Input PD code or string to snappy (use to reproduce the drawing):

8_3

Output PD code drawn by snappy:

[(5, 1, 6, 16), (11, 2, 12, 3), (9, 4, 10, 5), (15, 7, 16, 6), (13, 9, 14, 8), (3, 10, 4, 11), (1, 12, 2, 13), (7, 15, 8, 14)]

Arcs composing region <——> Region key

{1, 6, 8, 13, 15} <——> 41282
{1, 3, 5, 10, 12} <——> 5162
{2, 4, 9, 11, 13} <——> 10772
{2, 12} <——> 4100
{11, 3} <——> 2056
{10, 4} <——> 1040
{5, 7, 9, 14, 16} <——> 82592
{16, 6} <——> 65600
{15, 7} <——> 32896
{8, 14} <——> 16640

0

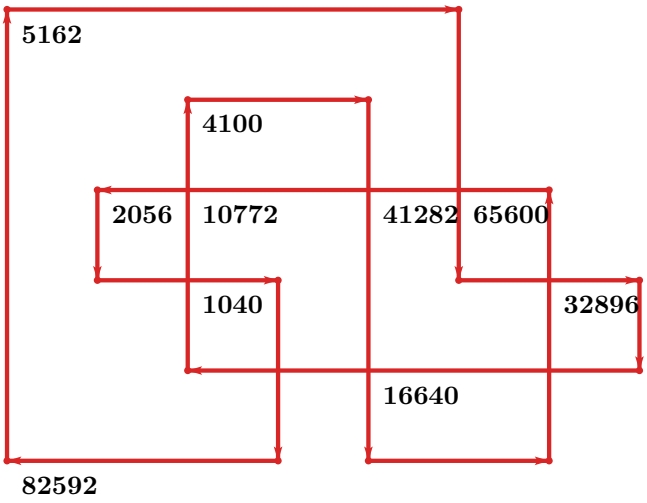

Figure 1: Snappy loop plot.

Minimal pinning sets:

{65600, 32896, 16640, 1040, 4100, 2056}

Number of minimal pinning sets: 1

Number of total pinning sets: 16

Pinning number: 1

Figure 2: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):
3_1
Output PD code drawn by snappy:
[(4, 1, 5, 2), (6, 3, 1, 4), (2, 5, 3, 6)]
Arcs composing region <——> Region key
{1, 4} <——> 18
{1, 3, 5} <——> 42
{2, 4, 6} <——> 84
{2, 5} <——> 36
{3, 6} <——> 72

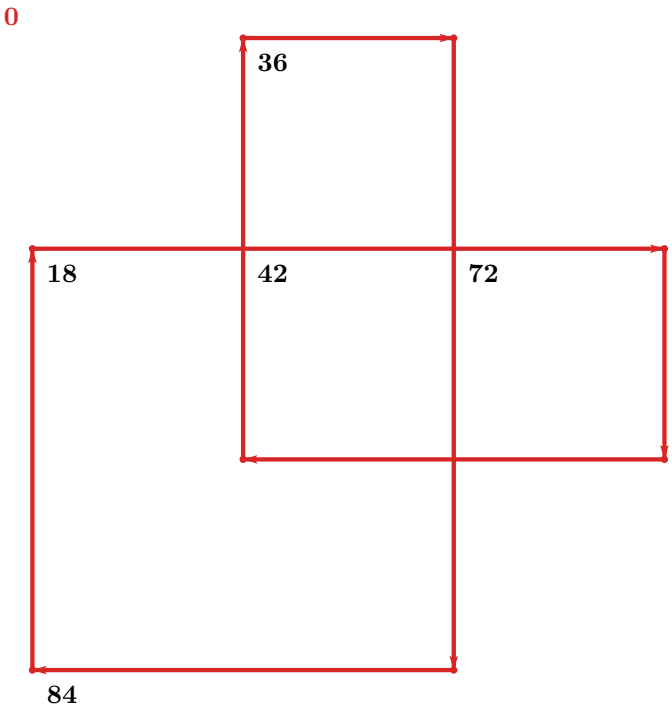

Figure 3: Snappy loop plot.

