FreeProductsComparisonMagma

September 14, 2018

Group : $C_2 * C_3$

Searching up to index : 2500

How many normal groups are found : 527

Total Time (in s) in GAP: 100.8

Total Time (in s) in MAGMA387.5

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	100.8	387.5
FindPQuotients	247	247	77.1	134.5
FindTQuotients	1	1	16.2	0.6
FindIntersections	246	246	7.5	252.4
AddGroup	724	604	14.7	356.1
MustCheckP	1706	994	0.0	0.0
FindPModules	932	285	77.0	134.5
SMTX_BasesMaximalSubmodules	272	266	12.9	0.6
PullBackH	404	383	12.7	3.7

Group : $C_2 * C_4$

Searching up to index : 500

How many normal groups are found : 688

Total Time (in s) in GAP: 44.0

Total Time (in s) in MAGMA129.4

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	44.0	129.4
FindPQuotients	305	305	36.3	65.7
FindTQuotients	1	1	0.2	0.2

FindIntersections	304	304	7.5	63.5
AddGroup	903	852	13.6	97.0
MustCheckP	1182	955	0.0	0.1
FindPModules	596	381	36.3	65.6
SMTX_BasesMaximalSubmodules	331	331	6.6	0.4
PullBackH	599	474	4.3	0.9

Group : $C_2 * C_5$
Searching up to index : 2000
How many normal groups are found : 205
Total Time (in s) in GAP: 61.4
Total Time (in s) in MAGMA25.2

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	61.4	25.2
FindPQuotients	88	88	53.5	22.6
FindTQuotients	1	1	6.6	0.3
FindIntersections	87	87	1.1	2.3
AddGroup	344	225	5.4	5.9
MustCheckP	894	349	0.0	0.0
FindPModules	592	96	53.5	22.6
SMTX_BasesMaximalSubmodules	96	86	10.9	0.5
PullBackH	173	157	13.6	1.4

Group : $C_2 * C_6$
Searching up to index : 500
How many normal groups are found : 862
Total Time (in s) in GAP: 56.9
Total Time (in s) in MAGMA151.7

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	56.9	151.7
FindPQuotients	363	363	47.9	76.6
FindTQuotients	1	1	0.6	0.2
FindIntersections	362	362	8.3	74.9

AddGroup	1145	1077	15.3	109.8
MustCheckP	1344	1090	0.0	0.1
FindPModules	683	456	47.9	76.5
SMTX_BasesMaximalSubmodules	398	397	8.1	0.5
PullBackH	770	620	7.2	1.4

Group : $C_2 * C_7$
Searching up to index : 1000
How many normal groups are found : 63
Total Time (in s) in GAP: 7.7
Total Time (in s) in MAGMA4.1

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	7.7	4.1
FindPQuotients	26	26	7.1	3.8
FindTQuotients	1	1	0.5	0.2
FindIntersections	25	25	0.0	0.1
AddGroup	79	69	0.4	0.6
MustCheckP	385	92	0.0	0.0
FindPModules	299	35	7.1	3.8
SMTX_BasesMaximalSubmodules	29	29	1.1	0.0
PullBackH	55	52	1.7	0.3

Group : $C_2 * C_8$
Searching up to index : 500
How many normal groups are found : 1187
Total Time (in s) in GAP: 149.8
Total Time (in s) in MAGMA299.6

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	149.8	299.6
FindPQuotients	466	466	135.2	177.0
FindTQuotients	1	1	0.6	0.2
FindIntersections	465	465	13.8	122.4
AddGroup	1761	1688	32.5	223.1

3

MustCheckP	1581	1337	0.0	0.0
FindPModules	868	648	135.2	176.9
SMTX_BasesMaximalSubmodules	505	505	20.2	1.1
PullBackH	1353	1228	23.5	2.7

Group : $C_2 * C_9$
Searching up to index : 1000
How many normal groups are found : 358
Total Time (in s) in GAP: 47.1
Total Time (in s) in MAGMA41.1

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	47.1	41.1
FindPQuotients	184	184	39.0	29.0
FindTQuotients	1	1	5.2	0.2
FindIntersections	183	183	2.9	11.9
AddGroup	490	445	7.2	21.8
MustCheckP	916	563	0.0	0.0
FindPModules	485	186	38.9	28.9
SMTX_BasesMaximalSubmodules	168	167	5.5	0.3
PullBackH	339	328	8.2	1.3

Group : $C_2 * C_{10}$
Searching up to index : 500
How many normal groups are found : 469
Total Time (in s) in GAP: 30.9
Total Time (in s) in MAGMA68.4

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	30.9	68.4
FindPQuotients	227	227	25.1	33.1
FindTQuotients	1	1	0.1	0.2
FindIntersections	226	226	5.6	35.1
AddGroup	567	551	9.8	48.8
MustCheckP	951	732	0.0	0.0

Function				
FindPModules	458	257	25.0	33.1
SMTX_BasesMaximalSubmodules	236	236	3.6	0.2
PullBackH	367	223	3.8	0.4

Group : $C_2 * C_{11}$
Searching up to index : 1000
How many normal groups are found : 21
Total Time (in s) in GAP: 8.8
Total Time (in s) in MAGMA1.0

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	8.8	1.0
FindPQuotients	6	6	1.1	0.8
FindTQuotients	1	1	7.6	0.2
FindIntersections	5	5	0.0	0.0
AddGroup	28	21	0.1	0.0
MustCheckP	317	34	0.0	0.0
FindPModules	271	9	1.1	0.8
SMTX_BasesMaximalSubmodules	7	7	0.0	0.0
PullBackH	16	14	0.0	0.0

Group : $C_2 * C_{12}$
Searching up to index : 150
How many normal groups are found : 355
Total Time (in s) in GAP: 8.9
Total Time (in s) in MAGMA23.7

Function	Count_GAP	Count_MAGMA	Time_GAP	Time_MAGMA
LowIndexNormal	1	1	8.9	23.7
FindPQuotients	152	152	8.1	20.4
FindTQuotients	1	1	0.0	0.1
FindIntersections	151	151	0.7	3.1
AddGroup	476	473	1.7	5.6
MustCheckP	494	423	0.0	0.0
FindPModules	308	237	8.1	20.4

5

SMTX_BasesMaximalSubmodules	181	181	1.5	0.2
PullBackH	378	339	0.7	0.3