

FreeProductsExtendedProfile

September 4, 2018

Group : $C_2 * C_3$

Searching up to index : 2500

How many normal groups are found : 527

Total Time in s : 552.8

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	3362	0.3	0.0	0.0	0.0
GModuleByMats	35002	0.5	0.0	0.0	0.0
NaturalHomomorphismBySubspace	554	0.9	0.0	0.0	0.0
EpimorphismQuotientSystem	981	0.9	0.1	0.1	0.0
Index	329807	1.6	0.0	0.4	0.0
GeneratorsOfMagmaWithInverses	1908306	1.6	0.3	0.0	0.0
IsomorphismFpGroup	1152	2.2	0.0	0.2	0.0
PQuotient	1962	2.7	0.0	0.2	0.0
Intersection	156126	6.7	0.2	1.1	0.0
ExponentSum	174578	6.8	0.0	0.5	0.0
PreImagesRepresentative	75056	7.2	0.0	0.4	0.0
LowIndexSubgroupsFpGroup	2	8.2	0.0	1.4	0.0
Core	5032	9.3	6.7	1.7	1.1
Image	222828	12.3	0.0	2.5	0.0
FindTQuotients	1	18.6	18.5	3.3	3.3
PullBackH	554	23.9	4.5	2.8	0.3
SMTX_BasesMaximalSubmodules	338	26.0	0.2	3.4	0.0

FindIntersections	246	29.6	29.6	12.1	12.1
PreImage	10698	48.1	0.6	20.6	0.0
Kernel	554	48.1	48.0	20.6	20.6
IsSubgroup	11455	403.8	0.6	218.2	0.0
AddGroup	874	405.4	404.8	218.6	218.5
FindPModules	981	504.5	502.4	237.5	237.3
FindPQuotients	247	504.5	504.5	237.5	237.5
LowIndexNormal	1	552.8	552.8	252.9	252.9

Group : $C_2 * C_4$

Searching up to index : 500

How many normal groups are found : 688

Total Time in s : 410.1

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
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
MinSubgroupSizes	1182	0.0	0.0	0.0	0.0
Core	199	0.0	0.0	0.0	0.0
Intersection	90004	0.2	0.0	0.0	0.0
FindTQuotients	1	0.2	0.2	0.0	0.0
GroupHomomorphismByImagesNC	10147	0.7	0.0	0.0	0.0
GModuleByMats	67018	0.7	0.0	0.0	0.0
EpimorphismQuotientSystem	1074	0.9	0.1	0.1	0.0
IsomorphismFpGroup	1235	1.1	0.0	0.1	0.0
NaturalHomomorphismBySubspace	2230	1.4	0.0	0.1	0.0
Index	641454	1.9	0.0	0.1	0.0
PQuotient	2148	2.8	0.0	0.2	0.0
GeneratorsOfMagmaWithInverses	3333825	2.9	0.4	0.0	0.0
ExponentSum	218118	4.1	0.0	0.3	0.0
PreImagesRepresentative	123774	4.9	0.0	0.3	0.0
Image	395614	12.7	0.2	1.4	0.0
FindIntersections	304	14.5	14.2	4.2	4.2
PullBackH	2230	16.0	2.7	1.7	0.2

SMTX_BasesMaximalSubmodules	859	29.0	0.4	2.7	0.0
PreImage	4676	47.9	1.8	6.9	0.1
Kernel	2230	48.2	47.9	6.9	6.9
IsSubgroup	34695	284.6	1.9	102.7	0.0
AddGroup	2534	286.7	285.4	102.9	102.8
FindPModules	1074	395.1	391.6	113.0	112.8
FindPQuotients	305	395.2	395.2	113.0	113.0
LowIndexNormal	1	410.1	410.1	117.3	117.3

