FreeProductsExtendedProfile

September 10, 2018

Group : $C_2 * C_3$
Searching up to index : 2500
How many normal groups are found : 527
Total Time in s : 112.7

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	0.2	0.0	0.0	0.0
GModuleByMats	18252	0.3	0.0	0.0	0.0
NaturalHomomorphismBySubspace	404	0.5	0.0	0.0	0.0
EpimorphismQuotientSystem	915	0.6	0.1	0.1	0.0
GeneratorsOfMagmaWithInverses	985521	0.7	0.0	0.0	0.0
IsomorphismFpGroup	1086	1.4	0.0	0.1	0.0
Index	297361	1.5	0.0	0.4	0.0
PQuotient	1830	2.4	0.0	0.2	0.0
ExponentSum	124472	4.1	0.0	0.3	0.0
PreImagesRepresentative	46544	4.2	0.0	0.2	0.0
Intersection	156126	6.2	0.3	1.1	0.0
Image	138872	6.8	0.0	1.2	0.0
LowIndexSubgroupsFpGroup	2	7.3	0.0	1.4	0.0
Core	5032	8.6	6.3	1.7	1.1
FindIntersections	246	8.9	8.8	3.6	3.6
PullBackH	404	14.0	2.7	1.6	0.2
SMTX_BasesMaximalSubmodules	272	14.4	0.0	2.0	0.0

IsSubgroupFp	8205	15.3	0.0	4.1	0.0
AddGroup	724	16.8	16.3	4.6	4.5
FindTQuotients	1	17.7	17.6	3.3	3.3
PreImage	10398	31.7	0.3	18.6	0.0
Kernel	404	31.7	31.7	18.6	18.6
FindPModules	932	85.9	84.7	25.5	25.4
FindPQuotients	247	86.0	86.0	25.5	25.5
LowIndexNormal	1	112.7	112.7	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 : 50.1

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	1637	0.0	0.0	0.0	0.0
NextPrimeInt	1182	0.0	0.0	0.0	0.0
MustCheckP	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	0.1	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	235254	0.1	0.0	0.0	0.0
GroupHomomorphismByImagesNC	3095	0.2	0.0	0.0	0.0
Intersection	90004	0.2	0.0	0.0	0.0
NaturalHomomorphismBySubspace	599	0.3	0.0	0.0	0.0
FindTQuotients	1	0.3	0.3	0.0	0.0
EpimorphismQuotientSystem	546	0.4	0.0	0.0	0.0
GModuleByMats	12308	0.4	0.0	0.0	0.0
IsomorphismFpGroup	707	0.5	0.0	0.0	0.0
Index	376764	0.7	0.0	0.0	0.0
ExponentSum	73447	1.3	0.0	0.1	0.0
PreImagesRepresentative	32352	1.4	0.0	0.1	0.0
PQuotient	1092	1.7	0.0	0.1	0.0
Image	102068	3.3	0.0	0.4	0.0
PullBackH	599	4.8	0.7	0.5	0.0
SMTX_BasesMaximalSubmodules	331	7.4	0.0	0.8	0.0

FindIntersections	304	8.4	8.1	1.6	1.6
PreImage	1414	11.9	0.4	2.5	0.0
Kernel	599	12.0	11.9	2.5	2.5
IsSubgroupFp	16590	14.0	0.0	2.5	0.0
AddGroup	903	15.4	14.5	2.7	2.5
FindPModules	596	41.3	40.4	5.9	5.8
FindPQuotients	305	41.4	41.4	5.9	5.9
LowIndexNormal	1	50.1	50.1	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 : 67.3

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	0.1	0.0	0.0	0.0
GModuleByMats	10000	0.1	0.0	0.0	0.0
Index	69741	0.3	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	470294	0.3	0.0	0.0	0.0
NaturalHomomorphismBySubspace	173	0.4	0.0	0.0	0.0
EpimorphismQuotientSystem	584	0.4	0.0	0.0	0.0
FindIntersections	87	1.1	1.1	0.4	0.4
IsomorphismFpGroup	649	1.4	0.0	0.1	0.0
LowIndexSubgroupsFpGroup	2	1.4	0.0	0.2	0.0
PQuotient	1168	1.6	0.0	0.1	0.0
Intersection	51412	2.3	0.1	0.3	0.0
Core	3194	3.3	2.4	0.5	0.3
ExponentSum	80188	4.2	0.0	0.3	0.0
PreImagesRepresentative	34196	4.3	0.0	0.2	0.0
IsSubgroupFp	5371	5.7	0.0	0.9	0.0
AddGroup	344	5.9	5.8	0.9	0.9
Image	98236	6.5	0.0	0.2	0.0

FindTQuotients	1	7.2	7.2	1.0	1.0
Kernel	173	11.6	11.6	2.9	2.9
PreImage	4450	11.6	0.1	2.9	0.0
SMTX_BasesMaximalSubmodules	96	12.4	0.0	2.2	0.0
PullBackH	173	14.8	2.7	2.0	0.2
FindPModules	592	58.9	57.7	8.7	8.5
FindPQuotients	88	58.9	58.9	8.7	8.7
LowIndexNormal	1	67.3	67.3	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 : 63.1