Minimal pinning sets:
{72, 18, 36}
Number of minimal pinning sets: 1
Number of total pinning sets: 4
Pinning number: 1

Figure 4: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):

4_1

Output PD code drawn by snappy:

[(3, 1, 4, 8), (5, 2, 6, 3), (7, 5, 8, 4), (1, 6, 2, 7)]

Arcs composing region <——> Region key

{1, 4, 7} <——> 146
{1, 3, 6} <——> 74
{2, 5, 7} <——> 164
{2, 6} <——> 68
{8, 3, 5} <——> 296
{8, 4} <——> 272

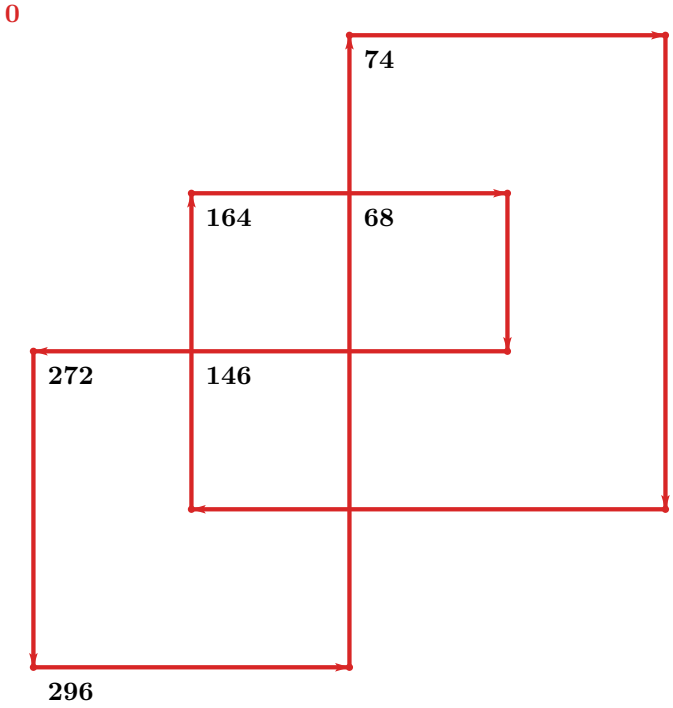

Figure 5: Snappy loop plot.

Minimal pinning sets:

{272, 74, 164, 68}
{272, 146, 296, 68}

Number of minimal pinning sets: 2
Number of total pinning sets: 7
Pinning number: 2

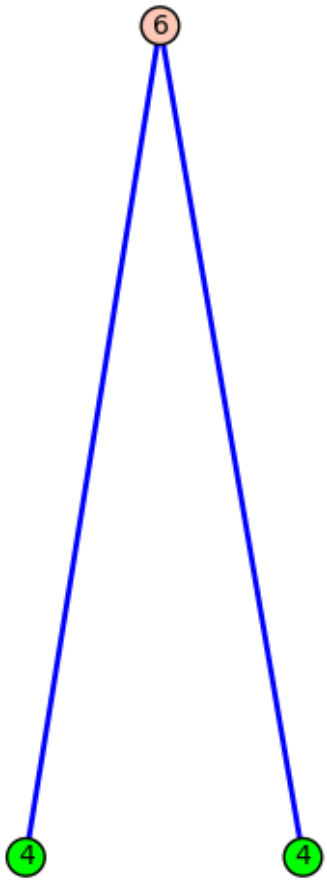

Figure 6: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):

5_1

Output PD code drawn by snappy:

[(6, 1, 7, 2), (8, 3, 9, 4), (10, 5, 1, 6), (2, 7, 3, 8), (4, 9, 5, 10)]

Arcs composing region <——> Region key

{1, 6} <——> 66
{1, 3, 5, 7, 9} <——> 682
{2, 4, 6, 8, 10} <——> 1364
{2, 7} <——> 132
{8, 3} <——> 264
{9, 4} <——> 528
{10, 5} <——> 1056

