

FreeProductsExtendedProfile

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	1771	0.0	0.0	0.0	0.0
NextPrimeInt	1706	0.0	0.0	0.0	0.0
MustCheckP	1706	0.0	0.0	0.0	0.0
MinSubgroupSizes	1706	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	2696	0.1	0.0	0.0	0.0
GModuleByMats	18252	0.3	0.0	0.0	0.0
NaturalHomomorphismBySubspace	404	0.4	0.0	0.0	0.0
EpimorphismQuotientSystem	915	0.6	0.0	0.1	0.0
GeneratorsOfMagmaWithInverses	985521	0.6	0.0	0.0	0.0
IsomorphismFpGroup	1086	1.2	0.0	0.1	0.0
Index	297361	1.2	0.0	0.4	0.0
PQuotient	1830	2.1	0.0	0.2	0.0
ExponentSum	124472	3.6	0.0	0.3	0.0
PreImagesRepresentative	46544	3.9	0.0	0.2	0.0
Intersection	156126	5.6	0.3	1.1	0.0
Image	138872	6.3	0.0	1.2	0.0
LowIndexSubgroupsFpGroup	2	6.8	0.0	1.4	0.0
FindIntersections	246	7.5	7.4	3.6	3.6
Core	5032	7.7	5.6	1.7	1.1
PullBackH	404	12.7	2.4	1.6	0.2
SMTX_BasesMaximalSubmodules	272	12.9	0.0	2.0	0.0

IsSubgroupFp	8205	13.4	0.0	4.1	0.0
AddGroup	724	14.7	14.2	4.6	4.5
FindTQuotients	1	16.2	16.1	3.3	3.3
PreImage	10398	28.1	0.3	18.6	0.0
Kernel	404	28.2	28.1	18.6	18.6
FindPModules	932	77.0	76.0	25.5	25.4
FindPQuotients	247	77.1	77.0	25.5	25.5
LowIndexNormal	1	100.8	100.8	32.5	32.5

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	1637	0.0	0.0	0.0	0.0
MustCheckP	1182	0.0	0.0	0.0	0.0
NextPrimeInt	1182	0.0	0.0	0.0	0.0
MinSubgroupSizes	1182	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
Core	199	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	3095	0.1	0.0	0.0	0.0
GModuleByMats	12308	0.1	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	235254	0.1	0.0	0.0	0.0
FindTQuotients	1	0.2	0.2	0.0	0.0
Intersection	90004	0.2	0.0	0.0	0.0
NaturalHomomorphismBySubspace	599	0.2	0.0	0.0	0.0
EpimorphismQuotientSystem	546	0.2	0.0	0.0	0.0
IsomorphismFpGroup	707	0.4	0.0	0.0	0.0
Index	376764	0.6	0.0	0.0	0.0
ExponentSum	73447	1.1	0.0	0.1	0.0
PQuotient	1092	1.2	0.0	0.1	0.0
PreImagesRepresentative	32352	1.4	0.0	0.1	0.0
Image	102068	2.9	0.0	0.4	0.0
PullBackH	599	4.3	0.7	0.5	0.0
SMTX_BasesMaximalSubmodules	331	6.6	0.0	0.8	0.0

FindIntersections	304	7.5	7.2	1.6	1.6
PreImage	1414	10.9	0.3	2.5	0.0
Kernel	599	10.9	10.9	2.5	2.5
IsSubgroupFp	16590	12.5	0.0	2.5	0.0
AddGroup	903	13.6	12.9	2.7	2.5
FindPModules	596	36.3	35.6	5.9	5.8
FindPQuotients	305	36.3	36.3	5.9	5.9
LowIndexNormal	1	44.0	44.0	7.6	7.6

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	707	0.0	0.0	0.0	0.0
NextPrimeInt	894	0.0	0.0	0.0	0.0
MustCheckP	894	0.0	0.0	0.0	0.0
MinSubgroupSizes	894	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1335	0.0	0.0	0.0	0.0
GModuleByMats	10000	0.1	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	470294	0.3	0.0	0.0	0.0
EpimorphismQuotientSystem	584	0.4	0.0	0.0	0.0
Index	69741	0.4	0.0	0.0	0.0
NaturalHomomorphismBySubspace	173	0.4	0.0	0.0	0.0
FindIntersections	87	1.1	1.1	0.4	0.4
IsomorphismFpGroup	649	1.3	0.0	0.1	0.0
PQuotient	1168	1.3	0.0	0.1	0.0
LowIndexSubgroupsFpGroup	2	1.3	0.0	0.2	0.0
Intersection	51412	2.2	0.1	0.3	0.0
Core	3194	3.1	2.2	0.5	0.3
ExponentSum	80188	3.9	0.0	0.3	0.0
PreImagesRepresentative	34196	4.1	0.0	0.2	0.0
IsSubgroupFp	5371	5.1	0.0	0.9	0.0
AddGroup	344	5.4	5.3	0.9	0.9
Image	98236	5.7	0.0	0.2	0.0