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	1947	0.0	0.0	0.0	0.0
NextPrimeInt	1344	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	0.0	0.0	0.0	0.0
Core	400	0.1	0.1	0.0	0.0
GModuleByMats	18190	0.2	0.0	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
FindTQuotients	1	0.5	0.5	0.0	0.0
EpimorphismQuotientSystem	626	0.6	0.0	0.0	0.0
Index	565607	1.0	0.0	0.1	0.0
IsomorphismFpGroup	819	1.0	0.0	0.0	0.0
PQuotient	1252	2.1	0.0	0.2	0.0
ExponentSum	110834	2.1	0.0	0.1	0.0
PreImagesRepresentative	46326	2.4	0.0	0.2	0.0
Image	148546	4.7	0.0	0.4	0.0
PullBackH	770	7.9	1.4	0.8	0.1
SMTX_BasesMaximalSubmodules	398	8.9	0.1	1.0	0.0

FindIntersections	362	9.1	8.7	1.7	1.7
PreImage	1952	14.7	0.5	3.2	0.0
Kernel	770	14.8	14.7	3.2	3.2
IsSubgroupFp	35122	15.0	0.0	2.6	0.0
AddGroup	1145	17.2	15.6	2.8	2.6
FindPModules	683	53.3	52.1	7.4	7.3
FindPQuotients	363	53.3	53.3	7.4	7.4
LowIndexNormal	1	63.1	63.1	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 : 8.3

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	248	0.0	0.0	0.0	0.0
NextPrimeInt	385	0.0	0.0	0.0	0.0
MustCheckP	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
FindIntersections	25	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	530	0.0	0.0	0.0	0.0
Index	6895	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	71455	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	55	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
IsomorphismFpGroup	316	0.1	0.0	0.0	0.0
EpimorphismQuotientSystem	295	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
PreImagesRepresentative	5204	0.4	0.0	0.0	0.0
ExponentSum	14542	0.4	0.0	0.0	0.0
IsSubgroupFp	631	0.4	0.0	0.0	0.0
AddGroup	79	0.5	0.4	0.0	0.0
FindTQuotients	1	0.5	0.5	0.0	0.0
Image	16968	0.7	0.0	0.0	0.0

PQuotient	590	0.7	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	29	1.2	0.0	0.2	0.0
PreImage	626	1.5	0.0	0.2	0.0
Kernel	55	1.5	1.5	0.2	0.2
PullBackH	55	1.8	0.3	0.2	0.0
FindPModules	299	7.6	7.5	1.0	0.9
FindPQuotients	26	7.6	7.6	1.0	1.0
LowIndexNormal	1	8.3	8.3	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 : 165.6

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
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
MinSubgroupSizes	1581	0.0	0.0	0.0	0.0
Core	415	0.2	0.1	0.0	0.0
GroupHomomorphismByImagesNC	6427	0.4	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
EpimorphismQuotientSystem	725	0.6	0.1	0.1	0.0
FindTQuotients	1	0.7	0.7	0.0	0.0
NaturalHomomorphismBySubspace	1353	1.2	0.0	0.0	0.0
Index	1226227	1.9	0.0	0.1	0.0
PQuotient	1450	2.1	0.0	0.2	0.0
IsomorphismFpGroup	1023	2.9	0.0	0.2	0.0
ExponentSum	236541	6.7	0.0	0.5	0.0
PreImagesRepresentative	129848	7.8	0.0	0.6	0.0
FindIntersections	465	15.3	13.9	2.6	2.5
Image	400064	15.7	0.1	1.6	0.0
SMTX_BasesMaximalSubmodules	505	22.5	0.2	2.6	0.0

PullBackH	1353	25.7	4.5	3.0	0.3
IsSubgroupFp	95908	31.7	0.0	4.4	0.0
AddGroup	1761	35.9	32.9	4.8	4.4
PreImage	3138	43.3	1.2	5.1	0.1
Kernel	1353	43.4	43.3	5.1	5.1
FindPModules	868	149.3	146.4	16.5	16.2
FindPQuotients	466	149.4	149.4	16.5	16.5
LowIndexNormal	1	165.6	165.6	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 : 51.5

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	1016	0.0	0.0	0.0	0.0
NextPrimeInt	916	0.0	0.0	0.0	0.0
MustCheckP	916	0.0	0.0	0.0	0.0
MinSubgroupSizes	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
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
EpimorphismQuotientSystem	468	0.5	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	1.4	0.0	0.1	0.0
IsomorphismFpGroup	557	1.4	0.0	0.1	0.0
ExponentSum	89368	2.2	0.0	0.1	0.0
Intersection	84152	2.5	0.1	0.4	0.0
PQuotient	936	2.6	0.0	0.5	0.0
PreImagesRepresentative	29304	2.9	0.0	0.2	0.0
FindIntersections	183	3.7	3.6	0.7	0.7
Core	4152	3.7	2.6	0.5	0.4
Image	96586	3.8	0.0	0.3	0.0
FindTQuotients	1	5.7	5.7	0.8	0.8
SMTX_BasesMaximalSubmodules	168	6.1	0.0	0.6	0.0

