

CA Configuration Class Filter

Overview

This report analyzes cellular automata configurations with different numbers of cells (N=4 through N=8), classifying each configuration based on rules 90 and 150.

Input Format: Rules: n1 n2 n3 ...

Classification Types: DC (Don't Care), I, II, III

N = 4

Configurations

- 1. **Rules:** 90 150 90 150
Classes: DC, II, I, DC
- 2. **Rules:** 150 150 90 150
Classes: DC, III, II, DC

Summary

Configurations with Class II or V: 2

N = 5

Configurations

- 1. **Rules:** 150 150 90 90 90
Classes: DC, III, II, I, DC
- 2. **Rules:** 90 150 150 90 90
Classes: DC, II, I, III, DC
- 3. **Rules:** 150 150 150 90 90
Classes: DC, III, II, I, DC
- 4. **Rules:** 90 90 150 150 90
Classes: DC, II, I, III, DC
- 5. **Rules:** 150 150 150 150 90
Classes: DC, III, II, I, DC
- 6. **Rules:** 90 90 90 90 150
Classes: DC, II, I, II, DC

7. **Rules:** 150 150 90 90 150

Classes: DC, III, II, I, DC

8. **Rules:** 90 90 90 150 150

Classes: DC, II, I, II, DC

9. **Rules:** 90 90 150 150 150

Classes: DC, II, I, III, DC

10. **Rules:** 90 150 150 150 150

Classes: DC, II, I, III, DC

Summary

Configurations with Class II or V: 10

N = 6

Configurations

1. **Rules:** 90 150 150 90 90 90

Classes: DC, II, I, III, III, DC

2. **Rules:** 150 90 150 90 150 90

Classes: DC, III, III, II, I, DC

3. **Rules:** 90 150 150 90 150 90

Classes: DC, II, I, III, III, DC

4. **Rules:** 90 90 90 150 150 90

Classes: DC, II, I, II, I, DC

5. **Rules:** 90 150 90 150 150 90

Classes: DC, II, I, II, I, DC

6. **Rules:** 150 90 150 150 150 90

Classes: DC, III, III, II, I, DC

7. **Rules:** 90 90 90 90 90 150

Classes: DC, II, I, II, I, DC

8. **Rules:** 150 90 150 90 90 150

Classes: DC, III, III, II, I, DC

9. **Rules:** 150 90 90 150 90 150

Classes: DC, III, III, III, II, DC

10. **Rules:** 90 150 90 150 90 150

Classes: DC, II, I, II, I, DC

11. **Rules:** 90 150 150 150 90 150
Classes: DC, II, I, III, II, DC

Summary

Configurations with Class II or V: 11

N = 7

Configurations

- 1. **Rules:** 90 90 150 90 90 90 90
Classes: DC, II, I, III, III, III, DC
- 2. **Rules:** 150 90 90 150 90 90 90
Classes: DC, III, III, III, II, I, DC
- 3. **Rules:** 150 150 90 150 90 90 90
Classes: DC, III, II, I, III, III, DC
- 4. **Rules:** 90 150 150 150 90 90 90
Classes: DC, II, I, III, II, I, DC
- 5. **Rules:** 90 90 90 90 150 90 90
Classes: DC, II, I, II, I, III, DC
- 6. **Rules:** 90 150 90 90 150 90 90
Classes: DC, II, I, II, I, III, DC
- 7. **Rules:** 150 90 150 90 150 90 90
Classes: DC, III, III, II, I, III, DC
- 8. **Rules:** 150 150 150 90 150 90 90
Classes: DC, III, II, I, II, I, DC
- 9. **Rules:** 90 90 150 90 90 150 90
Classes: DC, II, I, III, III, III, DC
- 10. **Rules:** 90 150 150 90 90 150 90
Classes: DC, II, I, III, III, III, DC
- 11. **Rules:** 150 150 90 150 90 150 90
Classes: DC, III, II, I, III, III, DC
- 12. **Rules:** 90 150 150 150 90 150 90
Classes: DC, II, I, III, II, I, DC

13. **Rules:** 90 150 90 90 150 150 90
Classes: DC, II, I, II, I, III, DC
14. **Rules:** 150 150 150 90 150 150 90
Classes: DC, III, II, I, II, I, DC
15. **Rules:** 90 90 90 150 150 150 90
Classes: DC, II, I, II, I, III, DC
16. **Rules:** 90 150 90 150 150 150 90
Classes: DC, II, I, II, I, III, DC
17. **Rules:** 150 90 150 150 150 150 90
Classes: DC, III, III, II, I, III, DC
18. **Rules:** 90 150 90 90 90 90 150
Classes: DC, II, I, II, I, II, DC
19. **Rules:** 150 90 150 90 90 90 150
Classes: DC, III, III, II, I, II, DC
20. **Rules:** 150 150 150 90 90 90 150
Classes: DC, III, II, I, II, I, DC
21. **Rules:** 90 90 90 150 90 90 150
Classes: DC, II, I, II, I, II, DC
22. **Rules:** 150 90 150 150 90 90 150
Classes: DC, III, III, II, I, II, DC
23. **Rules:** 150 90 90 90 150 90 150
Classes: DC, III, III, III, III, II, DC
24. **Rules:** 90 90 150 90 150 90 150
Classes: DC, II, I, III, III, II, DC
25. **Rules:** 150 90 90 150 150 90 150
Classes: DC, III, III, III, II, I, DC
26. **Rules:** 150 150 90 150 150 90 150
Classes: DC, III, II, I, III, II, DC
27. **Rules:** 90 150 150 150 150 90 150
Classes: DC, II, I, III, II, I, DC
28. **Rules:** 90 90 90 150 90 150 150
Classes: DC, II, I, II, I, II, DC
29. **Rules:** 90 150 90 150 90 150 150
Classes: DC, II, I, II, I, II, DC