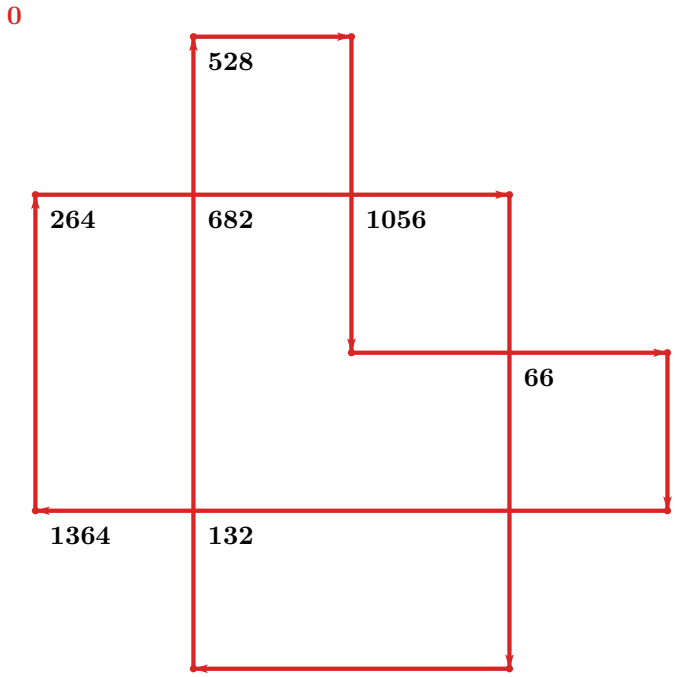

Figure 7: Snappy loop plot.

Minimal pinning sets:

{1056, 528, 66, 132, 264}

Number of minimal pinning sets: 1

Number of total pinning sets: 4

Pinning number: 1

Figure 8: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):

8_3

Output PD code drawn by snappy:

[(5, 1, 6, 16), (11, 2, 12, 3), (9, 4, 10, 5), (15, 7, 16, 6), (13, 9, 14, 8), (3, 10, 4, 11), (1, 12, 2, 13), (7, 15, 8, 14)]

Arcs composing region <——> Region key

{1, 6, 8, 13, 15} <——> 41282
{1, 3, 5, 10, 12} <——> 5162
{2, 4, 9, 11, 13} <——> 10772
{2, 12} <——> 4100
{11, 3} <——> 2056
{10, 4} <——> 1040
{5, 7, 9, 14, 16} <——> 82592
{16, 6} <——> 65600
{15, 7} <——> 32896
{8, 14} <——> 16640

0

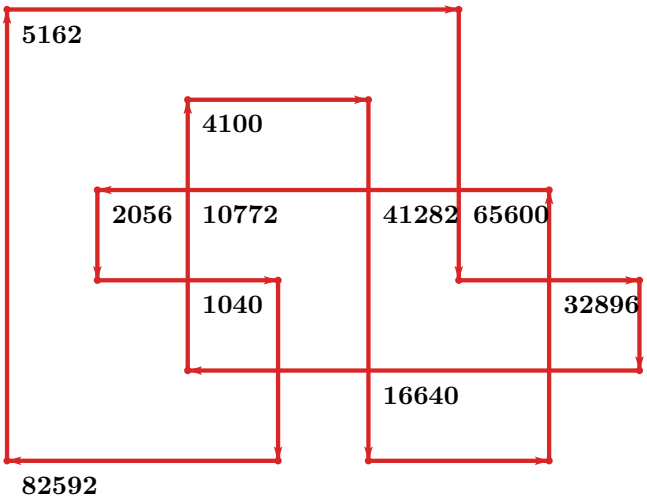

Figure 9: Snappy loop plot.

Minimal pinning sets:

{65600, 32896, 16640, 1040, 4100, 2056}

Number of minimal pinning sets: 1

Number of total pinning sets: 16

Pinning number: 1

Figure 10: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):

$9_2 4$

Output PD code drawn by snappy:

[(10, 1, 11, 2), (16, 4, 17, 3), (18, 6, 1, 5), (14, 7, 15, 8), (2, 9, 3, 10), (8, 12, 9, 11), (6, 13, 7, 14), (12, 15, 13, 16), (4, 18, 5, 17)]

Arcs composing region <——> Region key

{1, 3, 5, 10, 17} <——> 132138
{1, 6, 8, 11, 14} <——> 18754
{2, 10} <——> 1028
{9, 2, 11} <——> 2564
{16, 9, 3, 12} <——> 70152
{17, 4} <——> 131088
{4, 6, 13, 16, 18} <——> 335952
{18, 5} <——> 262176
{14, 7} <——> 16512
{15, 13, 7} <——> 41088
{8, 12, 15} <——> 37120

