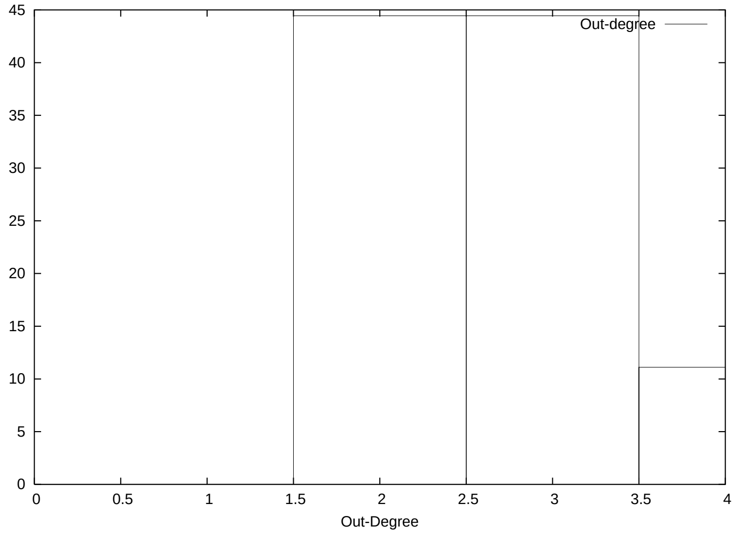
Graph: divine/shuffle-3x3

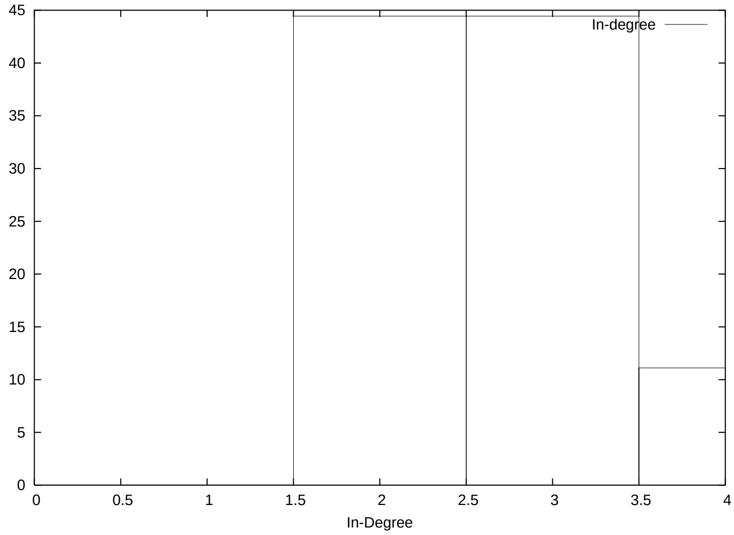
General Info

Example title	Shuffle puzzle
Parameter	3x3
Reduction	
Modification	
States	181,450
Edges	483,850
Average degree	2.6

Out-Degrees distribution:



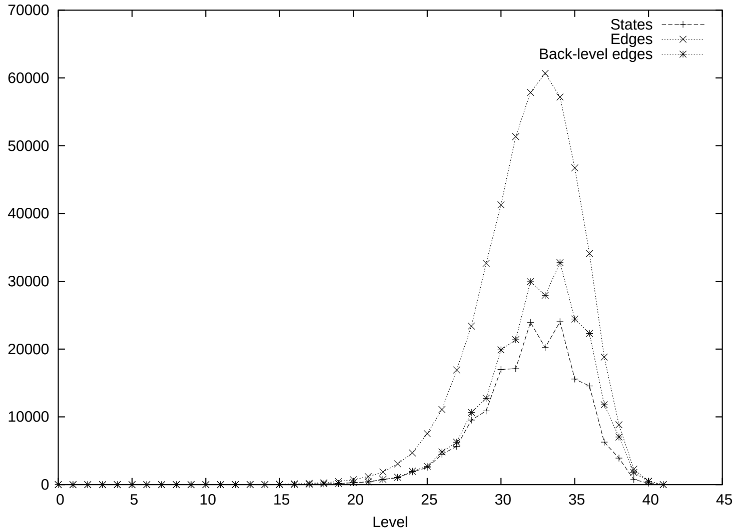
In-Degrees distribution:



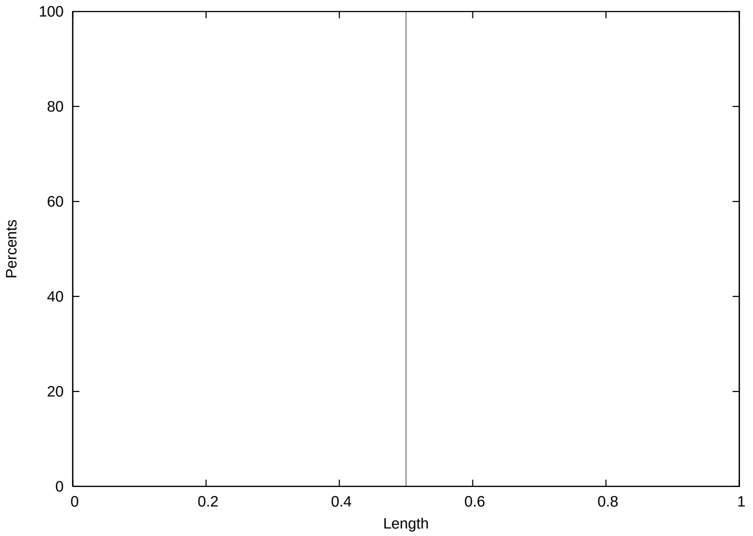
BFS Info

BFS height	41
BFS width	24,047 (13.2%)
Back level edges	241,920 (49.9%)

BFS level info:



Back level edges lengths:



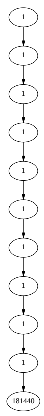
SCC Info

SCC components	11
SCC quetient height	10
SCC quetient nontrivial height	1
Number of terminal components	1
The largest component is	the only terminal

Statistics according to **sizes**:

Size	Number of components	Number of states here
181,440	1	99.9%
1	10	0%

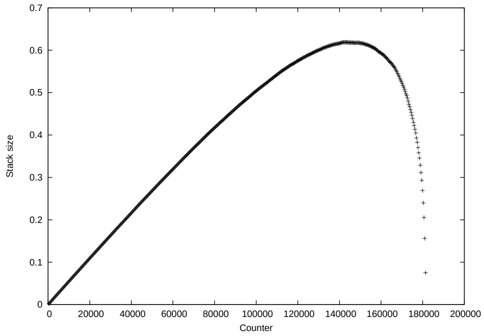
SCC component graph (part):



DFS Info

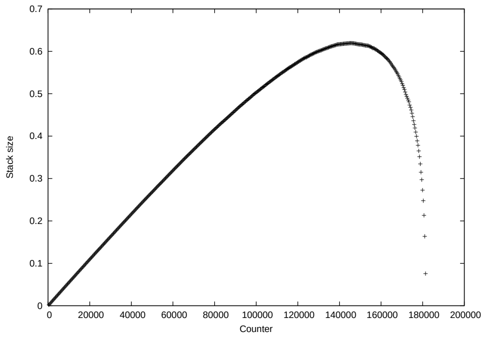
Run 0

front-edges : back-edges : cross-edges = 181,449 : 241,920 : 60,481 = 37.5%:49.9%:12.4%
Max. stack size: 112,353 (61.9%)
Shortest cycle detected: 2
Most often detected lengths of cycles: 2 (181439), 12 (270), 16 (38), 32 (31), 20 (17)
Stack graph:



Run 1

front-edges : back-edges : cross-edges = 181,449 : 241,920 : 60,481 = 37.5%:49.9%:12.4%
Max. stack size: 112,445 (61.9%)
Shortest cycle detected: 2
Most often detected lengths of cycles: 2 (181439), 12 (272), 16 (45), 32 (22), 36 (13)
Stack graph:



Local Structure

Short cycles(up to 6)

2	181,440	(99.9%)

Diamonds

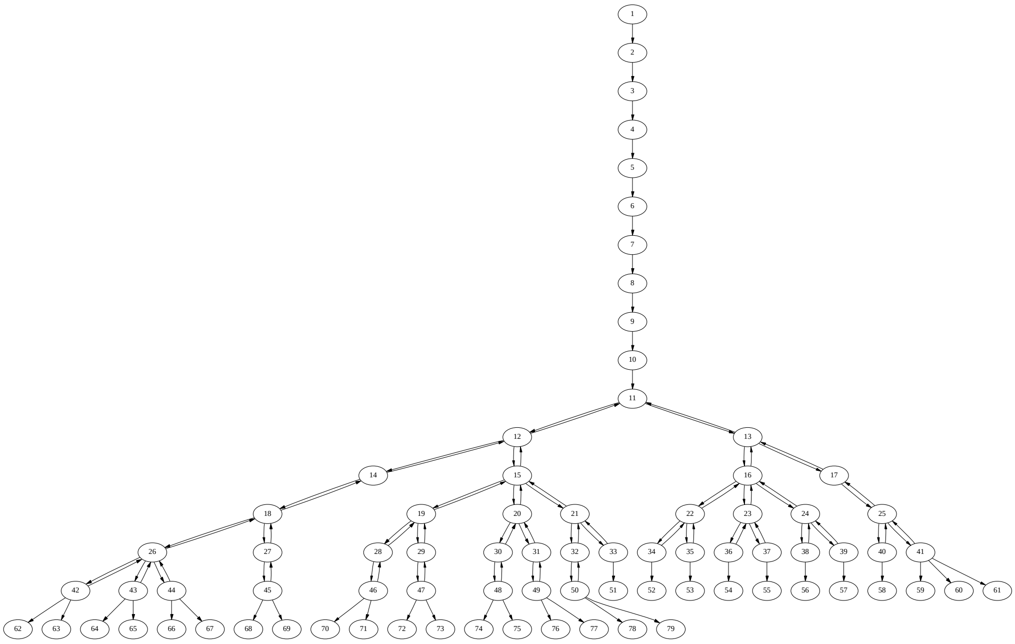
181,440 (99.9%)