Group : $C_2 * C_5$

Searching up to index : 2000

How many normal groups are found : 205

Total Time in s : 197.8

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
MinSubgroupSizes	894	0.0	0.0	0.0	0.0
MustCheckP	894	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1396	0.1	0.0	0.0	0.0
GModuleByMats	13688	0.2	0.0	0.0	0.0
Index	70639	0.3	0.0	0.0	0.0
NaturalHomomorphismBySubspace	184	0.4	0.0	0.0	0.0
EpimorphismQuotientSystem	601	0.5	0.0	0.1	0.0
GeneratorsOfMagmaWithInverses	782392	0.7	0.1	0.0	0.0
PQuotient	1202	1.6	0.0	0.1	0.0
LowIndexSubgroupsFpGroup	2	1.6	0.0	0.2	0.0
IsomorphismFpGroup	666	1.9	0.0	0.1	0.0
Intersection	51412	2.8	0.1	0.3	0.0
Core	3194	3.9	2.8	0.5	0.3
FindIntersections	87	4.5	4.5	1.5	1.5
ExponentSum	87018	4.7	0.0	0.3	0.0
PreImagesRepresentative	43648	5.7	0.0	0.3	0.0
FindTQuotients	1	7.4	7.4	1.1	1.1
Image	118908	7.7	0.0	0.4	0.0
Kernel	184	12.3	12.3	2.9	2.9

PreImage	4472	12.3	0.2	2.9	0.0
PullBackH	184	15.6	2.9	2.0	0.2
SMTX_BasesMaximalSubmodules	113	16.2	0.1	2.5	0.0
IsSubgroup	5751	125.7	0.2	56.8	0.0
AddGroup	355	125.9	125.8	56.9	56.8
FindPModules	601	185.7	184.0	64.1	63.9
FindPQuotients	88	185.8	185.7	64.1	64.1
LowIndexNormal	1	197.8	197.8	66.8	66.8

Group : $C_2 * C_6$

Searching up to index : 500

How many normal groups are found : 862

Total Time in s : 639.3

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	0.2	0.1	0.0	0.0
Intersection	130204	0.4	0.0	0.0	0.0
GModuleByMats	53322	0.6	0.0	0.0	0.0
GroupHomomorphismByImagesNC	7742	0.7	0.0	0.0	0.0
FindTQuotients	1	0.9	0.9	0.1	0.1
EpimorphismQuotientSystem	891	1.0	0.2	0.1	0.0
NaturalHomomorphismBySubspace	1667	1.4	0.0	0.1	0.0
IsomorphismFpGroup	1084	1.6	0.0	0.1	0.0
Index	839971	2.0	0.0	0.1	0.0
PQuotient	1782	3.3	0.0	0.3	0.0
GeneratorsOfMagmaWithInverses	4618101	4.1	0.5	0.0	0.0
ExponentSum	253034	6.1	0.0	0.4	0.0
PreImagesRepresentative	123492	6.9	0.0	0.5	0.0
Image	391486	13.6	0.2	1.1	0.0
FindIntersections	362	22.0	21.6	6.1	6.1
PullBackH	1667	23.5	4.1	2.5	0.3

SMTX_BasesMaximalSubmodules	663	27.5	0.3	2.7	0.0
PreImage	3746	40.9	1.5	5.4	0.1
Kernel	1667	41.1	40.9	5.4	5.4
IsSubgroup	52743	509.0	2.9	178.4	0.0
AddGroup	2042	511.9	509.9	178.6	178.4
FindPModules	891	616.2	612.8	186.0	185.7
FindPQuotients	363	616.3	616.3	186.0	186.0
LowIndexNormal	1	639.3	639.3	192.3	192.3

Group : $C_2 * C_7$

Searching up to index : 1000

How many normal groups are found : 63

Total Time in s : 22.0

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
FindIntersections	25	0.0	0.0	0.0	0.0
GModuleByMats	2284	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	582	0.0	0.0	0.0	0.0
Index	7637	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	67	0.1	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	123906	0.1	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.1	0.0	0.0	0.0
EpimorphismQuotientSystem	299	0.1	0.0	0.0	0.0
IsomorphismFpGroup	320	0.2	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	6320	0.5	0.0	0.0	0.0
FindTQuotients	1	0.6	0.6	0.1	0.1
ExponentSum	18918	0.7	0.0	0.0	0.0
PQuotient	598	0.8	0.0	0.0	0.0
Image	21950	0.9	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	33	1.9	0.0	0.2	0.0

PreImage	650	2.2	0.0	0.3	0.0
Kernel	67	2.2	2.2	0.3	0.3
PullBackH	67	3.0	0.5	0.3	0.0
IsSubgroup	778	11.1	0.0	4.7	0.0
AddGroup	91	11.1	11.1	4.7	4.7
FindPModules	299	21.3	21.1	6.0	6.0
FindPQuotients	26	21.3	21.3	6.0	6.0
LowIndexNormal	1	22.0	22.0	6.2	6.2

