 3), 1): 0.7926094056640772, ((1, 2), (1, 5), 2): 1, ((4, 2), (4, 5), 2): 1, ((1, 1), (4, 5), 2): 1, ((3, 4), (3, 3), 1): 0.8881848177394579, ((1, 1), (3, 2), 2): -0.8972649141655644, ((3, 2), (4, 1), 2): 0.6957808937644265, ((2, 4), (4, 2), 1): 0.9213689534062441, ((4, 4), (2, 4), 1): 0.07442464045392347, ((1, 1), (2, 4), 1): 0.11614837421108555, ((3, 4), (2, 3), 2): -0.811969795761119, ((2, 2), (3, 2), 2): -0.9034481159326487, ((3, 5), (2, 2), 2): -0.9077205784037367, ((4, 1), (3, 1), 2): -1.0006872247377565, ((3, 3), (2, 3), 2): -0.8106880466440939, ((1, 5), (3, 3), 1): 0.8857727338191934, ((1, 1), (1, 4), 1): 1, ((2, 4), (2, 2), 1): 0.8615073852193177, ((4, 2), (3, 1), 1): 0.06469938768130035, ((4, 5), (1, 2), 2): 1, ((4, 3), (3, 1), 2): -1.0050446624245286, ((1, 1), (4, 3), 1): 1.0, ((2, 2), (4, 4), 2): 1, ((4, 3), (2, 2), 2): -0.9098750179584605, ((4, 2), (4, 3), 1): 0.1609112845074091, ((3, 3), (3, 4), 2): -0.19821135808372556, ((2, 1), (4, 2), 1): 0.9367076508278885, ((4, 1), (2, 1), 1): 0.0029477909484790146, ((4, 4), (2, 2), 1): 0.7964303861098907, ((1, 3), (1, 4), 1): 0.20144775848920138, ((3, 1), (4, 4), 2): 1, ((4, 5), (3, 5), 1): 0.09019533521071371, ((2, 3), (2, 1), 2): -1.0049667365705337, ((4, 1), (4, 5), 1): 1, ((3, 3), (3, 1), 1): 0.7923234717957268, ((4, 4), (4, 1), 1): 0.9980316106815211, ((4, 4), (4, 2), 1): 0.9004333994326529, ((2, 2), (1, 4), 1): 1, ((4, 1), (3, 4), 1): 0.1180543956673505, ((3, 2), (3, 3), 2): -0.2542830931818786, ((2, 1), (3, 4), 2): -0.23239479869543767, ((4, 1), (2, 3), 1): 0.12329103614023702, ((2, 2), (4, 1), 2): 0.22235447806685316, ((1, 5), (2, 2), 2): -0.9044571737861063, ((2, 5), (1, 3), 1): 1.0, ((3, 2), (1, 5), 2): 1, ((1, 3), (4, 5), 1): 1.0, ((2, 1), (1, 4), 1): 1, ((2, 4), (1, 4), 1): 0.7873347109210276, ((1, 3), (3, 1), 1): 0.7158682319250578, ((2, 5), (3, 2), 1): 0.9821808001335697, ((4, 2), (2, 5), 1): 1.0, ((1, 1), (4, 1), 2): 1, ((3, 5), (1, 2), 2): 0.9794468433918019, ((3, 4), (1, 3), 2): 0.9412659970690485, ((2, 2), (1, 5), 1): 1, ((3, 3), (4, 3), 2): 0.8689152906683688, ((1, 3), (3, 5), 2): -0.2577285811017259, ((3, 5), (3, 1), 1): 0.9999429440951021, ((4, 2), (1, 5), 2): 1, ((4, 3), (3, 2), 1): 0.10523859244173978, ((1, 2), (3, 2), 2): -0.9064747501226718, ((4, 2), (4, 3), 2): -0.23041462302271223, ((4, 1), (3, 5), 2): 1, ((1, 2), (2, 4), 1): 0.15902105603408578, ((3, 4), (1, 1), 1): 1, ((3, 2), (2, 2), 2): -0.901044318530798, ((4, 2), (2, 4), 2): -0.30919954379604564, ((3, 5), (4, 1), 2): 0.5424031394313444, ((3, 3), (3, 1), 2): -0.9884747124218779, ((2, 5), (3, 5), 1): 0.9918718480507022, ((1, 3), (2, 5), 2): -0.1785192122881476, ((1, 4), (2, 4), 1): 0.06894839080025866, ((1, 1), (2, 2), 1): 0.03610175018766119, ((4, 5), (3, 1), 2): -1.0145116924320088, ((3, 4), (2, 2), 1): 0.8726455998119356}

optimal policy for playerA by Littman pour player 0 :

