

# DihedralExtendedProfile

September 14, 2018

**Group : Dih(10000)**

Searching up to index : 125

How many normal groups are found : 14

Total Time (in s) in GAP: 173.1

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
GeneratorsOfMagmaWithInverses	2885	0.0	0.0	0.0	0.0
ExponentSum	76	0.0	0.0	0.0	0.0
IsPowerOf	112	0.0	0.0	0.0	0.0
MinSubgroupSizes	118	0.0	0.0	0.0	0.0
MustCheckP	118	0.0	0.0	0.0	0.0
NextPrimeInt	118	0.0	0.0	0.0	0.0
Intersection	66	0.0	0.0	0.0	0.0
Core	5	0.0	0.0	0.0	0.0
Index	767	0.0	0.0	0.0	0.0
PreImagesRepresentative	56	0.0	0.0	0.0	0.0
PullBackH	13	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	13	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	152	0.0	0.0	0.0	0.0
GModuleByMats	56	0.0	0.0	0.0	0.0
Image	654	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
FindTQuotients	1	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	11	0.0	0.0	0.0	0.0
EpimorphismQuotientSystem	97	0.0	0.0	0.0	0.0
PreImage	36	0.0	0.0	0.0	0.0
Kernel	13	0.0	0.0	0.0	0.0

PQuotient	194	0.2	0.0	0.0	0.0
FindIntersections	11	21.4	21.4	6.8	6.8
IsomorphismFpGroup	108	43.6	0.0	13.7	0.0
IsSubgroupFp	20	129.0	0.0	41.0	0.0
AddGroup	16	129.0	129.0	41.0	41.0
FindPModules	99	151.6	151.5	48.0	48.0
FindPQuotients	12	151.6	151.6	48.0	48.0
LowIndexNormal	1	173.1	173.1	54.8	54.8

**Group : Dih(10000)**

Searching up to index : 250

How many normal groups are found : 17

Total Time (in s) in GAP: 227.3

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
Intersection	68	0.0	0.0	0.0	0.0
ExponentSum	113	0.0	0.0	0.0	0.0
NextPrimeInt	205	0.0	0.0	0.0	0.0
IsPowerOf	195	0.0	0.0	0.0	0.0
MinSubgroupSizes	205	0.0	0.0	0.0	0.0
FindIntersections	13	0.0	0.0	0.0	0.0
MustCheckP	205	0.0	0.0	0.0	0.0
PreImagesRepresentative	84	0.0	0.0	0.0	0.0
Core	5	0.0	0.0	0.0	0.0
PullBackH	20	0.0	0.0	0.0	0.0
GModuleByMats	84	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	4398	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	20	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
FindTQuotients	1	0.0	0.0	0.0	0.0
Image	1056	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	256	0.0	0.0	0.0	0.0
Index	1272	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	18	0.0	0.0	0.0	0.0
EpimorphismQuotientSystem	170	0.0	0.0	0.0	0.0
PreImage	50	0.0	0.0	0.0	0.0

Kernel	20	0.0	0.0	0.0	0.0
PQuotient	340	0.4	0.0	0.0	0.0
IsomorphismFpGroup	184	43.7	0.0	13.7	0.0
IsSubgroupFp	26	182.9	0.0	58.2	0.0
AddGroup	21	182.9	182.9	58.2	58.2
FindPModules	172	227.2	227.2	72.0	72.0
FindPQuotients	14	227.2	227.2	72.0	72.0
LowIndexNormal	1	227.3	227.3	72.0	72.0

**Group : Dih(10000)**

Searching up to index : 500

How many normal groups are found : 19

Total Time (in s) in GAP: 292.7

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
GModuleByMats	96	0.0	0.0	0.0	0.0
IsPowerOf	344	0.0	0.0	0.0	0.0
FindIntersections	16	0.0	0.0	0.0	0.0
MinSubgroupSizes	362	0.0	0.0	0.0	0.0
MustCheckP	362	0.0	0.0	0.0	0.0
Intersection	112	0.0	0.0	0.0	0.0
NextPrimeInt	362	0.0	0.0	0.0	0.0
ExponentSum	134	0.0	0.0	0.0	0.0
PreImagesRepresentative	96	0.0	0.0	0.0	0.0
Core	11	0.0	0.0	0.0	0.0
PullBackH	23	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	23	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	6547	0.0	0.0	0.0	0.0
Index	2045	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
Image	1618	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	21	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	397	0.0	0.0	0.0	0.0
PreImage	62	0.0	0.0	0.0	0.0
EpimorphismQuotientSystem	297	0.1	0.0	0.0	0.0
Kernel	23	0.1	0.0	0.0	0.0

PQuotient	594	0.7	0.0	0.1	0.0
IsomorphismFpGroup	313	10.9	0.0	3.4	0.0
FindTQuotients	1	33.9	33.9	10.2	10.2
FindPModules	299	258.8	258.8	82.3	82.3
FindPQuotients	17	258.8	258.8	82.3	82.3
IsSubgroupFp	35	280.8	0.0	89.0	0.0
AddGroup	27	280.8	280.8	89.0	89.0
LowIndexNormal	1	292.7	292.7	92.6	92.6