0

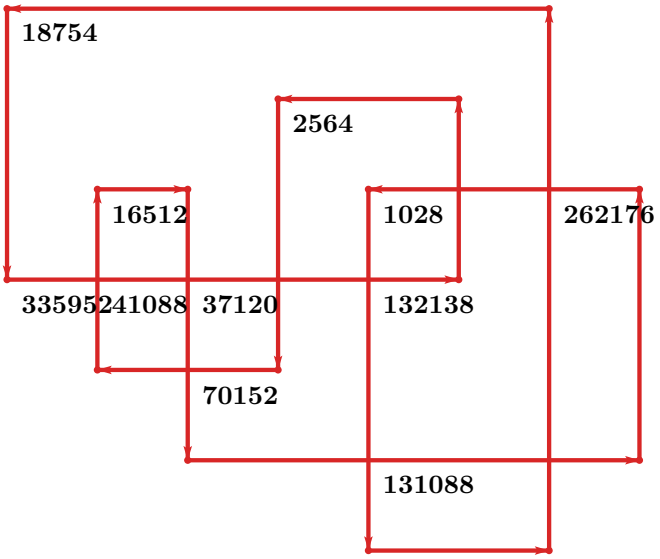

Figure 11: Snappy loop plot.

Minimal pinning sets:

{262176, 16512, 37120, 131088, 1028}
{262176, 16512, 41088, 131088, 1028}

Number of minimal pinning sets: 2

Number of total pinning sets: 96

Pinning number: 2

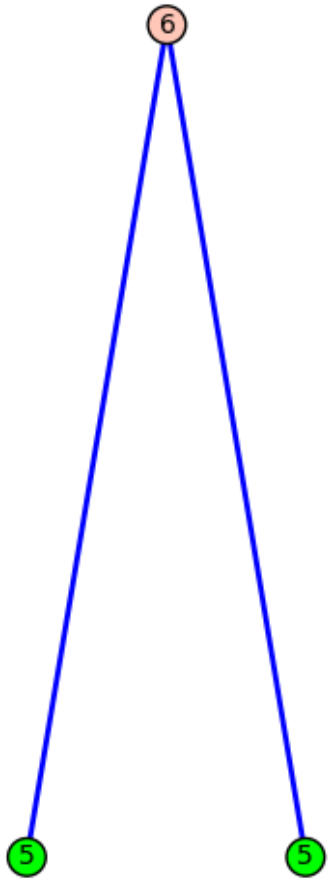

Figure 12: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):

[(1, 7, 2, 6), (3, 8, 4, 9), (5, 11, 6, 10), (16, 12, 1, 11), (2, 13, 3, 14), (4, 16, 5, 15), (7, 12, 8, 13), (9, 15, 10, 14)]

Output PD code drawn by snappy:

[(15, 5, 16, 4), (1, 6, 2, 7), (3, 9, 4, 8), (14, 10, 15, 9), (5, 10, 6, 11), (16, 11, 1, 12), (7, 13, 8, 12), (2, 14, 3, 13)]

Arcs composing region <——> Region key

{1, 12, 7} <——> 4226
{1, 11, 6} <——> 2114
{2, 13, 7} <——> 8324
{2, 10, 6, 14} <——> 17476
{8, 3, 13} <——> 8456
{9, 3, 14} <——> 16904
{8, 16, 4, 12} <——> 69904
{9, 4, 15} <——> 33296
{16, 11, 5} <——> 67616
{10, 5, 15} <——> 33824

