

Tables for the algorithm **ReducedTableOfMarks**, without improvements (Case $G = S_{12}$)

We have a chain of groups $H \leq U \leq G := S_{12}$. The runtimes are that of **ReducedTableOfMarks** without **IFP-Order**, **IFP-Intransitive** and **IFP-Transitive**. The style of the tables is described in the bachelor thesis.

Prop. U	Chain length/Indices	Prop. H	# Fix	Σ ti- me	time Fix	time Split
D[2], 5, II	6, [20, 144, 252, 11, 12]	D[1], 4, II	0	3	[1, 0, 0, 0, 0]	[2, 0, 0, 0, 0]
D[2], 5, II	6, [20, 144, 252, 11, 12]	D[2], 5, II	80	126	[3, 3, 48, 35, 19]	[1, 2, 10, 4, 1]
D[2], 5, II	6, [20, 144, 252, 11, 12]	D[3], 3, II	0	3759	[1, 6, 516, 3207, 0]	[1, 1, 5, 22, 0]
D[3], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[1], 4, II	0	15	[2, 0, 0, 0, 0, 0, 0, 0]	[13, 0, 0, 0, 0, 0, 0]
D[3], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[2], 5, II	0	4	[0, 0, 3, 0, 0, 0, 0, 0]	[0, 0, 1, 0, 0, 0, 0, 0]
D[3], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[3], 3, II	8640	2726	[2, 7, 21, 77, 189, 336, 986, 1095]	[0, 1, 0, 1, 1, 2, 4, 4]
D[3], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[4], 2, II	0	57	[2, 5, 20, 14, 13, 0, 0, 0]	[0, 1, 0, 1, 1, 0, 0, 0]
D[3], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[6], 4, II	0	2	[1, 0, 0, 0, 0, 0, 0, 0]	[1, 0, 0, 0, 0, 0, 0, 0]
D[3], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[7], 3, II	8640	2775	[2, 6, 20, 66, 211, 341, 981, 1139]	[1, 1, 0, 0, 0, 1, 3, 3]
D[4], 2, II	9, [8, 6, 15, 28, 9, 10, 11, 12]	D[1], 4, II	0	2	[1, 0, 0, 0, 0, 0, 0, 0]	[1, 0, 0, 0, 0, 0, 0, 0]

D[4], 2, II	9, [8, 6, 15, 28, 9, 10, 11, 12]	D[2], 5, II	0	6	[1, 1, 1, 0, 0, 0, 0, 0]	[1, 1, 1, 0, 0, 0, 0, 0]
D[4], 2, II	9, [8, 6, 15, 28, 9, 10, 11, 12]	D[3], 3, II	0	1196	[1, 6, 40, 65, 701, 375, 0, 0]	[1, 1, 0, 1, 3, 2, 0, 0]
D[4], 2, II	9, [8, 6, 15, 28, 9, 10, 11, 12]	D[4], 2, II	4608	588	[2, 6, 8, 14, 60, 90, 121, 282]	[1, 0, 1, 0, 1, 0, 1, 1]
D[4], 2, II	9, [8, 6, 15, 28, 9, 10, 11, 12]	D[6], 4, II	0	2	[1, 0, 0, 0, 0, 0, 0, 0]	[1, 0, 0, 0, 0, 0, 0, 0]
D[4], 2, II	9, [8, 6, 15, 28, 9, 10, 11, 12]	D[7], 3, II	0	1199	[2, 8, 26, 67, 708, 384, 0, 0]	[0, 1, 0, 0, 2, 1, 0, 0]
D[5], 1, Pr	12, [2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]	D[1], 4, II	0	2	[1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]	[1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
D[5], 1, Pr	12, [2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]	D[2], 5, II	0	11	[2, 3, 3, 0, 0, 0, 0, 0, 0, 0, 0]	[0, 2, 1, 0, 0, 0, 0, 0, 0, 0, 0]
D[5], 1, Pr	12, [2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]	D[3], 3, II	0	954	[2, 7, 20, 81, 188, 346, 304, 0, 0, 0, 0]	[0, 0, 1, 1, 2, 1, 1, 0, 0, 0, 0]
D[6], 4, II	7, [64, 3, 3, 70, 45, 66]	D[2], 5, II	0	12	[4, 3, 0, 0, 0, 0]	[3, 2, 0, 0, 0, 0]
D[6], 4, II	7, [64, 3, 3, 70, 45, 66]	D[3], 3, II	0	598	[6, 67, 436, 82, 0, 0]	[0, 2, 3, 2, 0, 0]
D[6], 4, II	7, [64, 3, 3, 70, 45, 66]	D[4], 2, II	2304	7627	[9, 30, 331, 110, 187, 6920]	[2, 1, 2, 0, 1, 34]
D[6], 4, II	7, [64, 3, 3, 70, 45, 66]	D[6], 4, II	128	52	[9, 7, 12, 0, 1, 17]	[2, 1, 1, 1, 0, 1]
D[6], 4, II	7, [64, 3, 3, 70, 45, 66]	D[20], 108, IT	0	24	[22, 0, 0, 0, 0, 0]	[2, 0, 0, 0, 0, 0]

