1 Pinning poset changes drastically under Reidemeister III

1.0.1 [(1, 7, 2, 6), (24, 7, 1, 8), (5, 10, 6, 11), (4, 12, 5, 11), (9, 15, 10, 14), (8, 15, 9, 16), (13, 18, 14, 19), (12, 20, 13, 19), (2, 22, 3, 21), (3, 20, 4, 21), (17, 23, 18, 22), (16, 23, 17, 24)]

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

Planar representation generated by `plantri`: -

Total optimal pinning sets: 1
Total minimal pinning sets: 1
Total pinning sets: 256
Pinning number: 6

Average optimal degree: 2.0

Average minimal degree: 2.0

Average overall degree: 2.97

Table 1: Pinning sets/average degree by cardinal

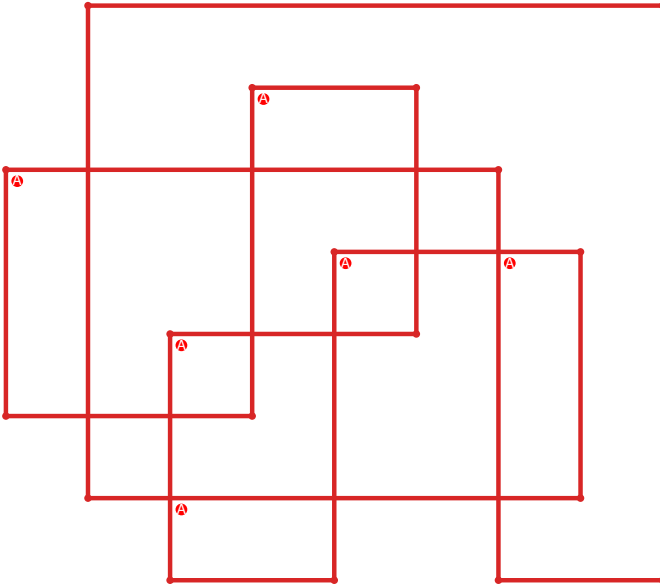| Cardinal	6	7	8	9	10	11	12	13	14	Total
Optimal pinning sets	1	0	0	0	0	0	0	0	0	1
Minimal (suboptimal) pinning sets	0	0	0	0	0	0	0	0	0	0
Nonminimal pinning sets	0	8	28	56	70	56	28	8	1	255
Average degree	2.0	2.36	2.62	2.83	3.0	3.14	3.25	3.35	3.43	

Figure 1: `SnapPy` multiloop plot.

Figure 2: Minimal join sub-semi-lattice of minimal pinning sets.

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1.0.2 [(1, 7, 2, 6), (24, 7, 1, 8), (5, 10, 6, 11), (3, 13, 4, 12), (9, 15, 10, 14), (8, 15, 9, 16), (13, 18, 14, 19), (4, 19, 5, 20), (2, 22, 3, 21), (11, 21, 12, 20), (17, 23, 18, 22), (16, 23, 17, 24)]

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

Planar representation generated by `plantri`: -

Total optimal pinning sets: 1
Total minimal pinning sets: 2
Total pinning sets: 1152
Pinning number: 4

Average optimal degree: 2.25

Average minimal degree: 2.38

Average overall degree: 3.14

Table 2: Pinning sets/average degree by cardinal

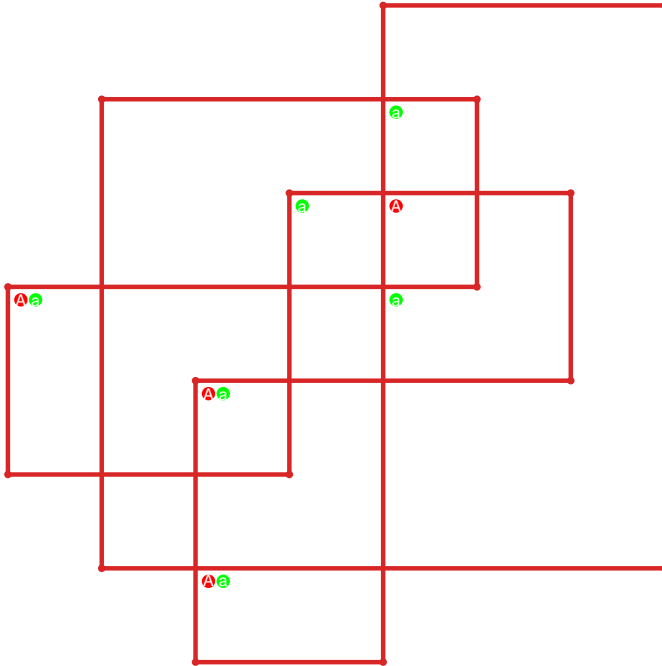| Cardinal	4	5	6	7	8	9	10	11	12	13	14	Total
Optimal pinning sets	1	0	0	0	0	0	0	0	0	0	0	1
Minimal (suboptimal) pinning sets	0	0	1	0	0	0	0	0	0	0	0	1
Nonminimal pinning sets	0	10	45	127	231	287	245	141	52	11	1	1150
Average degree	2.25	2.58	2.79	2.95	3.06	3.16	3.24	3.3	3.36	3.4	3.43	

Figure 3: `SnapPy` multiloop plot.

Figure 4: Minimal join sub-semi-lattice of minimal pinning sets.