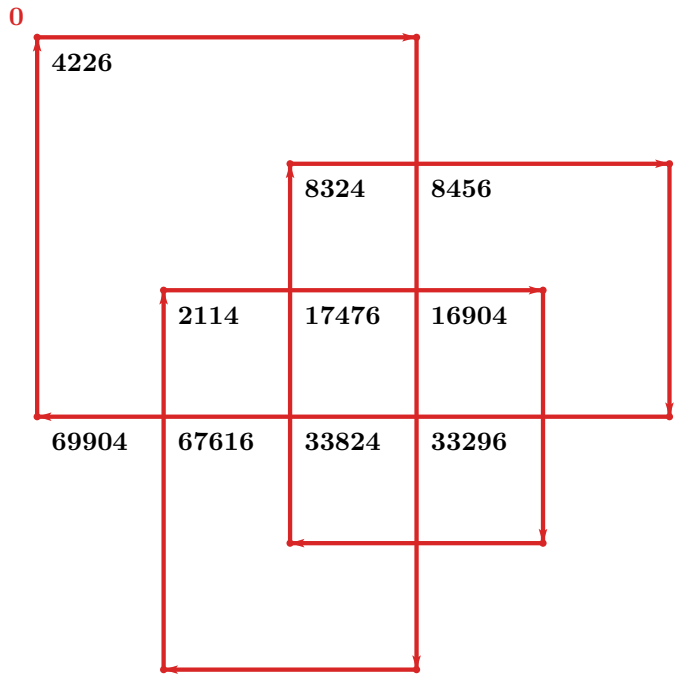

Figure 13: Snappy loop plot.

Minimal pinning sets:

{67616, 33296, 2114, 8324, 16904}
{33824, 69904, 2114, 8324, 16904}
{33824, 33296, 2114, 8324, 8456}
{67616, 33296, 2114, 8324, 8456}
{67616, 33824, 4226, 8456, 16904}
{67616, 33296, 4226, 17476, 8456}
{67616, 33824, 4226, 8324, 16904}
{67616, 33296, 4226, 8324, 16904}
{33824, 33296, 4226, 2114, 8456}
{33824, 4226, 2114, 8456, 16904}

Number of minimal pinning sets: 10

Number of total pinning sets: 160

Pinning number: 5

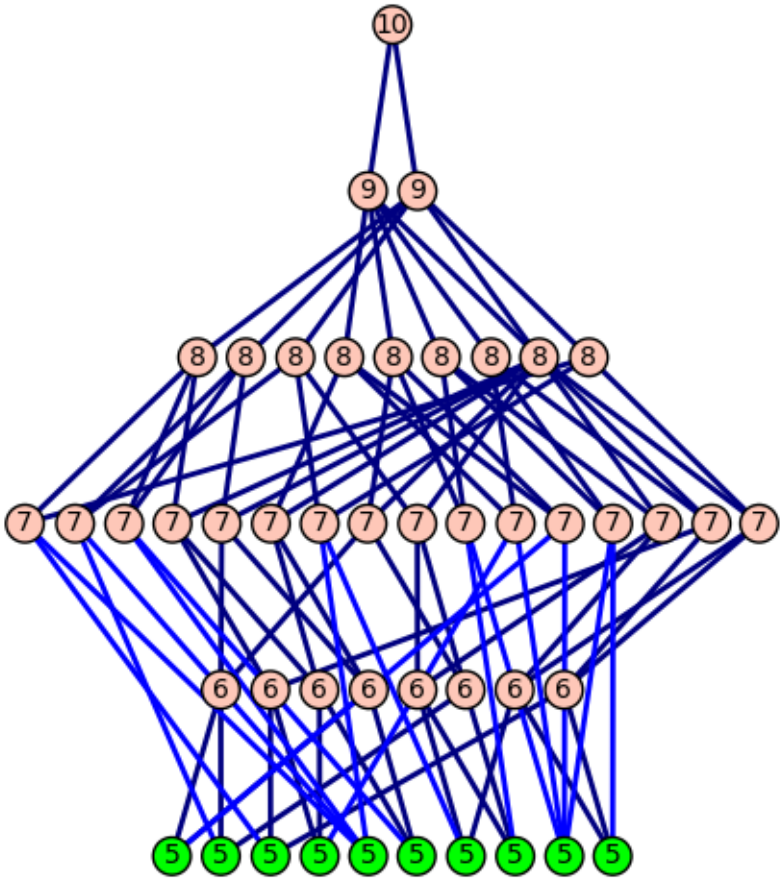

Figure 14: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):

[(1, 7, 2, 6), (4, 9, 5, 10), (2, 12, 3, 11), (7, 13, 8, 12), (18, 13, 1, 14), (3, 17, 4, 16), (5, 14, 6, 15), (8, 18, 9, 17), (10, 15, 11, 16)]

Output PD code drawn by snappy:

[(17, 5, 18, 4), (2, 7, 3, 8), (18, 10, 1, 9), (5, 11, 6, 10), (16, 11, 17, 12), (3, 12, 4, 13), (8, 13, 9, 14), (1, 15, 2, 14), (6, 16, 7, 15)]