**Group : Dih(10000)**

Searching up to index : 1000

How many normal groups are found : 21

Total Time (in s) in GAP: 356.4

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
IsPowerOf	612	0.0	0.0	0.0	0.0
FindIntersections	18	0.0	0.0	0.0	0.0
GModuleByMats	108	0.0	0.0	0.0	0.0
Intersection	142	0.0	0.0	0.0	0.0
ExponentSum	155	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	26	0.0	0.0	0.0	0.0
NextPrimeInt	641	0.0	0.0	0.0	0.0
MustCheckP	641	0.0	0.0	0.0	0.0
PreImagesRepresentative	108	0.0	0.0	0.0	0.0
Core	17	0.0	0.0	0.0	0.0
PullBackH	26	0.0	0.0	0.0	0.0
MinSubgroupSizes	641	0.0	0.0	0.0	0.0
Index	3355	0.0	0.0	0.0	0.0
Image	2564	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	9938	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	24	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	633	0.0	0.0	0.0	0.0
EpimorphismQuotientSystem	520	0.1	0.0	0.0	0.0
PreImage	74	0.1	0.0	0.0	0.0
Kernel	26	0.1	0.1	0.0	0.0

PQuotient	1040	1.3	0.0	0.1	0.0
IsomorphismFpGroup	537	10.9	0.0	3.4	0.0
FindTQuotients	1	75.2	75.2	23.9	23.9
FindPModules	522	281.1	281.1	89.3	89.3
FindPQuotients	19	281.1	281.1	89.3	89.3
IsSubgroupFp	42	343.7	0.0	109.5	0.0
AddGroup	33	343.7	343.7	109.5	109.5
LowIndexNormal	1	356.4	356.4	113.3	113.3

**Group : Dih(10000)**

Searching up to index : 2000

How many normal groups are found : 23

Total Time (in s) in GAP: 379.4

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
Intersection	158	0.0	0.0	0.0	0.0
IsPowerOf	1089	0.0	0.0	0.0	0.0
FindIntersections	20	0.0	0.0	0.0	0.0
Core	17	0.0	0.0	0.0	0.0
PreImagesRepresentative	116	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	28	0.0	0.0	0.0	0.0
ExponentSum	169	0.0	0.0	0.0	0.0
MustCheckP	1138	0.0	0.0	0.0	0.0
NextPrimeInt	1138	0.0	0.0	0.0	0.0
GModuleByMats	116	0.0	0.0	0.0	0.0
PullBackH	28	0.0	0.0	0.0	0.0
Index	5419	0.0	0.0	0.0	0.0
Image	4176	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	26	0.0	0.0	0.0	0.0
MinSubgroupSizes	1138	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	15302	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1037	0.0	0.0	0.0	0.0
PreImage	78	0.2	0.0	0.0	0.0
Kernel	28	0.2	0.2	0.0	0.0
EpimorphismQuotientSystem	914	0.2	0.0	0.0	0.0

PQuotient	1828	2.3	0.0	0.3	0.0
IsomorphismFpGroup	933	10.9	0.0	3.4	0.0
FindTQuotients	1	75.2	75.2	23.9	23.9
FindPModules	916	304.1	304.1	96.3	96.3
FindPQuotients	21	304.2	304.2	96.3	96.3
IsSubgroupFp	45	365.5	0.0	116.4	0.0
AddGroup	35	365.5	365.5	116.4	116.4
LowIndexNormal	1	379.4	379.4	120.3	120.3

**Group : Dih(10000)**

Searching up to index : 4000

How many normal groups are found : 25

Total Time (in s) in GAP: 434.3

Function	Count	AbsT/s	ChildT/s	AbsS/gb	ChildS/gb
ExponentSum	183	0.0	0.0	0.0	0.0
FindIntersections	22	0.0	0.0	0.0	0.0
NaturalHomomorphismBySubspace	30	0.0	0.0	0.0	0.0
GModuleByMats	124	0.0	0.0	0.0	0.0
Intersection	206	0.0	0.0	0.0	0.0
PullBackH	30	0.0	0.0	0.0	0.0
IsPowerOf	1946	0.0	0.0	0.0	0.0
PreImagesRepresentative	124	0.0	0.0	0.0	0.0
Core	23	0.0	0.0	0.0	0.0
NextPrimeInt	2042	0.0	0.0	0.0	0.0
MustCheckP	2042	0.0	0.0	0.0	0.0
LowIndexSubgroupsFpGroup	2	0.0	0.0	0.0	0.0
SMTX_BasesMaximalSubmodules	28	0.0	0.0	0.0	0.0
Index	9223	0.0	0.0	0.0	0.0
MinSubgroupSizes	2042	0.0	0.0	0.0	0.0
Image	7088	0.0	0.0	0.0	0.0
GeneratorsOfMagmaWithInverses	25086	0.0	0.0	0.0	0.0
GroupHomomorphismByImagesNC	1766	0.0	0.0	0.0	0.0
PreImage	94	0.4	0.0	0.1	0.0
Kernel	30	0.4	0.4	0.1	0.1
EpimorphismQuotientSystem	1633	0.5	0.0	0.1	0.0

PQuotient	3266	4.3	0.0	0.5	0.0
IsomorphismFpGroup	1654	10.7	0.0	3.4	0.0
FindTQuotients	1	107.4	107.4	34.2	34.2
FindPModules	1635	326.8	326.8	103.6	103.6
FindPQuotients	23	326.9	326.9	103.6	103.6
IsSubgroupFp	51	418.0	0.0	133.5	0.0
AddGroup	40	418.0	418.0	133.5	133.5
LowIndexNormal	1	434.3	434.3	137.8	137.8