

# CA Non-linear Rule Replacement Analyzer

## Results

### Summary Table

N	Target Max Cycle	Original Configuration	Positions Replaced	Combinations Tested	Maximal Configs Found	Maximal Configurations
4	15	90 150 90 150	1	8	2	<ul style="list-style-type: none"> <li>• 90 30 90 150</li> <li>• 90 75 90 150</li> <li>• 150 150 210</li> </ul>
4	15	150 150 90 150	1	8	2	<ul style="list-style-type: none"> <li>150</li> <li>• 150 150 225</li> <li>150</li> </ul>
5	31	150 150 90 90 90	1	8	0	None
5	31	90 150 150 90 90	1	8	0	None
5	31	150 150 150 90 90	1	8	0	None
5	31	90 90 150 150 90	1	8	0	None
5	31	150 150 150 150 90	1	8	2	<ul style="list-style-type: none"> <li>• 150 150 75</li> <li>150 90</li> <li>• 150 150 210</li> <li>150 90</li> </ul>
5	31	90 90 90 90 150	2	64	0	None
5	31	150 150 90 90 150	1	8	0	None
5	31	90 90 90 150 150	2	64	0	None
5	31	90 90 150 150 150	1	8	0	None
5	31	90 150 150 150 150	1	8	0	None
6	63	90 150 150 90 90 90	1	8	0	None
6	63	150 90 150 90 150 90	1	8	0	None
6	63	90 150 150 90 150 90	1	8	2	<ul style="list-style-type: none"> <li>• 90 30 150 90</li> <li>150 90</li> <li>• 90 75 150 90</li> <li>150 90</li> </ul>

N	Target Max Cycle	Original Configuration	Positions Replaced	Combinations Tested	Maximal Configs Found	Maximal Configurations
6	63	90 90 90 150 150 90	2	64	0	None
6	63	90 150 90 150 150 90	2	64	0	None
6	63	150 90 150 150 150 90	1	8	0	None
6	63	90 90 90 90 90 150	2	64	0	None
6	63	150 90 150 90 90 150	1	8	4	<ul style="list-style-type: none"> <li>• 150 90 150 30</li> <li>90 150</li> <li>• 150 90 150 45</li> <li>90 150</li> <li>• 150 90 150</li> <li>210 90 150</li> <li>• 150 90 150</li> <li>225 90 150</li> </ul>
6	63	150 90 90 150 90 150	1	8	0	None
6	63	90 150 90 150 90 150	2	64	0	None
6	63	90 150 150 150 90 150	2	64	4	<ul style="list-style-type: none"> <li>• 90 30 150 150</li> <li>30 150</li> <li>• 90 30 150 150</li> <li>45 150</li> <li>• 90 75 150 150</li> <li>210 150</li> <li>• 90 75 150 150</li> <li>225 150</li> </ul>
7	127	90 90 150 90 90 90 90	1	8	0	None
7	127	150 90 90 150 90 90 90	1	8	0	None
7	127	150 150 90 150 90 90 90	1	8	0	None
7	127	90 150 150 150 90 90 90	2	64	0	None
7	127	90 90 90 90 150 90 90	2	64	0	None
7	127	90 150 90 90 150 90 90	2	64	0	None
7	127	150 90 150 90 150 90 90	1	8	2	<ul style="list-style-type: none"> <li>• 150 90 150 30</li> <li>150 90 90</li> <li>• 150 90 150</li> <li>225 150 90 90</li> </ul>
7	127	150 150 150 90 150 90 90	2	64	0	None

N	Target Max Cycle	Original Configuration	Positions Replaced	Combinations Tested	Maximal Configs Found	Maximal Configurations
7	127	90 90 150 90 90 150 90	1	8	0	None
7	127	90 150 150 90 90 150 90	1	8	0	None
7	127	150 150 90 150 90 150 90	1	8	0	None
7	127	90 150 150 150 90 150 90	2	64	0	None
7	127	90 150 90 90 150 150 90	2	64	0	None
7	127	150 150 150 90 150 150 90	2	64	0	None
7	127	90 90 90 150 150 150 90	2	64	0	None
7	127	90 150 90 150 150 150 90	2	64	0	None
7	127	150 90 150 150 150 150 90	1	8	0	None
7	127	90 150 90 90 90 90 150	3	512	0	None
7	127	150 90 150 90 90 90 150	2	64	8	<ul style="list-style-type: none"> <li>• 150 90 150 30</li> <li>90 30 150</li> <li>• 150 90 150 30</li> <li>90 45 150</li> <li>• 150 90 150 45</li> <li>90 30 150</li> <li>• 150 90 150 45</li> <li>90 45 150</li> <li>• 150 90 150</li> <li>210 90 30 150</li> <li>• 150 90 150</li> <li>210 90 45 150</li> <li>• 150 90 150</li> <li>225 90 30 150</li> <li>• 150 90 150</li> <li>225 90 45 150</li> </ul>
7	127	150 150 150 90 90 90 150	2	64	0	None
7	127	90 90 90 150 90 90 150	3	512	0	None