FindTQuotients	1	6.6	6.6	1.0	1.0
PreImage	4450	10.9	0.1	2.9	0.0
Kernel	173	10.9	10.9	2.9	2.9
SMTX_BasesMaximalSubmodules	96	10.9	0.0	2.2	0.0
PullBackH	173	13.6	2.6	2.0	0.2
FindPModules	592	53.5	52.4	8.7	8.5
FindPQuotients	88	53.5	53.5	8.7	8.7
LowIndexNormal	1	61.4	61.4	10.2	10.2

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
NextPrimeInt	1344	0.0	0.0	0.0	0.0
IsPowerOf	1947	0.0	0.0	0.0	0.0
MustCheckP	1344	0.0	0.0	0.0	0.0
MinSubgroupSizes	1344	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.1	0.0	0.0	0.0
GModuleByMats	18190	0.1	0.0	0.0	0.0
Core	400	0.1	0.1	0.0	0.0
GroupHomomorphismByImagesNC	3889	0.2	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	337990	0.2	0.0	0.0	0.0
Intersection	130204	0.3	0.0	0.0	0.0
NaturalHomomorphismBySubspace	770	0.4	0.0	0.0	0.0
EpimorphismQuotientSystem	626	0.5	0.1	0.0	0.0
FindTQuotients	1	0.6	0.6	0.0	0.0
Index	565607	0.9	0.0	0.1	0.0
IsomorphismFpGroup	819	1.0	0.0	0.0	0.0
PQuotient	1252	1.7	0.0	0.2	0.0
ExponentSum	110834	1.8	0.0	0.1	0.0
PreImagesRepresentative	46326	2.3	0.0	0.2	0.0
Image	148546	4.2	0.0	0.4	0.0
PullBackH	770	7.2	1.2	0.8	0.1
SMTX_BasesMaximalSubmodules	398	8.1	0.0	1.0	0.0

FindIntersections	362	8.3	7.8	1.7	1.7
PreImage	1952	13.0	0.4	3.2	0.0
Kernel	770	13.1	13.0	3.2	3.2
IsSubgroupFp	35122	13.4	0.0	2.6	0.0
AddGroup	1145	15.3	14.0	2.8	2.6
FindPModules	683	47.9	46.9	7.4	7.3
FindPQuotients	363	47.9	47.9	7.4	7.4
LowIndexNormal	1	56.9	56.9	9.2	9.2

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	248	0.0	0.0	0.0	0.0
MustCheckP	385	0.0	0.0	0.0	0.0
NextPrimeInt	385	0.0	0.0	0.0	0.0
MinSubgroupSizes	385	0.0	0.0	0.0	0.0
GModuleByMats	1756	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	530	0.0	0.0	0.0	0.0
FindIntersections	25	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	71455	0.0	0.0	0.0	0.0
Index	6895	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	55	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.1	0.0	0.0	0.0
EpimorphismQuotientSystem	295	0.1	0.0	0.0	0.0
IsomorphismFpGroup	316	0.1	0.0	0.0	0.0
Intersection	6226	0.2	0.0	0.0	0.0
Core	518	0.3	0.2	0.0	0.0
ExponentSum	14542	0.4	0.0	0.0	0.0
PreImagesRepresentative	5204	0.4	0.0	0.0	0.0
IsSubgroupFp	631	0.4	0.0	0.0	0.0
AddGroup	79	0.4	0.4	0.0	0.0
FindTQuotients	1	0.5	0.5	0.0	0.0
PQuotient	590	0.7	0.0	0.0	0.0

Image	16968	0.7	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	29	1.1	0.0	0.2	0.0
PreImage	626	1.4	0.0	0.2	0.0
Kernel	55	1.4	1.4	0.2	0.2
PullBackH	55	1.7	0.3	0.2	0.0
FindPModules	299	7.1	6.9	1.0	0.9
FindPQuotients	26	7.1	7.1	1.0	1.0
LowIndexNormal	1	7.7	7.7	1.1	1.1