Group : $C_2 * C_8$

Searching up to index : 500

How many normal groups are found : 1187

Total Time in s : 4924.7

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
Intersection	211588	0.5	0.0	0.0	0.0
FindTQuotients	1	0.8	0.8	0.1	0.1
EpimorphismQuotientSystem	3104	4.1	0.8	0.5	0.0
GroupHomomorphismByImagesNC	52190	4.2	0.1	0.3	0.0
IsomorphismFpGroup	3402	4.3	0.0	0.3	0.0
GModuleByMats	455510	5.2	0.2	0.4	0.0
PQuotient	6208	8.8	0.0	0.8	0.0
Index	4269559	12.4	0.5	0.9	0.0
NaturalHomomorphismBySubspace	12199	12.8	0.0	0.9	0.0
GeneratorsOfMagmaWithInverses	39939849	36.3	6.3	0.2	0.0
FindIntersections	465	48.3	46.6	13.0	13.0
ExponentSum	1798858	55.1	0.3	4.1	0.0
PreImagesRepresentative	1041816	57.1	0.6	4.4	0.0
Image	3403422	121.7	1.8	10.6	0.0
SMTX_BasesMaximalSubmodules	2884	196.0	3.2	18.6	0.1

PullBackH	12199	217.5	39.0	25.0	2.9
PreImage	24830	416.9	11.6	37.8	1.1
Kernel	12199	418.7	416.9	37.9	37.8
IsSubgroup	372541	3822.8	25.3	1245.9	0.2
AddGroup	12607	3835.2	3827.4	1246.5	1246.0
FindPModules	3104	4875.5	4848.3	1336.1	1334.4
FindPQuotients	466	4875.5	4875.5	1336.1	1336.1
LowIndexNormal	1	4924.7	4924.7	1349.3	1349.3

Group : $C_2 * C_9$

Searching up to index : 1000

How many normal groups are found : 358

Total Time in s : 240.4

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
GModuleByMats	21402	0.2	0.0	0.0	0.0
GroupHomomorphismByImagesNC	2704	0.3	0.0	0.0	0.0
EpimorphismQuotientSystem	525	0.6	0.2	0.0	0.0
NaturalHomomorphismBySubspace	524	0.6	0.0	0.0	0.0
Index	152114	0.8	0.0	0.1	0.0
LowIndexSubgroupsFpGroup	2	1.1	0.0	0.1	0.0
GeneratorsOfMagmaWithInverses	1563451	1.5	0.2	0.0	0.0
IsomorphismFpGroup	614	1.7	0.0	0.1	0.0
Intersection	84152	3.1	0.1	0.4	0.0
PQuotient	1050	3.5	0.0	0.8	0.0
ExponentSum	135448	3.9	0.0	0.2	0.0
Core	4152	4.4	3.2	0.5	0.4
PreImagesRepresentative	47880	5.0	0.0	0.3	0.0
FindTQuotients	1	6.2	6.1	0.8	0.8
Image	159252	6.8	0.0	0.5	0.0
SMTX_BasesMaximalSubmodules	225	11.9	0.1	1.0	0.0
FindIntersections	183	12.9	12.9	3.5	3.5

PullBackH	524	15.5	2.9	1.3	0.2
PreImage	5206	17.9	0.6	2.4	0.0
Kernel	524	18.0	17.9	2.4	2.4
IsSubgroup	13046	167.4	0.7	56.9	0.0
AddGroup	675	168.0	167.6	57.0	56.9
FindPModules	525	221.1	219.8	60.4	60.3
FindPQuotients	184	221.2	221.2	60.4	60.4
LowIndexNormal	1	240.4	240.4	64.8	64.8

Group : $C_2 * C_{10}$

Searching up to index : 500

How many normal groups are found : 469

Total Time in s : 105.4

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
Core	188	0.1	0.0	0.0	0.0
GModuleByMats	8848	0.1	0.0	0.0	0.0
GroupHomomorphismByImagesNC	2296	0.2	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	433	0.3	0.0	0.0	0.0
EpimorphismQuotientSystem	474	0.4	0.0	0.0	0.0
Index	187074	0.6	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	754311	0.6	0.1	0.0	0.0
IsomorphismFpGroup	574	1.0	0.0	0.0	0.0
ExponentSum	71913	1.6	0.0	0.1	0.0
PQuotient	948	1.8	0.0	0.2	0.0
PreImagesRepresentative	27894	1.8	0.0	0.1	0.0
Image	89992	3.5	0.0	0.2	0.0
SMTX_BasesMaximalSubmodules	268	5.7	0.0	0.6	0.0
PullBackH	433	5.8	1.1	0.6	0.0

