

FreeProductsExtendedProfile

September 7, 2018

Group : $C_2 * C_3$

Searching up to index : 2500

How many normal groups are found : 527

Total Time in s : 374.5

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	18228	0.2	0.0	0.0	0.0
NaturalHomomorphismBySubspace	404	0.5	0.0	0.0	0.0
EpimorphismQuotientSystem	915	0.5	0.0	0.1	0.0
GeneratorsOfMagmaWithInverses	1571780	1.2	0.1	0.0	0.0
Index	297313	1.3	0.0	0.4	0.0
IsomorphismFpGroup	1086	2.1	0.0	0.2	0.0
PQuotient	1830	2.4	0.0	0.2	0.0
ExponentSum	124472	3.9	0.0	0.3	0.0
PreImagesRepresentative	46544	4.1	0.0	0.2	0.0
Intersection	156126	6.1	0.3	1.1	0.0
Image	138872	6.7	0.0	1.2	0.0
LowIndexSubgroupsFpGroup	2	7.3	0.0	1.4	0.0
Core	5032	8.5	6.1	1.7	1.1
PullBackH	404	13.7	2.6	1.6	0.2
SMTX_BasesMaximalSubmodules	272	13.9	0.1	2.0	0.0
FindTQuotients	1	16.6	16.5	3.3	3.3

FindIntersections	246	24.9	24.8	10.5	10.5
PreImage	10398	30.3	0.3	18.5	0.0
Kernel	404	30.3	30.3	18.5	18.5
IsSubgroup	8174	279.4	0.4	156.1	0.0
AddGroup	724	280.8	280.3	156.5	156.5
FindPModules	932	332.9	331.6	170.7	170.5
FindPQuotients	247	332.9	332.9	170.7	170.7
LowIndexNormal	1	374.5	374.5	184.5	184.5

Group : $C_2 * C_4$

Searching up to index : 500

How many normal groups are found : 688

Total Time in s : 162.5

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
NextPrimeInt	1182	0.0	0.0	0.0	0.0
IsPowerOf	1637	0.0	0.0	0.0	0.0
MustCheckP	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
GroupHomomorphismByImagesNC	3095	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
GModuleByMats	12276	0.2	0.0	0.0	0.0
NaturalHomomorphismBySubspace	599	0.2	0.0	0.0	0.0
EpimorphismQuotientSystem	546	0.3	0.0	0.0	0.0
Index	376768	0.8	0.0	0.0	0.0
IsomorphismFpGroup	707	0.9	0.0	0.1	0.0
ExponentSum	73447	1.1	0.0	0.1	0.0
GeneratorsOfMagmaWithInverses	1399179	1.1	0.1	0.0	0.0
PreImagesRepresentative	32352	1.4	0.0	0.1	0.0
PQuotient	1092	1.5	0.0	0.1	0.0
Image	102068	3.2	0.0	0.4	0.0
PullBackH	599	4.4	0.7	0.5	0.0
SMTX_BasesMaximalSubmodules	331	7.0	0.0	0.8	0.0

PreImage	1414	11.4	0.4	2.5	0.0
FindIntersections	304	11.4	11.1	3.6	3.6
Kernel	599	11.4	11.4	2.5	2.5
IsSubgroup	16592	128.3	0.8	50.9	0.0
AddGroup	903	129.8	128.8	51.1	51.0
FindPModules	596	150.8	150.0	52.4	52.4
FindPQuotients	305	150.8	150.8	52.4	52.4
LowIndexNormal	1	162.5	162.5	56.1	56.1

Group : $C_2 * C_5$

Searching up to index : 2000

How many normal groups are found : 205

Total Time in s : 175.0

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	1335	0.1	0.0	0.0	0.0
GModuleByMats	9992	0.1	0.0	0.0	0.0
Index	69737	0.3	0.0	0.0	0.0
NaturalHomomorphismBySubspace	173	0.4	0.0	0.0	0.0
EpimorphismQuotientSystem	584	0.5	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	742433	0.6	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	1.3	0.0	0.2	0.0
PQuotient	1168	1.5	0.0	0.1	0.0
IsomorphismFpGroup	649	1.8	0.0	0.1	0.0
Intersection	51412	2.2	0.1	0.3	0.0
Core	3194	3.3	2.3	0.5	0.3
FindIntersections	87	4.0	4.0	1.4	1.4
ExponentSum	80188	4.1	0.0	0.3	0.0
PreImagesRepresentative	34196	4.4	0.0	0.2	0.0
Image	98236	6.1	0.0	0.2	0.0
FindTQuotients	1	6.3	6.3	1.1	1.1
PreImage	4450	11.2	0.1	2.9	0.0

Kernel	173	11.2	11.1	2.9	2.9
SMTX_BasesMaximalSubmodules	96	11.4	0.0	1.8	0.0
PullBackH	173	14.7	2.7	2.0	0.2
IsSubgroup	5369	114.9	0.2	52.3	0.0
AddGroup	344	115.1	115.0	52.3	52.3
FindPModules	592	164.6	163.4	58.7	58.5
FindPQuotients	88	164.6	164.6	58.7	58.7
LowIndexNormal	1	175.0	175.0	61.2	61.2

