

DihedralExtendedProfile

September 10, 2018

Group : Dih(10000)

Searching up to index : 125

How many normal groups are found : 14

Total Time in s : 182.9

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

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|--------------------|-----|-------|-------|------|------|
| PQuotient | 194 | 0.2 | 0.0 | 0.0 | 0.0 |
| FindIntersections | 11 | 23.0 | 23.0 | 6.8 | 6.8 |
| IsomorphismFpGroup | 108 | 45.5 | 0.0 | 13.7 | 0.0 |
| IsSubgroupFp | 20 | 136.9 | 0.0 | 41.0 | 0.0 |
| AddGroup | 16 | 137.0 | 137.0 | 41.0 | 41.0 |
| FindPModules | 99 | 159.8 | 159.8 | 48.0 | 48.0 |
| FindPQuotients | 12 | 159.8 | 159.8 | 48.0 | 48.0 |
| LowIndexNormal | 1 | 182.9 | 182.9 | 54.8 | 54.8 |

Group : Dih(10000)

Searching up to index : 250

How many normal groups are found : 17

Total Time in s : 240.6

| 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 |
| IsPowerOf | 195 | 0.0 | 0.0 | 0.0 | 0.0 |
| FindIntersections | 13 | 0.0 | 0.0 | 0.0 | 0.0 |
| NaturalHomomorphismBySubspace | 20 | 0.0 | 0.0 | 0.0 | 0.0 |
| NextPrimeInt | 205 | 0.0 | 0.0 | 0.0 | 0.0 |
| GModuleByMats | 84 | 0.0 | 0.0 | 0.0 | 0.0 |
| MinSubgroupSizes | 205 | 0.0 | 0.0 | 0.0 | 0.0 |
| MustCheckP | 205 | 0.0 | 0.0 | 0.0 | 0.0 |
| GeneratorsOfMagmaWithInverses | 4398 | 0.0 | 0.0 | 0.0 | 0.0 |
| Core | 5 | 0.0 | 0.0 | 0.0 | 0.0 |
| PreImagesRepresentative | 84 | 0.0 | 0.0 | 0.0 | 0.0 |
| PullBackH | 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 |
| Index | 1272 | 0.0 | 0.0 | 0.0 | 0.0 |
| GroupHomomorphismByImagesNC | 256 | 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 |

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|--------------------|-----|-------|-------|------|------|
| Kernel | 20 | 0.0 | 0.0 | 0.0 | 0.0 |
| PQuotient | 340 | 0.4 | 0.0 | 0.0 | 0.0 |
| IsomorphismFpGroup | 184 | 45.6 | 0.0 | 13.7 | 0.0 |
| IsSubgroupFp | 26 | 194.4 | 0.0 | 58.2 | 0.0 |
| AddGroup | 21 | 194.4 | 194.4 | 58.2 | 58.2 |
| FindPModules | 172 | 240.6 | 240.6 | 72.0 | 72.0 |
| FindPQuotients | 14 | 240.6 | 240.6 | 72.0 | 72.0 |
| LowIndexNormal | 1 | 240.6 | 240.6 | 72.0 | 72.0 |

Group : Dih(10000)

Searching up to index : 500

How many normal groups are found : 19

Total Time in s : 309.0

| Function | Count | AbsT/s | ChildT/s | AbsS/gb | ChildS/gb |
|-------------------------------|-------|--------|----------|---------|-----------|
| NaturalHomomorphismBySubspace | 23 | 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 |
| Intersection | 112 | 0.0 | 0.0 | 0.0 | 0.0 |
| ExponentSum | 134 | 0.0 | 0.0 | 0.0 | 0.0 |
| Core | 11 | 0.0 | 0.0 | 0.0 | 0.0 |
| NextPrimeInt | 362 | 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 |
| GModuleByMats | 96 | 0.0 | 0.0 | 0.0 | 0.0 |
| PullBackH | 23 | 0.0 | 0.0 | 0.0 | 0.0 |
| GeneratorsOfMagmaWithInverses | 6547 | 0.0 | 0.0 | 0.0 | 0.0 |
| LowIndexSubgroupsFpGroup | 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| PreImagesRepresentative | 96 | 0.0 | 0.0 | 0.0 | 0.0 |
| Index | 2045 | 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 |
| EpimorphismQuotientSystem | 297 | 0.0 | 0.0 | 0.0 | 0.0 |
| PreImage | 62 | 0.1 | 0.0 | 0.0 | 0.0 |
| Kernel | 23 | 0.1 | 0.1 | 0.0 | 0.0 |

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|--------------------|-----|-------|-------|------|------|
| PQuotient | 594 | 0.8 | 0.0 | 0.1 | 0.0 |
| IsomorphismFpGroup | 313 | 11.4 | 0.0 | 3.4 | 0.0 |
| FindTQuotients | 1 | 34.2 | 34.2 | 10.2 | 10.2 |
| FindPModules | 299 | 274.7 | 274.7 | 82.3 | 82.3 |
| FindPQuotients | 17 | 274.7 | 274.7 | 82.3 | 82.3 |
| AddGroup | 27 | 296.4 | 296.4 | 89.0 | 89.0 |
| IsSubgroupFp | 35 | 296.4 | 0.0 | 89.0 | 0.0 |
| LowIndexNormal | 1 | 309.0 | 309.0 | 92.6 | 92.6 |

Group : Dih(10000)