{((2, 2), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.5830440841136021, 'N': 0.4169559158863979}, ((2, 5), (2, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (1, 2), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 5), (4, 3), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (2, 4), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (3, 3), 1): {'W': 0.18691360662044587, 'E': 0.8130863933795541, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (4, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 1), (1, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (4, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 3), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (2, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 2): {'W': 0.0, 'E': 0.3738558962810109, 'stand': 0.0, 'S': 0.0, 'N': 0.6261441037189891}, ((1, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (1, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 3), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (1, 2), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (2, 1), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (1, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (3, 5), 1): {'W': 0.3251644386506498, 'E': 0.44441278270730505, 'stand': 0.2304227786420452, 'N': 0.0}, ((3, 1), (1, 1), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 2), (2, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 5), (4, 3), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 1), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (1, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (4, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 1), (4, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (2, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (2, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 1), (2, 3), 2): {'E': 0.3563573659497866, 'stand': 0.0, 'S': 0.6436426340502134, 'N': 0.0}, ((4, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (4, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 5), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 2), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (3, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.391445002330001, 'S': 0.608554997669999, 'N': 0.0}, ((3, 2), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (4, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 4), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (1, 2), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (4, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 3), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (1, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 3), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 5), (3, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (4, 3), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.2193398643200568, 'S': 0.0, 'N': 0.7806601356799432}, ((3, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (1, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 3), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 3), 2): {'E': 0.31104615447041617, 'stand': 0.0, 'S': 0.0, 'N': 0.6889538455295838}, ((4, 5), (2, 5), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 3), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.2424385911489263, 'S': 0.0, 'N': 0.7575614088510737}, ((4, 1), (3, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 2), (1, 1), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 3), (4, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 1), (1, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 3), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 3), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (2, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 5), (1, 3), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (3, 5), 2): {'W': 0.0, 'E': 0.08866869385348512, 'stand': 0.9113313061465149, 'S': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 2), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (1, 2), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 4), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (1, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 4), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 2), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (2, 4), 2): {'W': 0.7245636628886754, 'E': 0.0, 'stand': 0.0, 'S': 0.2754363371113246, 'N': 0.0}, ((2, 1), (4, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 1), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 5), (1, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 3), (1, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3541758960937722, 'S': 0.0, 'N': 0.6458241039062278}, ((1, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 4), (3, 5), 2): {'W': 0.8211799830655103, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.1788200169344897}, ((3, 5), (1, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 1), (2, 1), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 4), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (3, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (4, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (1, 4), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.3484530580006644, 'S': 0.0, 'N': 0.6515469419993356}, ((2, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (2, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 3), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 1), (4, 1), 1): {'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((1, 3), (1, 1), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 4), 2): {'W': 0.0, 'E': 0.9990918127579832, 'stand': 0.0, 'S': 0.0009081872420168456, 'N': 0.0}, ((4, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (1, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (2, 5), 2): {'W': 0.6921812466503541, 'E': 0.0, 'stand': 0.0, 'S': 0.3078187533496459, 'N': 0.0}, ((3, 1), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (1, 5), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (3, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (3, 3), 1): {'W': 0.0, 'E': 0.05615305019029984, 'stand': 0.359602904379522, 'S': 0.0, 'N': 0.5842440454301782}, ((1, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 1), (1, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.6113232646066938, 'S': 0.38867673539330616, 'N': 0.0}, ((4, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.5821568910434898, 'S': 0.0, 'N': 0.41784310895651017}, ((2, 5), (1, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 4), 1): {'W': 0.1923703738096182, 'E': 0.36783342816612674, 'stand': 0.43979619802425507, 'N': 0.0}, ((1, 3), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (1, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (4, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.5304067123214415, 'S': 0.4695932876785585, 'N': 0.0}, ((2, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 4), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (3, 3), 1): {'W': 0.0, 'E': 0.401752619274128, 'stand': 0.598247380725872, 'N': 0.0}, ((1, 4), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 1), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 5), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 3), (2, 3), 1): {'W': 0.009638166451866992, 'E': 0.990361833548133, 'stand': 0.0, 'S': 0.0}, ((1, 2), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (2, 3), 1): {'W': 0.021036608453934375, 'E': 0.37864581077059134, 'stand': 0.6003175807754743, 'S': 0.0}, ((3, 1), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (3, 1), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 4), (4, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (1, 2), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 4), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (1, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 1), (1, 2), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((2, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (1, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (4, 1), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((3, 1), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 3), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 2), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 1), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (1, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (4, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 3), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (1, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 1), (2, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (1, 4), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 1), (2, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (1, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 4), 1): {'W': 0.3504448114442196, 'E': 0.6495551885557804, 'stand': 0.0, 'N': 0.0}, ((3, 2), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (2, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 5), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 3), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 1), (3, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (1, 1), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (4, 3), 2): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (4, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (4, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 1), (4, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 3), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 1), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (1, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 2), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 5), (4, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((4, 5), (3, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (3, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (4, 2), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (3, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (4, 1), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (3, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (3, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 1), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 2), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (1, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 2), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 2), (4, 4), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 4), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 2), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 2), (4, 1), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((3, 5), (4, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (3, 1), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (4, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 1), (3, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (1, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (2, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.31077184507100575, 'S': 0.6892281549289943, 'N': 0.0}, ((1, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((4, 2), (2, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (4, 4), 1): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 5), (1, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (4, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((2, 3), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 5), (4, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 4), (1, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (1, 1), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 5), (4, 3), 2): {'W': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((1, 2), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (1, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((4, 5), (2, 2), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 2), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 5), (1, 1), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 1), (3, 1), 1): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (1, 1), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 5), (4, 4), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (2, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 2), (2, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((1, 5), (3, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((1, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 1), (1, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 1), (1, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((2, 3), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 4), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 1), (4, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 4), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((4, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (3, 4), 1): {'W': 0.0, 'E': 0.15513845369451684, 'stand': 0.0, 'S': 0.0, 'N': 0.8448615463054832}, ((1, 3), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 4), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (2, 5), 1): {'W': 0.052082373625712566, 'E': 0.5919825925480339, 'stand': 0.3559350338262536, 'S': 0.0}, ((1, 3), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 4), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 1), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 5), (4, 4), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 1), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 3), (2, 4), 1): {'W': 0.0, 'E': 0.5258104200216275, 'stand': 0.4741895799783725, 'S': 0.0}, ((4, 4), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (1, 3), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (2, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 5), 1): {'W': 0.0, 'E': 0.9893774186753834, 'stand': 0.0, 'S': 0.0, 'N': 0.010622581324616617}, ((1, 5), (3, 2), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 3), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (1, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 3), (1, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 4), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 1), (3, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.46396575689714314, 'S': 0.0, 'N': 0.5360342431028569}, ((4, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (3, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 2), (3, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 2), (4, 2), 2): {'W': 0.3733548352742352, 'E': 0.0, 'stand': 0.6266451647257648, 'S': 0.0, 'N': 0.0}, ((3, 5), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 4), (2, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((3, 1), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (2, 4), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (4, 2), 2): {'E': 0.07489104644967581, 'stand': 0.0, 'S': 0.13369210974224588, 'N': 0.7914168438080783}, ((3, 5), (2, 3), 2): {'W': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (3, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (1, 3), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (3, 5), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 4), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 2), (3, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (3, 4), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 1), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (1, 2), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (1, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 4), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 3), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 1), (4, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (2, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.28402560103442653, 'S': 0.7159743989655735, 'N': 0.0}, ((3, 4), (4, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 1), (1, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.5366247935615069, 'S': 0.463375206438493, 'N': 0.0}, ((4, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (4, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 3), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((1, 1), (3, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (2, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (1, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 2), 1): {'E': 0.28320656637964836, 'stand': 0.6941095593098766, 'N': 0.022683874310475065}, ((3, 1), (2, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 3), (2, 5), 2): {'W': 0.0, 'E': 0.07875647930398583, 'stand': 0.9212435206960141, 'S': 0.0, 'N': 0.0}, ((1, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (2, 4), 2): {'W': 0.0, 'E': 0.35938804470318697, 'stand': 0.0, 'S': 0.640611955296813, 'N': 0.0}, ((2, 5), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 4), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 5), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 4), (4, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 5), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (2, 3), 1): {'W': 0.0, 'E': 0.17203750426366293, 'stand': 0.0, 'S': 0.8279624957363371, 'N': 0.0}, ((1, 2), (1, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 3), (3, 2), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 2), (4, 5), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((2, 5), (4, 5), 1): {'W': 0.0, 'E': 0.7991092493240355, 'stand': 0.0, 'S': 0.0, 'N': 0.20089075067596457}, ((4, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 5), (1, 1), 1): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 5), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 5), (4, 4), 1): {'W': 0.0, 'stand': 1.0, 'S': 0.0}, ((3, 1), (4, 3), 2): {'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 5), (2, 2), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 5), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (1, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 2), (1, 3), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((2, 2), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 5), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 3), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 2), (3, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 4), (4, 4), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 5), (2, 1), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 4), (3, 5), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((1, 3), (2, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 4), (1, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 4), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (2, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (1, 1), 1): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 5), (4, 5), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (4, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((3, 3), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 3), 2): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 5), (4, 4), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((2, 1), (1, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((3, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (2, 4), 2): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 5), (3, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 2), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (4, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((3, 4), (2, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (3, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 3), (1, 3), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((3, 2), (4, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 1), (3, 4), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 5), (2, 3), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 1), (3, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 1), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (2, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (4, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 3), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((1, 4), (1, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 5), (3, 4), 1): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.451401514437214, 'S': 0.0, 'N': 0.548598485562786}, ((2, 4), (1, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 5), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 4), (2, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 3), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((4, 5), (4, 2), 2): {'W': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 3), (4, 2), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (2, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((2, 2), (2, 3), 2): {'W': 0.7638309804037821, 'E': 0.0, 'stand': 0.0, 'S': 0.23616901959621797, 'N': 0.0}, ((4, 3), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 1), (1, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 2), (1, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 5), (2, 4), 1): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((3, 1), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0}, ((2, 3), (4, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (3, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 1), (2, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 1), (1, 3), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 2), (3, 5), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 4), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (2, 1), 2): {'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (4, 1), 2): {'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.653224176515421, 'S': 0.3467758234845791, 'N': 0.0}, ((1, 4), (2, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 3), (4, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 4), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((1, 5), (2, 5), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 4), (3, 4), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((1, 2), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'S': 0.25}, ((4, 2), (4, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((1, 1), (4, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 4), (3, 3), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 1), (3, 2), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 2), (4, 1), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 4), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (2, 4), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (2, 4), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (2, 3), 2): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 5), (2, 2), 2): {'W': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (3, 1), 2): {'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((3, 3), (2, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (3, 3), 1): {'W': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 1), (1, 4), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((2, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((4, 5), (1, 2), 2): {'W': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((4, 3), (3, 1), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 3), 1): {'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((2, 2), (4, 4), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 3), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 2), (4, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 3), (3, 4), 2): {'W': 0.7291714668227663, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.27082853317723365}, ((2, 1), (4, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (2, 1), 1): {'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 3), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 1), (4, 4), 2): {'E': 0.25, 'stand': 0.25, 'S': 0.25, 'N': 0.25}, ((4, 5), (3, 5), 1): {'W': 1.0, 'stand': 0.0, 'N': 0.0}, ((2, 3), (2, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 1), (4, 5), 1): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((3, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 4), (4, 1), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((4, 4), (4, 2), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'N': 0.0}, ((2, 2), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((4, 1), (3, 4), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 2), (3, 3), 2): {'W': 0.7329075985324053, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 0.2670924014675947}, ((2, 1), (3, 4), 2): {'E': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((4, 1), (2, 3), 1): {'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((2, 2), (4, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((1, 5), (2, 2), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (1, 3), 1): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((3, 2), (1, 5), 2): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((1, 3), (4, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 1), (1, 4), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((2, 4), (1, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0}, ((2, 5), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 5), 1): {'W': 1.0, 'E': 0.0, 'stand': 0.0, 'N': 0.0}, ((1, 1), (4, 1), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'S': 0.3333333333333333}, ((3, 5), (1, 2), 2): {'W': 0.0, 'stand': 0.0, 'S': 1.0, 'N': 0.0}, ((3, 4), (1, 3), 2): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((2, 2), (1, 5), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 3), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((1, 3), (3, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 5), (3, 1), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (1, 5), 2): {'W': 0.25, 'E': 0.25, 'stand': 0.25, 'N': 0.25}, ((4, 3), (3, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'N': 0.0}, ((1, 2), (3, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((4, 2), (4, 3), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((4, 1), (3, 5), 2): {'E': 0.3333333333333333, 'stand': 0.3333333333333333, 'N': 0.3333333333333333}, ((1, 2), (2, 4), 1): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((3, 4), (1, 1), 1): {'W': 0.2, 'E': 0.2, 'stand': 0.2, 'S': 0.2, 'N': 0.2}, ((3, 2), (2, 2), 2): {'W': 0.0, 'E': 0.0, 'stand': 1.0, 'S': 0.0, 'N': 0.0}, ((4, 2), (2, 4), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 5), (4, 1), 2): {'W': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((3, 3), (3, 1), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 0.0, 'N': 1.0}, ((2, 5), (3, 5), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}, ((1, 3), (2, 5), 2): {'W': 0.0, 'E': 0.0, 'stand': 0.0, 'S': 1.0}, ((1, 4), (2, 4), 1): {'W': 0.10332849699832591, 'E': 0.8966715030016741, 'stand': 0.0, 'S': 0.0}, ((1, 1), (2, 2), 1): {'E': 0.27776346467524665, 'stand': 0.7222365353247533, 'S': 0.0}, ((4, 5), (3, 1), 2): {'W': 0.0, 'stand': 0.0, 'N': 1.0}, ((3, 4), (2, 2), 1): {'W': 0.0, 'E': 1.0, 'stand': 0.0, 'S': 0.0, 'N': 0.0}}