D[6], 4, II	7, [64, 3, 3, 70, 45, 66]	D[22], 7560, II	0	14	[7, 3, 0, 0, 0, 0]	[3, 1, 0, 0, 0, 0]
D[7], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[11], 4, II	0	4	[2, 0, 0, 0, 0, 0, 0, 0]	[2, 0, 0, 0, 0, 0, 0, 0]
D[7], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[3], 3, II	8640	2829	[2, 7, 20, 79, 196, 348, 1004, 1139]	[0, 2, 1, 1, 1, 1, 14, 14]
D[7], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[6], 4, II	0	2	[1, 0, 0, 0, 0, 0, 0, 0]	[1, 0, 0, 0, 0, 0, 0, 0]
D[7], 3, II	9, [12, 20, 7, 8, 9, 10, 11, 12]	D[7], 3, II	8640	2863	[1, 15, 19, 77, 205, 348, 1011, 1167]	[0, 1, 1, 0, 1, 1, 12, 4]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[2], 5, II	0	65	[31, 1, 4, 0, 0]	[27, 1, 1, 0, 0]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[4], 2, II	2304	7517	[39, 3, 54, 160, 7214]	[14, 0, 1, 2, 30]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[6], 4, II	0	136	[40, 2, 10, 5, 61]	[15, 0, 0, 0, 3]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[7], 3, II	0	1516	[42, 3, 53, 18, 1371]	[16, 0, 0, 1, 12]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[8], 16, II	0	59	[41, 0, 0, 0, 0]	[18, 0, 0, 0, 0]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[12], 12, II	16	105	[44, 0, 3, 7, 31]	[15, 1, 0, 0, 4]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[20], 108, IT	0	64	[44, 1, 0, 0, 0]	[19, 0, 0, 0, 0]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[30], 30240, II	0	66	[51, 0, 0, 0, 0]	[15, 0, 0, 0, 0]
D[12], 12, II	6, [192, 15, 15, 2, 462]	D[40], 7257600, II	0	77	[61, 0, 0, 0, 0]	[16, 0, 0, 0, 0]

D[15], 384, II	6, [2, 15, 3, 210, 66]	D[1], 4, II	0	75	[5, 36, 1, 6, 1]	[4, 14, 1, 6, 1]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[2], 5, II	0	30	[5, 19, 0, 0, 0]	[0, 6, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[3], 3, II	270	384	[12, 256, 35, 54, 20]	[2, 5, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[4], 2, II	984	701	[9, 178, 38, 315, 150]	[3, 7, 0, 1, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[5], 1, Pr	124740012864	12864	[5, 851, 2255, 36159, 71303]	[3, 13, 613, 560, 1102]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[6], 4, II	0	70	[9, 29, 1, 4, 1]	[2, 24, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[7], 3, II	270	327	[8, 224, 26, 47, 15]	[3, 4, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[8], 16, II	0	58	[8, 45, 0, 0, 0]	[2, 3, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[9], 12, II	0	11	[9, 0, 0, 0, 0]	[2, 0, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[10], 36, II	0	168	[11, 133, 9, 10, 0]	[2, 3, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[11], 16, II	0	56	[6, 34, 0, 0, 0]	[3, 13, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[12], 12, II	0	9	[7, 0, 0, 0, 0]	[2, 0, 0, 0, 0]