Searching up to index : 1000

How many normal groups are found : 21

Total Time in s : 377.5

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

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|--------------------|------|-------|-------|-------|-------|
| PQuotient | 1040 | 1.4 | 0.0 | 0.1 | 0.0 |
| IsomorphismFpGroup | 537 | 11.4 | 0.0 | 3.4 | 0.0 |
| FindTQuotients | 1 | 79.6 | 79.6 | 23.9 | 23.9 |
| FindPModules | 522 | 297.8 | 297.8 | 89.3 | 89.3 |
| FindPQuotients | 19 | 297.9 | 297.9 | 89.3 | 89.3 |
| IsSubgroupFp | 42 | 364.2 | 0.0 | 109.5 | 0.0 |
| AddGroup | 33 | 364.2 | 364.2 | 109.5 | 109.5 |
| LowIndexNormal | 1 | 377.5 | 377.5 | 113.3 | 113.3 |

Group : Dih(10000)

Searching up to index : 2000

How many normal groups are found : 23

Total Time in s : 409.6

| Function | Count | AbsT/s | ChildT/s | AbsS/gb | ChildS/gb |
|-------------------------------|-------|--------|----------|---------|-----------|
| Intersection | 158 | 0.0 | 0.0 | 0.0 | 0.0 |
| ExponentSum | 169 | 0.0 | 0.0 | 0.0 | 0.0 |
| FindIntersections | 20 | 0.0 | 0.0 | 0.0 | 0.0 |
| IsPowerOf | 1089 | 0.0 | 0.0 | 0.0 | 0.0 |
| GModuleByMats | 116 | 0.0 | 0.0 | 0.0 | 0.0 |
| Core | 17 | 0.0 | 0.0 | 0.0 | 0.0 |
| NaturalHomomorphismBySubspace | 28 | 0.0 | 0.0 | 0.0 | 0.0 |
| LowIndexSubgroupsFpGroup | 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| PullBackH | 28 | 0.0 | 0.0 | 0.0 | 0.0 |
| NextPrimeInt | 1138 | 0.0 | 0.0 | 0.0 | 0.0 |
| PreImagesRepresentative | 116 | 0.0 | 0.0 | 0.0 | 0.0 |
| GeneratorsOfMagmaWithInverses | 15302 | 0.0 | 0.0 | 0.0 | 0.0 |
| Index | 5419 | 0.0 | 0.0 | 0.0 | 0.0 |
| MinSubgroupSizes | 1138 | 0.0 | 0.0 | 0.0 | 0.0 |
| MustCheckP | 1138 | 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 |
| 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 | 0.3 | 0.0 | 0.0 | 0.0 |

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|--------------------|------|-------|-------|-------|-------|
| PQuotient | 1828 | 2.6 | 0.0 | 0.3 | 0.0 |
| IsomorphismFpGroup | 933 | 12.6 | 0.0 | 3.4 | 0.0 |
| FindTQuotients | 1 | 81.7 | 81.7 | 23.9 | 23.9 |
| FindPModules | 916 | 327.8 | 327.7 | 96.3 | 96.3 |
| FindPQuotients | 21 | 327.8 | 327.8 | 96.3 | 96.3 |
| IsSubgroupFp | 45 | 393.6 | 0.0 | 116.4 | 0.0 |
| AddGroup | 35 | 393.6 | 393.6 | 116.4 | 116.4 |
| LowIndexNormal | 1 | 409.6 | 409.6 | 120.3 | 120.3 |

Group : Dih(10000)

Searching up to index : 4000

How many normal groups are found : 25

Total Time in s : 462.9

| Function | Count | AbsT/s | ChildT/s | AbsS/gb | ChildS/gb |
|-------------------------------|-------|--------|----------|---------|-----------|
| IsPowerOf | 1946 | 0.0 | 0.0 | 0.0 | 0.0 |
| NaturalHomomorphismBySubspace | 30 | 0.0 | 0.0 | 0.0 | 0.0 |
| ExponentSum | 183 | 0.0 | 0.0 | 0.0 | 0.0 |
| Intersection | 206 | 0.0 | 0.0 | 0.0 | 0.0 |
| GModuleByMats | 124 | 0.0 | 0.0 | 0.0 | 0.0 |
| FindIntersections | 22 | 0.0 | 0.0 | 0.0 | 0.0 |
| Core | 23 | 0.0 | 0.0 | 0.0 | 0.0 |
| PullBackH | 30 | 0.0 | 0.0 | 0.0 | 0.0 |
| PreImagesRepresentative | 124 | 0.0 | 0.0 | 0.0 | 0.0 |
| NextPrimeInt | 2042 | 0.0 | 0.0 | 0.0 | 0.0 |
| LowIndexSubgroupsFpGroup | 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| MustCheckP | 2042 | 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 |
| SMTX_BasesMaximalSubmodules | 28 | 0.0 | 0.0 | 0.0 | 0.0 |
| GeneratorsOfMagmaWithInverses | 25086 | 0.0 | 0.0 | 0.0 | 0.0 |
| Image | 7088 | 0.0 | 0.0 | 0.0 | 0.0 |
| GroupHomomorphismByImagesNC | 1766 | 0.1 | 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 | 0.1 | 0.1 | 0.0 |

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|--------------------|------|-------|-------|-------|-------|
| PQuotient | 3266 | 4.7 | 0.0 | 0.5 | 0.0 |
| IsomorphismFpGroup | 1654 | 11.5 | 0.0 | 3.4 | 0.0 |
| FindTQuotients | 1 | 114.1 | 114.1 | 34.2 | 34.2 |
| FindPModules | 1635 | 348.6 | 348.6 | 103.6 | 103.6 |
| FindPQuotients | 23 | 348.7 | 348.7 | 103.6 | 103.6 |
| IsSubgroupFp | 51 | 445.4 | 0.0 | 133.5 | 0.0 |
| AddGroup | 40 | 445.4 | 445.4 | 133.5 | 133.5 |
| LowIndexNormal | 1 | 462.9 | 462.9 | 137.8 | 137.8 |