ecart entre new\_V et val de littman :

(1.9088836495866333, 254.19707470011298)

ecart entre val de player 0 trouve par shpaley et val de player 0 trouve par littman

(1.8999999999991513, 341.0065504035587)

Petit Analyse :

1. On peut voir que même si avec 20 millions itération de Littman écart entre valeur de jeu trouvé par Littman et valeur de jeu trouvé par Shapley et aussi par « new\_vi« est énorme c’est encore a cause de plein états non touché , les états qui ont encore valeur de jeu == 1 et probabilité action équiprobable. On a pas touché valeur de ces état car Shapley player a joué toujours son meilleur action donc il y’a certain état que le jeu n’est jamais entrée dans ces états

2 . Pour les états que on a modifié le valeur de jeu et aussi probable des action , les valeur obtenu par Littman sont très proche de valeur obtenu par SHapley

Test shapley player with littman player (apprentissage contre policy trouve par shapler pour player B avec fonction type 3 1000000 fois

p0 avec littman player (apprentissage contre shapley player avec fonction type 3 et p1 avec shapley player

total\_rewards

{0: 0.33852258347154546, 1: -0.33852258347154546}

winers : {0: 0.506094660482816, 1: 0.49390533951718396} nombre fois arrive en etat but 67272

Petit Analyse :c’est trop intéressant même si on n’a pas converger vers EN avec Littman mais on a très bien appris commet jouer de manier optimal contre un Shapley player et donc comme on peut voir les deux player ont presque même résultat . (player Littman un peu mieux que Shapley player)

Test shapley player with littman player (apprentissage contre random player) 1000000 fois

p0 avec littman player (apprentissage contre random player) et p1 avec shapley player

total\_rewards

{0: 0.17842298269317697, 1: -0.17842298269317697}

winers : {0: 0.5003940227492379, 1: 0.499605977250762} nombre fois arrive en etat but 67255

Ici on peut bien dire que Littman avec 20 million itération contre random player a trouvé bien stratégie optimal, car comme on peut voir Shapley player et Littman player ont même résultat . C’est très positive car même si avec Littman on a pas bien converger pour trouve valeur de jeu correct mais stratégie mixte trouvé est optimal

Test shapley player contre random player 1000000 fois

p0 shapley player et p1 random player

total\_rewards

{0: 0.9418129465018951, 1: -0.9418129465018951}

winers : {0: 0.9891723708774113, 1: 0.010827629122588675} nombre fois arrive en etat but 104455

Test littman player (apprentissage contre random player) contre random player 1000000 fois

p0 littman player (apprentissage contre random player) et p1 random player

total\_rewards

{0: 1.0398684626635275, 1: -1.0398684626635275}

winers : {0: 0.9877023503971222, 1: 0.012297649602877872} nombre fois arrive en etat but 98962

Test littman player (apprentissage contre shapley player avec fonction type 3) contre random player 1000000 fois

p0 littman player (apprentissage contre shapley player avec fonction type 3) et p1 random player

total\_rewards

{0: 0.7209872944931814, 1: -0.7209872944931814}

winers : {0: 0.9353993494759667, 1: 0.06460065052403324} nombre fois arrive en etat but 66408

Pour les 3 dernier test Encore la meme chose shapley player et Littman player sont trop bien contre random player

Test shapley player contre shapley player 1000000 fois

p0 shapley player et p1 shapley player

total\_rewards

{0: -0.02310050362707384, 1: 0.02310050362707384}

winers : {0: 0.5017194692661793, 1: 0.4982805307338207} nombre fois arrive en etat but 73860

Encore la même chose que test en haut comme stratégie trouvé par Shapley est optimal quand deux Shapley player joue il obtient même résultats