Group : $C_2 * C_6$

Searching up to index : 500

How many normal groups are found : 862

Total Time in s : 338.3

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
GModuleByMats	18152	0.2	0.0	0.0	0.0
Core	400	0.2	0.1	0.0	0.0
GroupHomomorphismByImagesNC	3889	0.2	0.0	0.0	0.0
Intersection	130204	0.3	0.0	0.0	0.0
EpimorphismQuotientSystem	626	0.4	0.0	0.0	0.0
NaturalHomomorphismBySubspace	770	0.5	0.0	0.0	0.0
FindTQuotients	1	0.7	0.7	0.1	0.1
Index	565647	1.0	0.0	0.1	0.0
IsomorphismFpGroup	819	1.4	0.0	0.1	0.0
PQuotient	1252	1.9	0.0	0.2	0.0
ExponentSum	110834	2.0	0.0	0.1	0.0
GeneratorsOfMagmaWithInverses	2822570	2.3	0.2	0.0	0.0
PreImagesRepresentative	46326	2.4	0.0	0.2	0.0
Image	148546	4.6	0.0	0.4	0.0
PullBackH	770	7.8	1.4	0.8	0.1
SMTX_BasesMaximalSubmodules	398	8.6	0.1	1.0	0.0

PreImage	1952	14.0	0.5	2.7	0.0
Kernel	770	14.1	14.0	2.7	2.7
FindIntersections	362	20.2	19.7	6.3	6.3
IsSubgroup	35133	291.0	1.8	109.5	0.0
AddGroup	1145	293.2	291.7	109.8	109.6
FindPModules	683	317.3	316.1	109.3	109.2
FindPQuotients	363	317.4	317.4	109.3	109.3
LowIndexNormal	1	338.3	338.3	115.8	115.8

Group : $C_2 * C_7$

Searching up to index : 1000

How many normal groups are found : 63

Total Time in s : 16.1

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
MinSubgroupSizes	385	0.0	0.0	0.0	0.0
MustCheckP	385	0.0	0.0	0.0	0.0
GModuleByMats	1740	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	6891	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	55	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	105387	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	0.2	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	5204	0.4	0.0	0.0	0.0
ExponentSum	14542	0.4	0.0	0.0	0.0
FindTQuotients	1	0.5	0.5	0.1	0.1
Image	16968	0.6	0.0	0.0	0.0
PQuotient	590	0.8	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	29	1.2	0.0	0.1	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
IsSubgroup	632	8.2	0.0	3.7	0.0
AddGroup	79	8.2	8.2	3.7	3.7
FindPModules	299	15.4	15.3	4.7	4.6
FindPQuotients	26	15.4	15.4	4.7	4.7
LowIndexNormal	1	16.1	16.1	4.8	4.8

Group : $C_2 * C_8$

Searching up to index : 500

How many normal groups are found : 1187

Total Time in s : 1093.9

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	0.4	0.0	0.0	0.0
GModuleByMats	37762	0.4	0.0	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	725	0.8	0.1	0.1	0.0
NaturalHomomorphismBySubspace	1353	1.2	0.0	0.0	0.0
PQuotient	1450	1.9	0.0	0.2	0.0
Index	1226203	2.0	0.1	0.1	0.0
IsomorphismFpGroup	1023	3.8	0.0	0.3	0.0
ExponentSum	236541	6.9	0.0	0.5	0.0
GeneratorsOfMagmaWithInverses	9070228	7.6	1.0	0.0	0.0
PreImagesRepresentative	129848	7.9	0.0	0.6	0.0
Image	400064	14.9	0.2	1.6	0.0
SMTX_BasesMaximalSubmodules	505	22.3	0.2	2.6	0.0
PullBackH	1353	25.2	4.6	3.0	0.3

FindIntersections	465	41.2	39.6	12.0	12.0
PreImage	3138	42.4	1.1	5.2	0.1
Kernel	1353	42.6	42.4	5.2	5.2
IsSubgroup	95910	961.0	6.0	343.8	0.0
AddGroup	1761	965.2	962.2	344.3	343.9
FindPModules	868	1051.8	1048.9	346.7	346.5
FindPQuotients	466	1051.8	1051.8	346.7	346.7
LowIndexNormal	1	1093.9	1093.9	358.9	358.9

Group : $C_2 * C_9$

Searching up to index : 1000

How many normal groups are found : 358

Total Time in s : 153.5

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
MinSubgroupSizes	916	0.0	0.0	0.0	0.0
MustCheckP	916	0.0	0.0	0.0	0.0
GModuleByMats	10816	0.1	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1907	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
Index	128645	0.5	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	1225773	1.0	0.1	0.0	0.0
LowIndexSubgroupsFpGroup	2	1.1	0.0	0.1	0.0
IsomorphismFpGroup	557	1.5	0.0	0.1	0.0
ExponentSum	89368	2.1	0.0	0.1	0.0
PQuotient	936	2.3	0.0	0.5	0.0
Intersection	84152	2.6	0.1	0.4	0.0
PreImagesRepresentative	29304	2.8	0.0	0.2	0.0
Core	4152	3.7	2.7	0.5	0.4
Image	96586	3.8	0.0	0.3	0.0
FindTQuotients	1	5.3	5.3	0.8	0.8
SMTX_BasesMaximalSubmodules	168	6.1	0.0	0.6	0.0
PullBackH	339	8.7	1.6	0.8	0.1