FindIntersections	226	7.9	7.8	1.8	1.8
PreImage	1058	9.8	0.4	2.6	0.0
Kernel	433	9.9	9.8	2.6	2.6
IsSubgroup	10393	72.1	0.4	27.7	0.0
AddGroup	633	73.0	72.5	27.8	27.7
FindPModules	474	97.1	96.2	30.8	30.7
FindPQuotients	227	97.2	97.2	30.8	30.8
LowIndexNormal	1	105.4	105.4	32.7	32.7

Group : $C_2 * C_{11}$

Searching up to index : 1000

How many normal groups are found : 21

Total Time in s : 13.3

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	164	0.0	0.0	0.0	0.0
FindIntersections	5	0.0	0.0	0.0	0.0
MinSubgroupSizes	317	0.0	0.0	0.0	0.0
PreImagesRepresentative	176	0.0	0.0	0.0	0.0
NextPrimeInt	317	0.0	0.0	0.0	0.0
GModuleByMats	156	0.0	0.0	0.0	0.0
MustCheckP	317	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	16	0.0	0.0	0.0	0.0
ExponentSum	2678	0.0	0.0	0.0	0.0
IsomorphismFpGroup	277	0.0	0.0	0.0	0.0
Image	1804	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
PullBackH	16	0.1	0.0	0.0	0.0
Index	30688	0.1	0.0	0.0	0.0
EpimorphismQuotientSystem	271	0.2	0.0	0.0	0.0
Kernel	16	0.2	0.2	0.0	0.0
PreImage	6524	0.2	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	598404	0.5	0.0	0.0	0.0
PQuotient	542	1.1	0.0	0.0	0.0
IsSubgroup	186	1.3	0.0	0.5	0.0

AddGroup	28	1.3	1.3	0.5	0.5
LowIndexSubgroupsFpGroup	2	2.2	0.0	0.2	0.0
FindPModules	271	3.2	3.1	0.6	0.6
FindPQuotients	6	3.2	3.2	0.6	0.6
Intersection	85446	5.2	0.2	0.6	0.0
Core	6494	7.6	5.4	1.0	0.6
FindTQuotients	1	10.1	10.1	1.3	1.3
LowIndexNormal	1	13.3	13.3	2.0	2.0

Group : $C_2 * C_{12}$

Searching up to index : 150

How many normal groups are found : 355

Total Time in s : 91.5

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	669	0.0	0.0	0.0	0.0
NextPrimeInt	494	0.0	0.0	0.0	0.0
MustCheckP	494	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
Core	22	0.0	0.0	0.0	0.0
MinSubgroupSizes	494	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
GModuleByMats	16320	0.2	0.0	0.0	0.0
GroupHomomorphismByImagesNC	4463	0.4	0.0	0.0	0.0
IsomorphismFpGroup	581	0.4	0.0	0.0	0.0
EpimorphismQuotientSystem	489	0.5	0.0	0.0	0.0
NaturalHomomorphismBySubspace	973	0.5	0.0	0.0	0.0
ExponentSum	64426	0.7	0.0	0.0	0.0
Index	167375	0.9	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	1357671	1.2	0.1	0.0	0.0
PreImagesRepresentative	38352	1.4	0.0	0.1	0.0
PQuotient	978	1.6	0.0	0.1	0.0
Image	125028	3.4	0.0	0.2	0.0
PullBackH	973	3.5	0.5	0.3	0.0
FindIntersections	151	6.6	6.6	1.6	1.5

SMTX_BasesMaximalSubmodules	399	6.9	0.1	0.5	0.0
PreImage	1990	10.8	0.9	0.9	0.0
Kernel	973	11.0	10.8	0.9	0.9
IsSubgroup	19790	59.2	0.8	14.6	0.0
AddGroup	1071	59.8	59.4	14.7	14.6
FindPModules	489	84.7	83.4	15.5	15.5
FindPQuotients	152	84.7	84.7	15.5	15.5
LowIndexNormal	1	91.5	91.5	17.1	17.1