Arcs composing region <——> Region key

{1, 9, 14} <——> 16898
{1, 10, 6, 15} <——> 33858
{8, 2, 14} <——> 16644
{2, 15, 7} <——> 32900
{8, 3, 13} <——> 8456
{16, 3, 12, 7} <——> 69768
{9, 18, 4, 13} <——> 270864
{17, 4, 12} <——> 135184
{10, 18, 5} <——> 263200
{17, 11, 5} <——> 133152
{16, 11, 6} <——> 67648

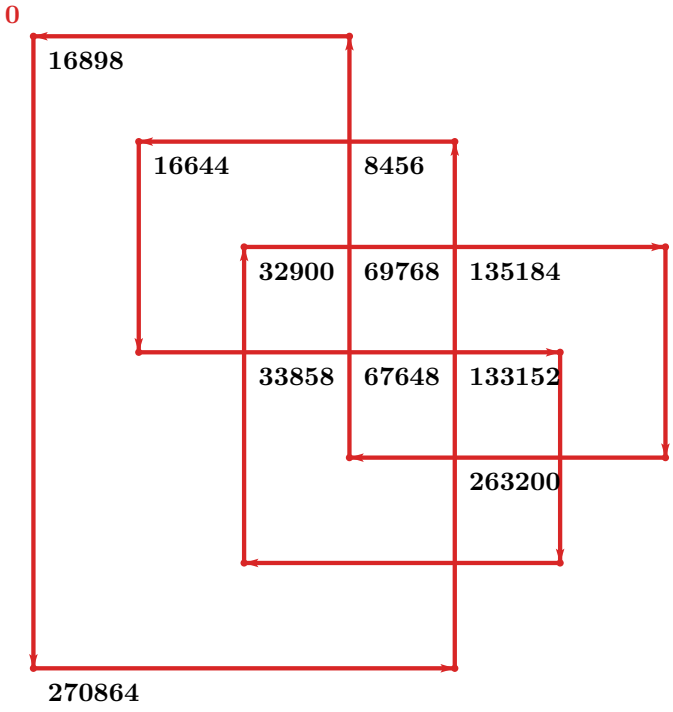

Figure 15: Snappy loop plot.

Minimal pinning sets:

{263200, 135184, 67648, 16644}
{263200, 133152, 67648, 270864, 16644, 69768}
{133152, 67648, 270864, 32900, 16644}
{133152, 67648, 33858, 270864, 16644, 135184}
{263200, 133152, 33858, 135184, 16644, 69768}
{133152, 270864, 33858, 16644, 69768}
{133152, 135184, 33858, 16644, 8456}
{133152, 270864, 33858, 32900, 16644, 8456}
{133152, 8456, 16898, 32900}
{263200, 67648, 16898, 135184, 32900, 8456}
{263200, 133152, 16898, 16644, 69768}
{133152, 270864, 16898, 32900, 16644, 69768}
{133152, 16898, 33858, 16644, 8456, 69768}