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	2278	0.0	0.0	0.0	0.0
NextPrimeInt	1581	0.0	0.0	0.0	0.0
MustCheckP	1581	0.0	0.0	0.0	0.0
MinSubgroupSizes	1581	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
Core	415	0.2	0.1	0.0	0.0
GroupHomomorphismByImagesNC	6427	0.3	0.0	0.0	0.0
GModuleByMats	37582	0.4	0.0	0.0	0.0
Intersection	211588	0.4	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	758221	0.5	0.0	0.0	0.0
FindTQuotients	1	0.6	0.6	0.0	0.0
EpimorphismQuotientSystem	725	0.7	0.1	0.1	0.0
NaturalHomomorphismBySubspace	1353	1.1	0.0	0.0	0.0
Index	1226227	1.7	0.0	0.1	0.0
PQuotient	1450	1.8	0.0	0.2	0.0
IsomorphismFpGroup	1023	2.5	0.0	0.2	0.0
ExponentSum	236541	6.3	0.0	0.5	0.0
PreImagesRepresentative	129848	7.4	0.0	0.6	0.0
FindIntersections	465	13.8	12.5	2.6	2.5
Image	400064	13.9	0.1	1.6	0.0
SMTX_BasesMaximalSubmodules	505	20.2	0.2	2.6	0.0

PullBackH	1353	23.5	4.3	3.0	0.3
IsSubgroupFp	95908	28.8	0.0	4.4	0.0
AddGroup	1761	32.5	29.8	4.8	4.4
PreImage	3138	39.0	0.9	5.1	0.1
Kernel	1353	39.0	39.0	5.1	5.1
FindPModules	868	135.2	132.5	16.5	16.2
FindPQuotients	466	135.2	135.2	16.5	16.5
LowIndexNormal	1	149.8	149.8	19.2	19.2

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
NextPrimeInt	916	0.0	0.0	0.0	0.0
IsPowerOf	1016	0.0	0.0	0.0	0.0
MinSubgroupSizes	916	0.0	0.0	0.0	0.0
MustCheckP	916	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1907	0.1	0.0	0.0	0.0
GModuleByMats	10816	0.1	0.0	0.0	0.0
EpimorphismQuotientSystem	468	0.2	0.0	0.0	0.0
NaturalHomomorphismBySubspace	339	0.3	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	550157	0.4	0.0	0.0	0.0
Index	128693	0.5	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.9	0.0	0.1	0.0
IsomorphismFpGroup	557	1.1	0.0	0.1	0.0
ExponentSum	89368	2.0	0.0	0.1	0.0
Intersection	84152	2.4	0.1	0.4	0.0
PreImagesRepresentative	29304	2.7	0.0	0.2	0.0
PQuotient	936	2.8	0.0	0.5	0.0
FindIntersections	183	2.9	2.8	0.7	0.7
Core	4152	3.4	2.5	0.5	0.4
Image	96586	3.7	0.0	0.3	0.0
FindTQuotients	1	5.2	5.1	0.8	0.8
SMTX_BasesMaximalSubmodules	168	5.5	0.0	0.6	0.0

IsSubgroupFp	9439	6.7	0.0	1.1	0.0
AddGroup	490	7.2	7.0	1.2	1.1
PullBackH	339	8.2	1.5	0.8	0.1
PreImage	4836	9.0	0.2	1.7	0.0
Kernel	339	9.1	9.0	1.7	1.7
FindPModules	485	38.9	38.2	5.0	4.9
FindPQuotients	184	39.0	39.0	5.0	5.0
LowIndexNormal	1	47.1	47.1	6.6	6.6

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	1302	0.0	0.0	0.0	0.0
NextPrimeInt	951	0.0	0.0	0.0	0.0
MustCheckP	951	0.0	0.0	0.0	0.0
MinSubgroupSizes	951	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
GModuleByMats	6964	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	2000	0.0	0.0	0.0	0.0
Core	188	0.1	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	161367	0.1	0.0	0.0	0.0
Intersection	51102	0.1	0.0	0.0	0.0
FindTQuotients	1	0.1	0.1	0.0	0.0
NaturalHomomorphismBySubspace	367	0.1	0.0	0.0	0.0
Index	170125	0.3	0.0	0.0	0.0
EpimorphismQuotientSystem	442	0.4	0.0	0.0	0.0
IsomorphismFpGroup	542	0.5	0.0	0.0	0.0
ExponentSum	60082	1.0	0.0	0.0	0.0
PQuotient	884	1.3	0.0	0.2	0.0
PreImagesRepresentative	21780	1.4	0.0	0.1	0.0
Image	70586	2.2	0.0	0.2	0.0
SMTX_BasesMaximalSubmodules	236	3.6	0.0	0.5	0.0
PullBackH	367	3.8	0.7	0.4	0.0

