11-Puzzle

Nivel	N=0	N=1	N=2
0	1	1	1
1	3	3	3
2	9	6	6
3	28	13	13
4	84	24	24
5	257	42	42
6	775	83	83
7	2359	169	169
8	7135	329	329
9	21672	614	614
10	65640	1169	1169
11	199189	2302	2302
12	603681	4486	4486
13	1831139	8583	8583
14	5551189	16453	16453
15	16835176	31877	31877
16	51043144	61814	61814
17	154786173	119105	119105
18	469328199	229274	229274
19	1423163575	442882	442882
20	4315294251	856195	856195

TopSpin 22 4

Nivel	N=0	N=1	N=2
0	1	1	1
1	22	22	22
2	484	297	297
3	10648	3332	3234
4	234256	34917	31696
5	5153632	359044	295838
6	113379904	3685933	2710563
7	2494357888	37916082	24741989

TopSpin 26 4

Nivel	N=0	N=1	N=2
0	1	1	1
1	26	26	26
2	676	403	403
3	17576	5040	4914
4	456976	57614	52753
5	11881376	639658	530056
6	308915776	7079228	5172126
7	8031810176	78662142	50068605

Hanoi 14-4

Nivel	N=0	N=1
0	1	1
1	6	6
2	36	33
3	213	178
4	1261	957
5	7461	5146
6	44150	27652
7	261293	148603
8	1546411	798557
9	9152209	4291157
10	54162928	23058298
11	320520008	123897505
12	1896623154	665703925

Hanoi 16-4

Nivel	N=0	N=1
0	1	1
1	6	6
2	36	33
3	213	178
4	1265	960
5	7506	5178
6	44592	27936
7	265027	150803
8	1576072	814431
9	9376459	4400264
10	55803952	23782911
11	332222631	128586235
12	1978420703	695430255

Factor de ramificación

TopSpin 22 4

nivel	N=0	N=1	N=2
0	22	22	22
1	22	13.5	13.5
2	22	11.21	10.88
3	22	10.47	9.8
4	22	10.28	9.33
5	22	10.26	9.16
6	22	10.28	9.12

TopSpin 26 4

Nivel	N=0	N=1	N=2
0	26	26	26
1	26	15.5	15.5
2	26	12.5	12.19
3	26	11.43	10.73
4	26	11.1	10.04
5	26	11.06	9.75

Nivel	N=0	N=1	N=2
6	26	11.11	9.68

11-Puzzle

Nivel	N=0	N=1	N=2
0	3.0	3.0	3.0
1	3.0	2.0	2.0
2	3.1	2.16	2.16
3	3.0	1.84	1.84
4	3.05	1.75	1.75
5	3.01	1.97	1.97
6	3.04	2.03	2.03
7	3.02	1.94	1.94
8	3.03	1.86	1.86
9	3.02	1.90	1.90
10	3.03	1.96	1.96
11	3.03	1.94	1.94
12	3.03	1.91	1.91
13	3.03	1.91	1.91
14	3.03	1.93	1.93
15	3.03	1.93	1.93
16	3.03	1.92	1.92
17	3.03	1.92	1.92
18	3.03	1.93	1.93
19	3.03	1.93	1.93

Hanoi 14-4

Nivel	N=0	N=1
0	6.0	6.0
1	6.0	5.5
2	5.91	5.39
3	5.92	5.37
4	5.91	5.37
5	5.91	5.37
6	5.91	5.37
7	5.91	5.37
8	5.91	5.37
9	5.91	5.37
10	5.91	5.37

Nivel	N=0	N=1
11	5.91	5.37

Hanoi 16-4

Nivel	N=0	N=1
0	6.0	6.0
1	6.0	5.5
2	5.91	5.39
3	5.93	5.39
4	5.93	5.39
5	5.94	5.39
6	5.94	5.39
7	5.94	5.40
8	5.94	5.40
9	5.95	5.40
10	5.95	5.40

X, id_dfs, tower14_4, "7 15 8 2 13 6 3 12 11 B 4 10 9 5 1 14", na, na, na, na

X, id_dfs, tower14_4, "14 13 15 7 11 12 9 5 6 B 2 1 4 8 10 3",
X, id_dfs, tower14_4, "13 5 4 10 9 12 8 14 2 3 7 1 B 15 11 6",
X, id_dfs, tower14_4, "1 4 2 3 7 5 6 8 11 9 B 10", na, na, na, na
X, id_dfs, tower14_4, "2 4 3 1 7 5 B 6 8 9 10 11", na, na, na, na
X, id_dfs, tower14_4, "3 1 2 6 4 5 B 9 11 10 8 7", na, na, na, na
X, id_dfs, tower14_4, "6 3 4 10 1 2 9 7 5 11 B 8", 32, 712700973, 381.043,
1.87039e+06
X, id_dfs, tower14_4, "7 8 1 3 B 2 4 6 5 9 10 11", na, na, na, na
X, id_dfs, tower14_4, "3 5 4 6 2 1 7 10 8 9 B 11", 28, 777680041, 22.7548,
3.41765e+07
X, id_dfs, tower14_4, "3 1 2 10 4 8 5 7 11 6 B 9", na, na, na, na