PreImage	4836	10.0	0.2	1.7	0.0
Kernel	339	10.0	10.0	1.7	1.7
FindIntersections	183	10.1	10.0	3.2	3.2
IsSubgroup	9415	110.2	0.4	42.6	0.0
AddGroup	490	110.8	110.5	42.7	42.7
FindPModules	485	138.0	137.2	44.1	44.1
FindPQuotients	184	138.0	138.0	44.1	44.1
LowIndexNormal	1	153.5	153.5	48.2	48.2

Group : $C_2 * C_{10}$

Searching up to index : 500

How many normal groups are found : 469

Total Time in s : 73.6

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	6978	0.0	0.0	0.0	0.0
Core	188	0.1	0.0	0.0	0.0
Intersection	51102	0.1	0.0	0.0	0.0
NaturalHomomorphismBySubspace	367	0.1	0.0	0.0	0.0
FindTQuotients	1	0.2	0.2	0.0	0.0
GroupHomomorphismByImagesNC	2000	0.2	0.0	0.0	0.0
EpimorphismQuotientSystem	442	0.3	0.1	0.0	0.0
Index	170111	0.4	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	623402	0.5	0.0	0.0	0.0
IsomorphismFpGroup	542	0.9	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	1.4	0.0	0.2	0.0
Image	70586	2.4	0.0	0.2	0.0
SMTX_BasesMaximalSubmodules	236	3.9	0.0	0.4	0.0
PullBackH	367	4.1	0.7	0.4	0.0

FindIntersections	226	5.3	5.2	1.5	1.5
PreImage	926	6.4	0.2	1.6	0.0
Kernel	367	6.5	6.4	1.6	1.6
IsSubgroup	7995	50.1	0.3	18.2	0.0
AddGroup	567	50.8	50.4	18.3	18.2
FindPModules	458	68.0	67.4	20.2	20.1
FindPQuotients	227	68.1	68.1	20.2	20.2
LowIndexNormal	1	73.6	73.6	21.8	21.8

Group : $C_2 * C_{11}$

Searching up to index : 1000

How many normal groups are found : 21

Total Time in s : 10.5

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
NextPrimeInt	317	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
GModuleByMats	156	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	16	0.0	0.0	0.0	0.0
IsomorphismFpGroup	277	0.0	0.0	0.0	0.0
MustCheckP	317	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
Image	1804	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	7	0.0	0.0	0.0	0.0
PullBackH	16	0.0	0.0	0.0	0.0
EpimorphismQuotientSystem	271	0.1	0.0	0.0	0.0
Kernel	16	0.1	0.1	0.0	0.0
PreImage	6524	0.1	0.0	0.0	0.0
Index	30688	0.2	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	597629	0.5	0.0	0.0	0.0
PQuotient	542	0.7	0.0	0.0	0.0
IsSubgroup	164	1.0	0.0	0.5	0.0

AddGroup	28	1.0	1.0	0.5	0.5
LowIndexSubgroupsFpGroup	2	1.8	0.0	0.2	0.0
FindPModules	271	2.2	2.2	0.6	0.6
FindPQuotients	6	2.2	2.2	0.6	0.6
Intersection	85446	4.3	0.2	0.6	0.0
Core	6494	6.1	4.4	1.0	0.6
FindTQuotients	1	8.2	8.2	1.3	1.3
LowIndexNormal	1	10.5	10.5	1.9	1.9

Group : $C_2 * C_{12}$

Searching up to index : 150

How many normal groups are found : 355

Total Time in s : 44.7

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
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
MustCheckP	494	0.0	0.0	0.0	0.0
FindTQuotients	1	0.0	0.0	0.0	0.0
GModuleByMats	4756	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
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
Index	109412	0.2	0.0	0.0	0.0
IsomorphismFpGroup	363	0.3	0.0	0.0	0.0
PreImagesRepresentative	12760	0.3	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	862541	0.6	0.0	0.0	0.0
PQuotient	542	0.6	0.0	0.0	0.0
PullBackH	378	0.8	0.1	0.0	0.0
Image	40214	0.9	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	181	1.7	0.0	0.1	0.0

PreImage	800	2.4	0.2	0.2	0.0
Kernel	378	2.5	2.4	0.2	0.2
FindIntersections	151	5.8	5.8	1.5	1.5
IsSubgroup	14054	36.1	0.5	10.1	0.0
AddGroup	476	36.4	36.2	10.2	10.1
FindPModules	308	38.7	38.4	9.4	9.4
FindPQuotients	152	38.8	38.8	9.4	9.4
LowIndexNormal	1	44.7	44.7	11.0	11.0