FindIntersections	226	5.6	5.5	1.3	1.3
PreImage	926	5.9	0.2	1.7	0.0
Kernel	367	5.9	5.9	1.7	1.7
IsSubgroupFp	7995	9.3	0.0	2.0	0.0
AddGroup	567	9.8	9.5	2.1	2.0
FindPModules	458	25.0	24.5	4.4	4.3
FindPQuotients	227	25.1	25.1	4.4	4.4
LowIndexNormal	1	30.9	30.9	5.7	5.7

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
GModuleByMats	156	0.0	0.0	0.0	0.0
IsPowerOf	164	0.0	0.0	0.0	0.0
MinSubgroupSizes	317	0.0	0.0	0.0	0.0
FindIntersections	5	0.0	0.0	0.0	0.0
MustCheckP	317	0.0	0.0	0.0	0.0
NextPrimeInt	317	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	16	0.0	0.0	0.0	0.0
PreImagesRepresentative	176	0.0	0.0	0.0	0.0
Image	1804	0.0	0.0	0.0	0.0
IsomorphismFpGroup	277	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	335	0.0	0.0	0.0	0.0
ExponentSum	2678	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	7	0.0	0.0	0.0	0.0
EpimorphismQuotientSystem	271	0.0	0.0	0.0	0.0
PullBackH	16	0.0	0.0	0.0	0.0
Kernel	16	0.0	0.0	0.0	0.0
Index	30688	0.1	0.0	0.0	0.0
PreImage	6524	0.1	0.0	0.0	0.0
IsSubgroupFp	164	0.1	0.0	0.0	0.0
AddGroup	28	0.1	0.1	0.0	0.0
GeneratorsOfMagmaWithInverses	591871	0.3	0.0	0.0	0.0

PQuotient	542	0.7	0.0	0.0	0.0
FindPModules	271	1.1	1.1	0.1	0.1
FindPQuotients	6	1.1	1.1	0.1	0.1
LowIndexSubgroupsFpGroup	2	1.8	0.0	0.2	0.0
Intersection	85446	4.0	0.2	0.6	0.0
Core	6494	5.6	4.1	1.0	0.6
FindTQuotients	1	7.6	7.6	1.3	1.3
LowIndexNormal	1	8.8	8.8	1.4	1.4

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

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
NextPrimeInt	494	0.0	0.0	0.0	0.0
IsPowerOf	669	0.0	0.0	0.0	0.0
MinSubgroupSizes	494	0.0	0.0	0.0	0.0
Core	22	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
MustCheckP	494	0.0	0.0	0.0	0.0
GModuleByMats	4752	0.0	0.0	0.0	0.0
FindTQuotients	1	0.0	0.0	0.0	0.0
Intersection	21354	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1865	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	96878	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	378	0.1	0.0	0.0	0.0
EpimorphismQuotientSystem	271	0.1	0.0	0.0	0.0
IsomorphismFpGroup	363	0.1	0.0	0.0	0.0
ExponentSum	22348	0.2	0.0	0.0	0.0
Index	109414	0.2	0.0	0.0	0.0
PreImagesRepresentative	12760	0.3	0.0	0.0	0.0
FindIntersections	151	0.7	0.6	0.0	0.0
PQuotient	542	0.7	0.0	0.0	0.0
PullBackH	378	0.7	0.1	0.0	0.0
Image	40214	0.8	0.0	0.0	0.0

IsSubgroupFp	14059	1.4	0.0	0.1	0.0
SMTX_BasesMaximalSubmodules	181	1.5	0.0	0.1	0.0
AddGroup	476	1.7	1.5	0.2	0.1
PreImage	800	2.0	0.1	0.2	0.0
Kernel	378	2.0	2.0	0.2	0.2
FindPModules	308	8.1	7.8	0.9	0.8
FindPQuotients	152	8.1	8.1	0.9	0.9
LowIndexNormal	1	8.9	8.9	1.0	1.0