D[15], 384, II	6, [2, 15, 3, 210, 66]	D[13], 192, IT	0	4	[4, 0, 0, 0, 0]	[0, 0, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[14], 108, IT	0	10	[8, 0, 0, 0, 0]	[2, 0, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[15], 384, II	2	45	[9, 18, 1, 1, 1]	[2, 13, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[16], 576, II	0	58	[10, 43, 0, 0, 0]	[2, 3, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[17], 384, II	2	37	[9, 20, 0, 2, 0]	[2, 4, 0, 0, 0]
D[15], 384, II	6, [2, 15, 3, 210, 66]	D[18], 576, II	0	61	[7, 48, 0, 0, 0]	[2, 4, 0, 0, 0]
D[20], 108, IT	4, [12, 800, 462]	D[1], 4, II	0	649	[31, 563, 0]	[29, 26, 0]
D[20], 108, IT	4, [12, 800, 462]	D[2], 5, II	0	164	[33, 99, 0]	[10, 22, 0]
D[20], 108, IT	4, [12, 800, 462]	D[3], 3, II	1440	1456	[46, 1183, 198]	[12, 15, 2]
D[20], 108, IT	4, [12, 800, 462]	D[4], 2, II	0	1803	[34, 1233, 489]	[23, 23, 1]
D[20], 108, IT	4, [12, 800, 462]	D[5], 1, Pr	443520340642	0340642	[29, 22761, 313552]	[5, 333, 3962]
D[20], 108, IT	4, [12, 800, 462]	D[8], 16, II	0	52	[38, 0, 0]	[14, 0, 0]

D[20], 108, IT	4, [12, 800, 462]	D[9], 12, II	0	175	[34, 60, 0]	[55, 26, 0]
D[20], 108, IT	4, [12, 800, 462]	D[10], 36, II	0	761	[41, 676, 0]	[18, 26, 0]
D[20], 108, IT	4, [12, 800, 462]	D[11], 16, II	0	59	[37, 0, 0]	[22, 0, 0]
D[20], 108, IT	4, [12, 800, 462]	D[12], 12, II	0	144	[48, 73, 0]	[11, 12, 0]
D[20], 108, IT	4, [12, 800, 462]	D[15], 384, II	0	167	[54, 75, 0]	[17, 21, 0]
D[20], 108, IT	4, [12, 800, 462]	D[16], 576, II	0	391	[52, 308, 0]	[15, 16, 0]
D[20], 108, IT	4, [12, 800, 462]	D[17], 384, II	0	159	[62, 71, 0]	[12, 14, 0]
D[20], 108, IT	4, [12, 800, 462]	D[18], 576, II	0	380	[52, 303, 0]	[13, 12, 0]
D[24], 1320, Pr	2, [362880]	D[18], 576, II	0	71938	[29964]	[41974]
D[20], 108, IT	4, [12, 800, 462]	D[20], 108, IT	36	286	[45, 196, 15]	[18, 12, 0]
D[20], 108, IT	4, [12, 800, 462]	D[25], 80640, II	0	60	[49, 0, 0]	[11, 0, 0]
D[20], 108, IT	4, [12, 800, 462]	D[30], 30240, II	0	58	[40, 0, 0]	[18, 0, 0]