Neighborhoods

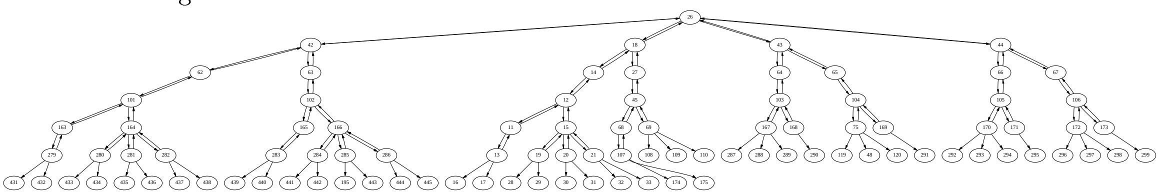
k	avg size	avg clustering
1	3.6	1
2	8.5	1.3
3	17.4	1.4
4	32.5	1.5

Visualization of some parts of the state state space:

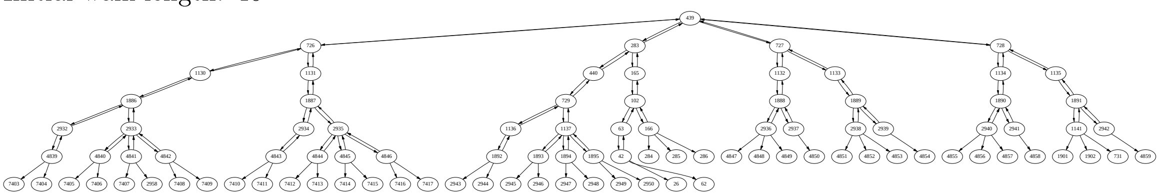
Initial walk length: 0



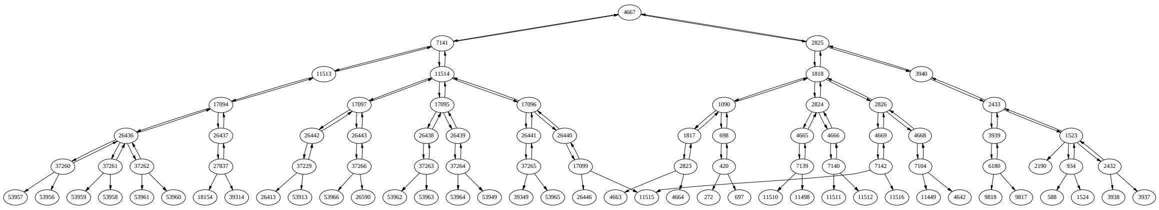
Initial walk length: 20



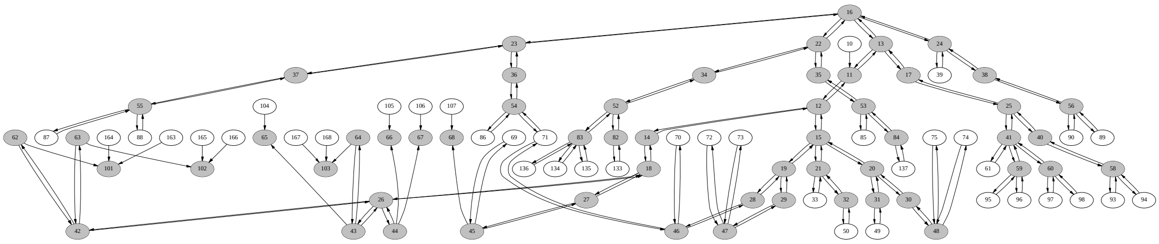
Initial walk length: 40



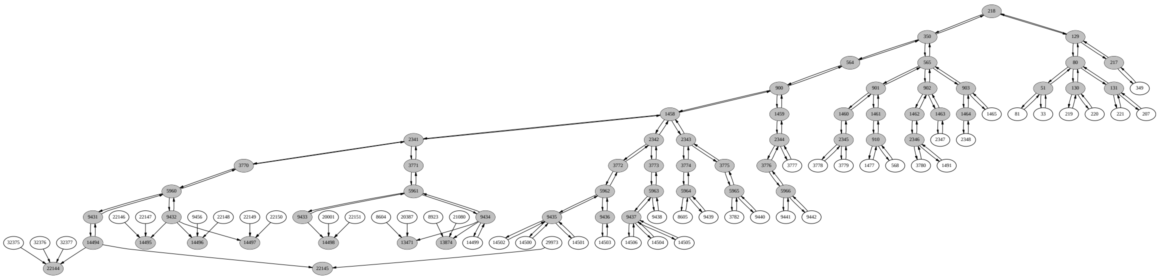
Initial walk length: 60



Initial walk length: 20



Initial walk length: 40



Initial walk length: 60