IsSubgroupFp	9439	7.6	0.0	1.1	0.0
AddGroup	490	8.3	7.8	1.2	1.1
PullBackH	339	8.9	1.6	0.8	0.1
PreImage	4836	9.6	0.2	1.7	0.0
Kernel	339	9.6	9.6	1.7	1.7
FindPModules	485	42.0	41.3	5.0	4.9
FindPQuotients	184	42.0	42.0	5.0	5.0
LowIndexNormal	1	51.5	51.5	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 : 34.9

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
NextPrimeInt	951	0.0	0.0	0.0	0.0
IsPowerOf	1302	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
GeneratorsOfMagmaWithInverses	161367	0.0	0.0	0.0	0.0
GModuleByMats	6964	0.0	0.0	0.0	0.0
Core	188	0.1	0.0	0.0	0.0
GroupHomomorphismByImagesNC	2000	0.1	0.0	0.0	0.0
FindTQuotients	1	0.2	0.2	0.0	0.0
Intersection	51102	0.2	0.0	0.0	0.0
NaturalHomomorphismBySubspace	367	0.2	0.0	0.0	0.0
EpimorphismQuotientSystem	442	0.2	0.0	0.0	0.0
Index	170125	0.4	0.0	0.0	0.0
IsomorphismFpGroup	542	0.6	0.0	0.0	0.0
ExponentSum	60082	1.1	0.0	0.0	0.0
PreImagesRepresentative	21780	1.3	0.0	0.1	0.0
PQuotient	884	1.5	0.0	0.2	0.0
Image	70586	2.5	0.0	0.2	0.0
SMTX_BasesMaximalSubmodules	236	4.2	0.0	0.5	0.0
PullBackH	367	4.5	0.7	0.4	0.0

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
FindIntersections	226	6.1	6.0	1.3	1.3
PreImage	926	6.7	0.2	1.7	0.0
Kernel	367	6.8	6.7	1.7	1.7
IsSubgroupFp	7995	10.5	0.0	2.0	0.0
AddGroup	567	11.2	10.8	2.1	2.0
FindPModules	458	28.5	27.9	4.4	4.3
FindPQuotients	227	28.6	28.6	4.4	4.4
LowIndexNormal	1	34.9	34.9	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 : 9.8

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
NextPrimeInt	317	0.0	0.0	0.0	0.0
IsPowerOf	164	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
PreImagesRepresentative	176	0.0	0.0	0.0	0.0
MinSubgroupSizes	317	0.0	0.0	0.0	0.0
GModuleByMats	156	0.0	0.0	0.0	0.0
IsomorphismFpGroup	277	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	16	0.0	0.0	0.0	0.0
Image	1804	0.0	0.0	0.0	0.0
ExponentSum	2678	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	335	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	7	0.0	0.0	0.0	0.0
Kernel	16	0.0	0.0	0.0	0.0
EpimorphismQuotientSystem	271	0.1	0.0	0.0	0.0
PreImage	6524	0.1	0.0	0.0	0.0
Index	30688	0.1	0.0	0.0	0.0
PullBackH	16	0.1	0.0	0.0	0.0
IsSubgroupFp	164	0.2	0.0	0.0	0.0
AddGroup	28	0.2	0.2	0.0	0.0
GeneratorsOfMagmaWithInverses	591871	0.4	0.0	0.0	0.0

PQuotient	542	0.8	0.0	0.0	0.0
FindPModules	271	1.3	1.2	0.1	0.1
FindPQuotients	6	1.3	1.3	0.1	0.1
LowIndexSubgroupsFpGroup	2	2.0	0.0	0.2	0.0
Intersection	85446	4.3	0.2	0.6	0.0
Core	6494	6.2	4.4	1.0	0.6
FindTQuotients	1	8.5	8.5	1.3	1.3
LowIndexNormal	1	9.8	9.8	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 : 10.2

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	669	0.0	0.0	0.0	0.0
MustCheckP	494	0.0	0.0	0.0	0.0
NextPrimeInt	494	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
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
GeneratorsOfMagmaWithInverses	96878	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1865	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
ExponentSum	22348	0.2	0.0	0.0	0.0
IsomorphismFpGroup	363	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
PQuotient	542	0.7	0.0	0.0	0.0
FindIntersections	151	0.7	0.7	0.0	0.0
Image	40214	0.8	0.0	0.0	0.0
PullBackH	378	0.8	0.1	0.0	0.0

IsSubgroupFp	14059	1.5	0.0	0.1	0.0
SMTX_BasesMaximalSubmodules	181	1.7	0.0	0.1	0.0
AddGroup	476	1.9	1.7	0.2	0.1
PreImage	800	2.5	0.2	0.2	0.0
Kernel	378	2.5	2.5	0.2	0.2
FindPModules	308	9.3	9.0	0.9	0.8
FindPQuotients	152	9.4	9.4	0.9	0.9
LowIndexNormal	1	10.2	10.2	1.0	1.0