D[20], 108, IT	4, [12, 800, 462]	D[35], 518400, IT	0	156	[55, 74, 0]	[15, 12, 0]
D[20], 108, IT	4, [12, 800, 462]	D[40], 7257600, II	0	64	[51, 0, 0]	[13, 0, 0]
D[20], 108, IT	4, [12, 800, 462]	D[45], 1036800, IT	0	161	[60, 79, 0]	[10, 12, 0]
D[13], 192, IT	3, [432, 5775]	D[4], 2, II	720	2090	[415, 1487]	[172, 16]
D[13], 192, IT	3, [432, 5775]	D[6], 4, II	0	859	[413, 325]	[113, 8]
D[13], 192, IT	3, [432, 5775]	D[7], 3, II	0	1572	[401, 886]	[270, 15]
D[13], 192, IT	3, [432, 5775]	D[8], 16, II	0	591	[441, 34]	[110, 6]
D[13], 192, IT	3, [432, 5775]	D[9], 12, II	12	673	[445, 104]	[118, 6]
D[13], 192, IT	3, [432, 5775]	D[10], 36, II	0	1042	[509, 406]	[113, 14]
D[13], 192, IT	3, [432, 5775]	D[11], 16, II	0	607	[455, 34]	[112, 6]
D[13], 192, IT	3, [432, 5775]	D[12], 12, II	12	691	[459, 104]	[121, 7]
D[13], 192, IT	3, [432, 5775]	D[13], 192, IT	4	728	[554, 40]	[127, 7]

D[21], 1320, Pr	2, [362880]	D[13], 192, IT	0	71950	[30393]	[41557]
D[21], 1320, Pr	2, [362880]	D[3], 3, II	0	67267	[24765]	[42502]
D[21], 1320, Pr	2, [362880]	D[12], 12, II	0	69981	[28600]	[41381]
D[21], 1320, Pr	2, [362880]	D[18], 576, II	0	71862	[29513]	[42349]
D[30], 30240, II	4, [2, 120, 66]	D[2], 5, II	0	21	[5, 8, 0]	[4, 4, 0]
D[30], 30240, II	4, [2, 120, 66]	D[4], 2, II	224	118	[6, 89, 14]	[3, 4, 2]
D[30], 30240, II	4, [2, 120, 66]	D[6], 4, II	0	30	[6, 18, 0]	[3, 3, 0]
D[30], 30240, II	4, [2, 120, 66]	D[7], 3, II	180	164	[7, 140, 11]	[3, 3, 0]
D[30], 30240, II	4, [2, 120, 66]	D[8], 16, II	0	30	[7, 18, 0]	[2, 3, 0]
D[30], 30240, II	4, [2, 120, 66]	D[10], 36, II	60	96	[7, 82, 5]	[0, 2, 0]
D[30], 30240, II	4, [2, 120, 66]	D[13], 192, IT	0	12	[10, 0, 0]	[2, 0, 0]
D[30], 30240, II	4, [2, 120, 66]	D[15], 384, II	0	24	[9, 10, 0]	[3, 2, 0]

D[30], 30240, II	4, [2, 120, 66]	D[17], 384, II	0	40	[9, 26, 0]	[2, 3, 0]
D[30], 30240, II	4, [2, 120, 66]	D[19], 192, IT	0	10	[7, 0, 0]	[3, 0, 0]
D[30], 30240, II	4, [2, 120, 66]	D[21], 1320, Pr	0	9	[7, 0, 0]	[2, 0, 0]
D[30], 30240, II	4, [2, 120, 66]	D[26], 30240, II	2	21	[10, 9, 0]	[2, 0, 0]
D[30], 30240, II	4, [2, 120, 66]	D[29], 80640, II	0	47	[9, 34, 0]	[2, 2, 0]
D[30], 30240, II	4, [2, 120, 66]	D[30], 30240, II	2	24	[10, 10, 0]	[2, 2, 0]
D[30], 30240, II	4, [2, 120, 66]	D[35], 518400, IT	0	13	[11, 0, 0]	[2, 0, 0]
D[30], 30240, II	4, [2, 120, 66]	D[40], 7257600, II	0	27	[10, 10, 0]	[3, 4, 0]
D[40], 7257600, II	2, [66]	D[1], 4, II	2	9	[8]	[1]
D[40], 7257600, II	2, [66]	D[2], 5, II	1	10	[8]	[2]
D[40], 7257600, II	2, [66]	D[4], 2, II	10	10	[8]	[2]
D[40], 7257600, II	2, [66]	D[5], 1, Pr	66	17	[16]	[1]