Number of minimal pinning sets: 13

Number of total pinning sets: 395

Pinning number: 4

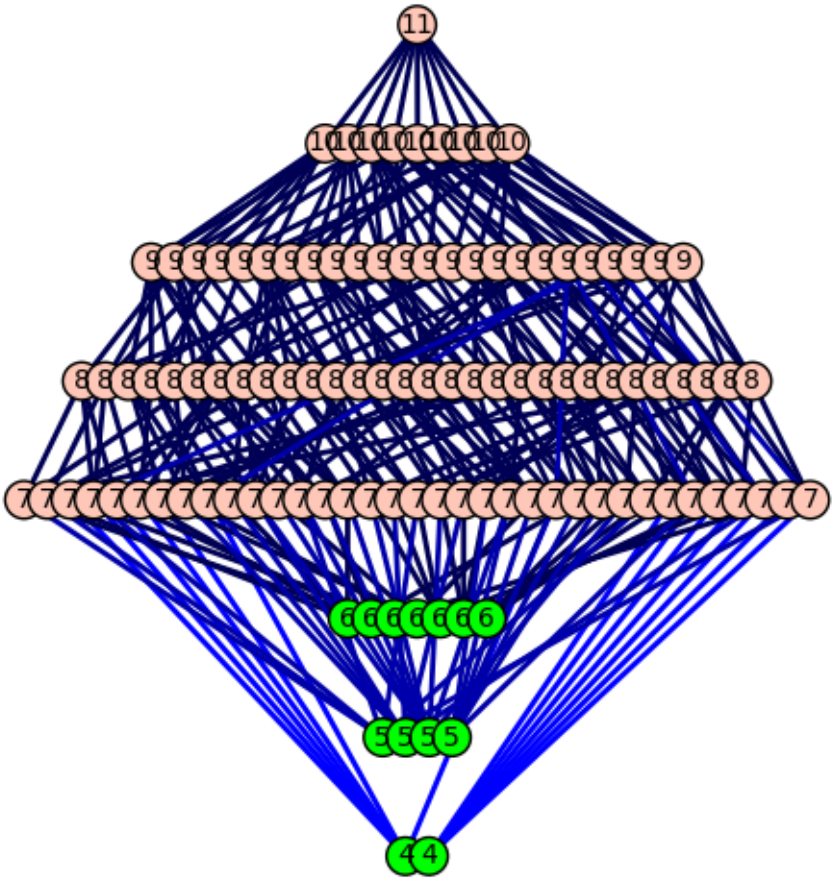

Figure 16: Minimal join semilattice of pinning sets.

Input PD code or string to snappy (use to reproduce the drawing):

[(24, 6, 1, 5), (3, 10, 4, 11), (1, 13, 2, 12), (6, 14, 7, 13), (2, 17, 3, 18), (8, 15, 9, 16), (11, 19, 12, 18), (4, 20, 5, 19), (7, 23, 8, 22), (9, 20, 10, 21), (14, 24, 15, 23), (16, 21, 17, 22)]

Output PD code drawn by snappy:

[(22, 4, 23, 3), (1, 8, 2, 9), (23, 11, 24, 10), (4, 12, 5, 11), (6, 13, 7, 14), (24, 15, 1, 16), (9, 17, 10, 16), (2, 18, 3, 17), (7, 18, 8, 19), (14, 19, 15, 20), (5, 21, 6, 20), (12, 22, 13, 21)]

Arcs composing region <——> Region key

{16, 1, 9} <——> 66050
{8, 1, 19, 15} <——> 557314
{9, 2, 17} <——> 131588
{8, 2, 18} <——> 262404
{17, 10, 3, 23} <——> 8520712
{3, 7, 13, 18, 22} <——> 4464776
{11, 4, 23} <——> 8390672
{4, 12, 22} <——> 4198416
{5, 11, 15, 20, 24} <——> 17860640
{21, 12, 5} <——> 2101280
{20, 6, 14} <——> 1065024
{21, 13, 6} <——> 2105408
{19, 14, 7} <——> 540800
{16, 24, 10} <——> 16843776

Minimal pinning sets:
{2105408, 540800, 16843776, 4198416, 131588}
{2101280, 1065024, 540800, 16843776, 131588, 4198416}
{2101280, 2105408, 540800, 16843776, 131588, 8390672}
{2101280, 1065024, 540800, 16843776, 131588, 8390672}
{1065024, 2105408, 557314, 16843776, 131588, 4198416}
{2101280, 1065024, 557314, 16843776, 131588, 4198416}
{2101280, 1065024, 557314, 16843776, 131588, 8390672}
{2101280, 2105408, 66050, 540800, 262404, 8390672}
{2101280, 1065024, 66050, 8390672, 262404}
{2105408, 540800, 66050, 8390672, 262404, 4198416}
{1065024, 2105408, 66050, 8390672, 262404, 4198416}
{2105408, 540800, 66050, 4198416, 262404, 8520712}
{1065024, 2105408, 66050, 4198416, 262404, 8520712}
{2101280, 1065024, 66050, 4198416, 262404, 8520712}
{1065024, 2105408, 66050, 4198416, 131588}
{2101280, 1065024, 66050, 4198416, 131588}
{17860640, 2105408, 66050, 540800, 131588, 4198416}
{2101280, 2105408, 66050, 540800, 131588, 8390672}
{2101280, 1065024, 66050, 540800, 131588, 8390672}
{2105408, 540800, 66050, 8390672, 131588, 4198416}
{2101280, 1065024, 66050, 8390672, 131588, 4464776}
{2105408, 540800, 66050, 4198416, 131588, 8520712}
{2101280, 1065024, 66050, 557314, 131588, 8390672}
Number of minimal pinning sets: 23
Number of total pinning sets: 2400
Pinning number: 5

