

	0	1	2	3	4
0
1
2	.	*	*	*	.
3
4

liveCells (Life)
(1,2)
(2,2)
(3,2)

liveNeighbourMap (Neighbours)	
Key	Value

	0	1	2	3	4
0
1
2	.	*	*	*	.
3
4

liveCells (Life)
(1,2)
(2,2)
(3,2)

liveNeighbourMap (Neighbours)	
Key	Value
(0,1)	1
(1,1)	1
(2,1)	1
(0,2)	1
(2,2)	1
(0,3)	1
(1,3)	1
(2,3)	1

	0	1	2	3	4
0
1
2	.	*	*	*	.
3
4

liveCells (Life)
(1,2)
(2,2)
(3,2)

liveNeighbourMap (Neighbours)	
Key	Value
(0,1)	1
(1,1)	2
(2,1)	2
(0,2)	1
(2,2)	1
(0,3)	1
(1,3)	2
(2,3)	2
(3,1)	1
(1,2)	1
(3,2)	1
(3,3)	1

	0	1	2	3	4
0
1
2	.	*	*	*	.
3
4

liveCells (Life)
(1,2)
(2,2)
(3,2)

liveNeighbourMap (Neighbours)	
Key	Value
(0,1)	1
(1,1)	2
(2,1)	3
(0,2)	1
(2,2)	2
(0,3)	1
(1,3)	2
(2,3)	3
(3,1)	2
(1,2)	1
(3,2)	1
(3,3)	2
(4,1)	1
(4,2)	1
(4,3)	1

liveCells (Life)
(1,2)
(2,2)
(3,2)

liveNeighbourMap (Neighbours)	
Key	Value
(0,1)	1
(1,1)	2
(2,1)	3
(0,2)	1
(2,2)	2
(0,3)	1
(1,3)	2
(2,3)	3
(3,1)	2
(1,2)	1
(3,2)	1
(3,3)	2
(4,1)	1
(4,2)	1
(4,3)	1

liveToDead (GameOfLife)
(1,2)
(3,2)

deadToLive (GameOfLife)
(2,1)
(2,3)

	0	1	2	3	4
0
1
2	.	*	*	*	.
3
4

liveToDead (GameOfLife)
(1,2)
(3,2)

liveCells (Life)
(1,2)
(2,2)
(3,2)

liveNeighbourMap (Neighbours)	
Key	Value
(0,1)	1
(1,1)	2
(2,1)	3
(0,2)	1
(2,2)	2
(0,3)	1
(1,3)	2
(2,3)	3
(3,1)	2
(1,2)	1
(3,2)	1
(3,3)	2
(4,1)	1
(4,2)	1
(4,3)	1

	0	1	2	3	4
0
1
2	.	.	*	*	.
3
4

liveToDead (GameOfLife)
(1,2)
(3,2)

	liveCells (Life)
(1,2)	
(2,2)	
(3,2)	

	liveNeighbourMap (Neighbours)	
	Key	Value
(0,1)		
	(1,1)	1
	(2,1)	2
(0,2)		
	(2,2)	1
(0,3)		
	(1,3)	1
	(2,3)	2
	(3,1)	2
	(1,2)	1
	(3,2)	1
	(3,3)	2
	(4,1)	1
	(4,2)	1
	(4,3)	1

	0	1	2	3	4
0
1
2	.	.	*	.	.
3
4

liveToDead (GameOfLife)
(1,2)
(3,2)

	liveCells (Life)
(1,2)	
	(2,2)
(3,2)	

	liveNeighbourMap (Neighbours)	
	Key	Value
	(1,1)	1
	(2,1)	1
(2,2)		
	(1,3)	1
	(2,3)	1
	(3,1)	1
	(1,2)	1
	(3,2)	1
	(3,3)	1
(4,1)		
(4,2)		
(4,3)		

	0	1	2	3	4
0
1
2	.	.	*	.	.
3
4

deadToLive (GameOfLife)
(2,1)
(2,3)

liveCells (Life)
(2,2)

liveNeighbourMap (Neighbours)	
Key	Value
(1,1)	1
(2,1)	1
(1,3)	1
(2,3)	1
(3,1)	1
(1,2)	1
(3,2)	1
(3,3)	1

	0	1	2	3	4
0
1	.	.	*	.	.
2	.	.	*	.	.
3
4

deadToLive (GameOfLife)
(2,1)
(2,3)

liveCells (Life)
(2,2)
(2,1)

liveNeighbourMap (Neighbours)	
Key	Value
(1,1)	2
(2,1)	1
(1,3)	1
(2,3)	1
(3,1)	2
(1,2)	2
(3,2)	2
(3,3)	1
(1,0)	1
(2,0)	1
(3,0)	1
(2,2)	1

	0	1	2	3	4
0
1	.	.	*	.	.
2	.	.	*	.	.
3	.	.	*	.	.
4

deadToLive (GameOfLife)
(2,1)
(2,3)

liveCells (Life)
(2,2)
(2,1)
(2,3)

liveNeighbourMap (Neighbours)	
Key	Value
(1,1)	2
(2,1)	1
(1,3)	2
(2,3)	1
(3,1)	2
(1,2)	3
(3,2)	3
(3,3)	2
(1,0)	1
(2,0)	1
(3,0)	1
(2,2)	2
(1,4)	1
(2,4)	1
(3,4)	1

	0	1	2	3	4
0
1	.	.	*	.	.
2	.	.	*	.	.
3	.	.	*	.	.
4

liveCells (Life)
(2,2)
(2,1)
(2,3)

liveNeighbourMap (Neighbours)	
Key	Value
(1,1)	2
(2,1)	1
(1,3)	2
(2,3)	1
(3,1)	2
(1,2)	3
(3,2)	3
(3,3)	2
(1,0)	1
(2,0)	1
(3,0)	1
(2,2)	2
(1,4)	1
(2,4)	1
(3,4)	1