30. **Rules:** 150 90 150 150 90 150 150
Classes: DC, III, III, II, I, II, DC
31. **Rules:** 150 150 150 150 90 150 150
Classes: DC, III, II, I, III, III, DC
32. **Rules:** 150 90 90 90 150 150 150
Classes: DC, III, III, III, III, II, DC
33. **Rules:** 90 90 150 90 150 150 150
Classes: DC, II, I, III, III, II, DC
34. **Rules:** 90 150 150 90 150 150 150
Classes: DC, II, I, III, III, II, DC
35. **Rules:** 150 150 90 150 150 150 150
Classes: DC, III, II, I, III, II, DC

Summary

Configurations with Class II or V: 35

N = 8

Configurations

1. **Rules:** 90 150 150 90 90 90 90 90
Classes: DC, II, I, III, III, III, III, DC
2. **Rules:** 150 150 150 150 90 90 90 90
Classes: DC, III, II, I, III, III, III, DC
3. **Rules:** 90 150 90 150 90 150 90 90
Classes: DC, II, I, II, I, II, I, DC
4. **Rules:** 150 90 150 150 90 150 90 90
Classes: DC, III, III, II, I, II, I, DC
5. **Rules:** 90 150 150 90 150 150 90 90
Classes: DC, II, I, III, III, II, I, DC
6. **Rules:** 150 90 90 150 150 150 90 90
Classes: DC, III, III, III, II, I, III, DC
7. **Rules:** 150 90 150 90 90 90 150 90
Classes: DC, III, III, II, I, II, I, DC
8. **Rules:** 150 150 90 150 90 90 150 90
Classes: DC, III, II, I, III, III, III, DC

9. **Rules:** 90 90 150 90 150 90 150 90
Classes: DC, II, I, III, III, II, I, DC
10. **Rules:** 150 150 90 150 150 90 150 90
Classes: DC, III, II, I, III, II, I, DC
11. **Rules:** 150 90 150 150 150 90 150 90
Classes: DC, III, III, II, I, III, III, DC
12. **Rules:** 150 150 150 150 150 90 150 90
Classes: DC, III, II, I, III, II, I, DC
13. **Rules:** 90 90 90 90 90 150 150 90
Classes: DC, II, I, II, I, II, I, DC
14. **Rules:** 90 90 150 150 90 150 150 90
Classes: DC, II, I, III, II, I, III, DC
15. **Rules:** 150 150 150 90 150 150 150 90
Classes: DC, III, II, I, II, I, III, DC
16. **Rules:** 150 150 90 90 150 90 90 150
Classes: DC, III, II, I, II, I, II, DC
17. **Rules:** 90 90 150 150 150 90 90 150
Classes: DC, II, I, III, II, I, II, DC
18. **Rules:** 90 150 90 90 90 150 90 150
Classes: DC, II, I, II, I, II, I, DC
19. **Rules:** 150 150 90 150 90 150 90 150
Classes: DC, III, II, I, III, III, II, DC
20. **Rules:** 90 90 150 90 150 150 90 150
Classes: DC, II, I, III, III, II, I, DC
21. **Rules:** 90 150 90 150 150 150 90 150
Classes: DC, II, I, II, I, III, II, DC
22. **Rules:** 150 90 90 150 90 90 150 150
Classes: DC, III, III, III, II, I, II, DC
23. **Rules:** 150 150 90 150 90 90 150 150
Classes: DC, III, II, I, III, III, III, DC
24. **Rules:** 90 150 90 90 150 90 150 150
Classes: DC, II, I, II, I, III, III, DC
25. **Rules:** 150 150 90 90 150 90 150 150
Classes: DC, III, II, I, II, I, II, DC

26. **Rules:** 150 90 150 90 150 90 150 150
Classes: DC, III, III, II, I, III, III, DC
27. **Rules:** 90 150 90 150 150 90 150 150
Classes: DC, II, I, II, I, III, III, DC
28. **Rules:** 90 150 150 150 90 150 150 150
Classes: DC, II, I, III, II, I, III, DC
29. **Rules:** 150 150 150 150 90 150 150 150
Classes: DC, III, II, I, III, III, II, DC
30. **Rules:** 90 90 90 90 150 150 150 150
Classes: DC, II, I, II, I, III, II, DC
31. **Rules:** 150 150 150 90 150 150 150 150
Classes: DC, III, II, I, II, I, III, DC
32. **Rules:** 90 150 90 150 150 150 150 150
Classes: DC, II, I, II, I, III, II, DC

Summary

Configurations with Class II or V: 32

Overall Results Summary

N (Cells)	Total Configurations	Class II or V Count
4	2	2
5	10	10
6	11	11
7	35	35
8	32	32
Total	90	90