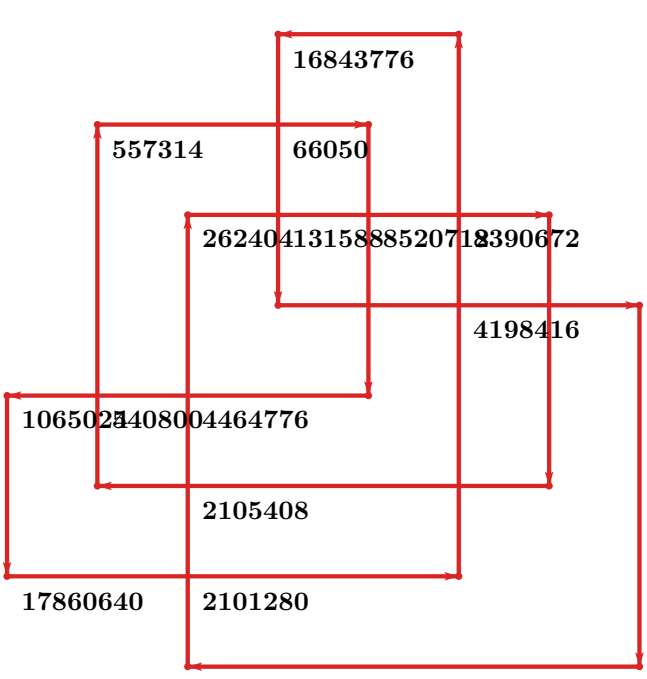

Figure 17: Snappy loop plot.

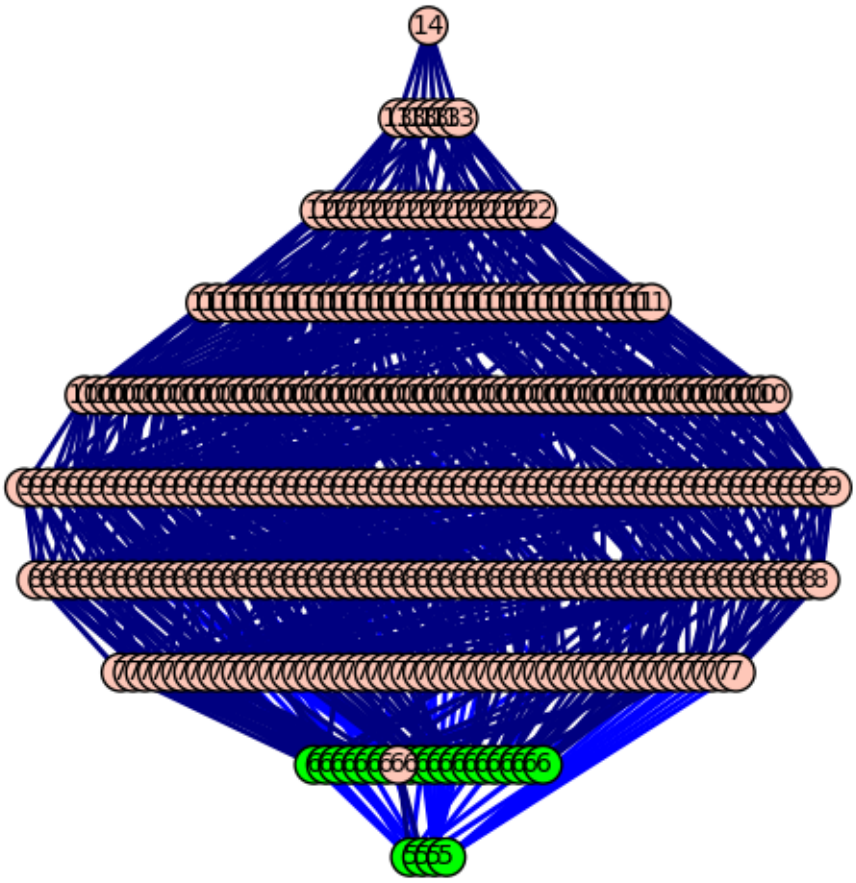

Figure 18: Minimal join semilattice of pinning sets.