D[40], 7257600, II	2, [66]	D[6], 4, II	2	10	[8]	[2]
D[40], 7257600, II	2, [66]	D[10], 36, II	7	9	[7]	[2]
D[40], 7257600, II	2, [66]	D[11], 16, II	2	6	[5]	[1]
D[40], 7257600, II	2, [66]	D[16], 576, II	2	14	[12]	[2]
D[40], 7257600, II	2, [66]	D[17], 384, II	1	12	[9]	[3]
D[40], 7257600, II	2, [66]	D[18], 576, II	2	5	[5]	[0]
D[40], 7257600, II	2, [66]	D[22], 7560, II	1	9	[9]	[0]
D[40], 7257600, II	2, [66]	D[25], 80640, II	2	12	[10]	[2]
D[40], 7257600, II	2, [66]	D[30], 30240, II	1	12	[10]	[2]
D[40], 7257600, II	2, [66]	D[33], 725760, II	1	11	[10]	[1]
D[40], 7257600, II	2, [66]	D[34], 161280, II	2	24	[21]	[3]
D[40], 7257600, II	2, [66]	D[35], 518400, IT	0	14	[11]	[3]

D[40], 7257600, II	2, [66]	D[36], 725760, II	1	12	[10]	[2]
D[40], 7257600, II	2, [66]	D[37], 161280, II	2	11	[9]	[2]
D[40], 7257600, II	2, [66]	D[3], 3, II	15	11	[8]	[3]
D[40], 7257600, II	2, [66]	D[38], 518400, IT	0	11	[8]	[3]
D[40], 7257600, II	2, [66]	D[39], 2177280, II	0	10	[8]	[2]
D[40], 7257600, II	2, [66]	D[40], 7257600, II	1	13	[10]	[3]
D[48], 39916800, Pr	2, [12]	D[30], 30240, II	0	4	[2]	[2]
D[48], 39916800, Pr	2, [12]	D[31], 46080, IT	0	3	[3]	[0]
D[48], 39916800, Pr	2, [12]	D[32], 15552, IT	0	3	[2]	[1]
D[48], 39916800, Pr	2, [12]	D[33], 725760, II	1	3	[2]	[1]
D[48], 39916800, Pr	2, [12]	D[34], 161280, II	0	16	[15]	[1]
D[48], 39916800, Pr	2, [12]	D[35], 518400, IT	0	2	[2]	[0]

D[48], 39916800, Pr	2, [12]	D[36], 725760, II	1	3	[2]	[1]
D[48], 39916800, Pr	2, [12]	D[37], 161280, II	0	1	[1]	[0]
D[48], 39916800, Pr	2, [12]	D[38], 518400, IT	0	2	[2]	[0]
D[48], 39916800, Pr	2, [12]	D[39], 2177280, II	0	0	[0]	[0]
D[48], 39916800, Pr	2, [12]	D[40], 7257600, II	0	0	[0]	[0]
D[48], 39916800, Pr	2, [12]	D[41], 1036800, IT	0	3	[3]	[0]
D[48], 39916800, Pr	2, [12]	D[42], 3628800, Pr	2	2	[2]	[0]
D[48], 39916800, Pr	2, [12]	D[43], 2177280, II	0	2	[2]	[0]
D[48], 39916800, Pr	2, [12]	D[44], 7257600, II	0	3	[3]	[0]
D[48], 39916800, Pr	2, [12]	D[45], 1036800, IT	0	4	[3]	[1]
D[48], 39916800, Pr	2, [12]	D[46], 3628800, Pr	2	3	[2]	[1]
D[48], 39916800, Pr	2, [12]	D[47], 39916800, Pr	1	3	[2]	[1]

D[48], 39916800, Pr	2, [12]	D[48], 39916800, Pr	1	1	[1]	[0]
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