N	Target Max Cycle	Original Configuration	Positions Replaced	Combinations Tested	Maximal Configs Found	Maximal Configurations
7	127	150 90 150 150 90 90 150	2	64	8	<ul style="list-style-type: none"> <li>• 150 90 150 30</li> <li>90 30 150</li> <li>• 150 90 150 30</li> <li>90 45 150</li> <li>• 150 90 150 45</li> <li>90 30 150</li> <li>• 150 90 150 45</li> <li>90 45 150</li> <li>• 150 90 150</li> <li>210 90 30 150</li> <li>• 150 90 150</li> <li>210 90 45 150</li> <li>• 150 90 150</li> <li>225 90 30 150</li> <li>• 150 90 150</li> <li>225 90 45 150</li> </ul>
7	127	150 90 90 90 150 90 150	1	8	0	None
7	127	90 90 150 90 150 90 150	2	64	0	None
7	127	150 90 90 150 150 90 150	1	8	0	None
7	127	150 150 90 150 150 90 150	2	64	0	None
7	127	90 150 150 150 150 90 150	2	64	0	None
7	127	90 90 90 150 90 150 150	3	512	0	None
7	127	90 150 90 150 90 150 150	3	512	0	None
7	127	150 90 150 150 90 150 150	2	64	8	<ul style="list-style-type: none"> <li>• 150 90 150 30</li> <li>90 30 150</li> <li>• 150 90 150 30</li> <li>90 45 150</li> <li>• 150 90 150 45</li> <li>90 30 150</li> <li>• 150 90 150 45</li> <li>90 45 150</li> <li>• 150 90 150</li> <li>210 90 30 150</li> <li>• 150 90 150</li> <li>210 90 45 150</li> <li>• 150 90 150</li> <li>225 90 30 150</li> <li>• 150 90 150</li> <li>225 90 45 150</li> </ul>
7	127	150 150 150 150 90 150 150	1	8	0	None

N	Target Max Cycle	Original Configuration	Positions Replaced	Combinations Tested	Maximal Configs Found	Maximal Configurations
7	127	150 90 90 90 150 150 150	1	8	0	None
7	127	90 90 150 90 150 150 150	2	64	0	None
7	127	90 150 150 90 150 150 150	2	64	0	None
7	127	150 150 90 150 150 150 150	2	64	0	None
8	255	90 150 150 90 90 90 90 90	1	8	0	None
8	255	150 150 150 150 90 90 90 90	1	8	0	None
8	255	90 150 90 150 90 150 90 90	3	512	0	None
8	255	150 90 150 150 90 150 90 90	2	64	0	None
8	255	90 150 150 90 150 150 90 90	2	64	0	None
8	255	150 90 90 150 150 150 90 90	1	8	0	None
8	255	150 90 150 90 90 90 150 90	2	64	0	None
8	255	150 150 90 150 90 90 150 90	1	8	0	None
8	255	90 90 150 90 150 90 150 90	2	64	0	None
8	255	150 150 90 150 150 90 150 90	2	64	0	None
8	255	150 90 150 150 150 90 150 90	1	8	0	None
8	255	150 150 150 150 150 90 150 90	2	64	0	None
8	255	90 90 90 90 90 150 150 90	3	512	0	None
8	255	90 90 150 150 90 150 150 90	2	64	0	None
8	255	150 150 150 90 150 150 150 90	2	64	0	None
8	255	150 150 90 90 150 90 90 150	3	512	0	None
8	255	90 90 150 150 150 90 90 150	3	512	0	None
8	255	90 150 90 90 90 150 90 150	3	512	0	None

N	Target Max Cycle	Original Configuration	Positions Replaced	Combinations Tested	Maximal Configs Found	Maximal Configurations
8	255	150 150 90 150 90 150 90 150	2	64	0	None
8	255	90 90 150 90 150 150 90 150	2	64	0	None
8	255	90 150 90 150 150 150 90 150	3	512	0	None
8	255	150 90 90 150 90 90 150 150	2	64	0	None
8	255	150 150 90 150 90 90 150 150	1	8	0	None
8	255	90 150 90 90 150 90 150 150	2	64	0	None
8	255	150 150 90 90 150 90 150 150	3	512	0	None
8	255	150 90 150 90 150 90 150 150	1	8	2	• 150 90 150 30 150 90 150 150 • 150 90 150 225 150 90 150 150
8	255	90 150 90 150 150 90 150 150	2	64	0	None
8	255	90 150 150 150 90 150 150 150	2	64	0	None
8	255	150 150 150 150 90 150 150 150	2	64	0	None
8	255	90 90 90 90 150 150 150 150	3	512	0	None
8	255	150 150 150 90 150 150 150 150	2	64	0	None
8	255	90 150 90 150 150 150 150 150	3	512	0	None

## Statistics by N

N	Total Configs Tested	Configs with Maximal Results	Success Rate	Total Maximal Configs Found
4 2	2		100.0%	4
5 10	1		10.0%	2
6 11	3		27.3%	10
7 33	4		12.1%	26
8 32	1		3.1%	2