

File - unknown

```
"/Users/Daantje/Desktop/LMU_Studium/Informatik/Skripte & Co./Master/Masterarbeit/  
quantum_graph_coalition_structure/venv/bin/python" -Xmx6g /Applications/PyCharm.app/  
Contents/plugins/python/helpers/pydev/pydevconsole.py --mode=client --host=127.0.0.1 --  
port=50758
```

```
import sys; print('Python %s on %s' % (sys.version, sys.platform))  
sys.path.extend(['/Users/Daantje/Desktop/LMU_Studium/Informatik/Skripte & Co./Master/  
Masterarbeit/quantum_graph_coalition_structure'])
```

PyDev console: starting.

```
Python 3.10.4 (v3.10.4:9d38120e33, Mar 23 2022, 17:29:05) [Clang 13.0.0 (clang-1300.0.29  
.30)] on darwin  
>>> runfile('/Users/Daantje/Desktop/LMU_Studium/Informatik/Skripte & Co./Master/  
Masterarbeit/quantum_graph_coalition_structure/main.py', wdir='/Users/Daantje/Desktop/  
LMU_Studium/Informatik/Skripte & Co./Master/Masterarbeit/  
quantum_graph_coalition_structure')  
Seed: 3949468976
```

Test for graphsize 4

Graph 0

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...  
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.  
028954843277226416 - Time: 0.5715372562408447  
None
```

Graph 1

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...  
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.  
5708825220945002 - Time: 0.616063117980957  
None
```

Graph 2

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...  
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.  
00712843874983804 - Time: 0.7616808414459229  
None
```

Graph 3

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...  
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.  
06152625301075432 - Time: 0.22713112831115723  
None
```

Graph 4

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...  
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.  
06396917936914548 - Time: 0.3469069004058838  
None
```

Graph 5

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
```

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Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
10380144569396066 - Time: 0.2781507968902588  
None

Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
05554082850606079 - Time: 0.37932491302490234  
None

Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
038931269477402 - Time: 0.671987771987915  
None

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
042007430425400116 - Time: 0.3621499538421631  
None

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
0010690439865044254 - Time: 0.6972489356994629  
None

Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2197142340515299 - Time: 0.654930830001831  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2770576453315883 - Time: 0.6579339504241943  
None

Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
06753117632182892 - Time: 0.21851301193237305  
None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
01673789206527232 - Time: 0.3014030456542969  
None

Graph 14

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
03599345154763256 - Time: 0.4753232002258301
None
```

Graph 15

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
10695262062797894 - Time: 0.7474157810211182
None
```

Graph 16

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
06090302529973002 - Time: 0.25275683403015137
None
```

Graph 17

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
37306828772501177 - Time: 0.5908751487731934
None
```

Graph 18

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
06615960564805334 - Time: 0.23143315315246582
None
```

Graph 19

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
24253747559571082 - Time: 0.269456148147583
None
```

Test for graphsize 6

Graph 0

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
4037548984604129 - Time: 0.7906780242919922
None
```

Graph 1

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
14602401068624005 - Time: 0.6982760429382324
```

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None

#### Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
12639840396634128 - Time: 0.652271032333374  
None

#### Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
1447468748308225 - Time: 0.661700963973999  
None

#### Graph 4

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2074140190053555 - Time: 0.6436207294464111  
None

#### Graph 5

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
21629539194693592 - Time: 0.7514359951019287  
None

#### Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
1032573088773745 - Time: 0.6798529624938965  
None

#### Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
08555938986791745 - Time: 0.6371099948883057  
None

#### Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
13737909873700005 - Time: 0.6659059524536133  
None

#### Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
23536312556377226 - Time: 0.6771349906921387  
None

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Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2985191363911497 - Time: 0.813234806060791  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
1310541476422742 - Time: 0.6364688873291016  
None

Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
20825406819544412 - Time: 0.6631531715393066  
None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2924666692276716 - Time: 0.7336537837982178  
None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8758237641815896 - Time: 0.6639909744262695  
None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
29878868277545223 - Time: 0.7795829772949219  
None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5885124948454461 - Time: 0.6694960594177246  
None

Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
19838467424926165 - Time: 0.4880828857421875  
None

Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

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Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
11297024288754187 - Time: 0.7693758010864258  
None

Graph 19

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9194011936254896 - Time: 0.5220749378204346  
None

Test for graphsize 8

Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
4037548984604129 - Time: 0.5317778587341309  
None

Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
14602401068624005 - Time: 0.570601224899292  
None

Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
12639840396634128 - Time: 0.6039230823516846  
None

Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
1447468748308225 - Time: 0.5842549800872803  
None

Graph 4

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2074140190053555 - Time: 0.7269730567932129  
None

Graph 5

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
21629539194693592 - Time: 0.6096930503845215  
None

Graph 6

File - unknown

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
1032573088773745 - Time: 0.5721940994262695
None
```

Graph 7

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
08555938986791745 - Time: 0.5558929443359375
None
```

Graph 8

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
13737909873700005 - Time: 0.5640959739685059
None
```

Graph 9

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
23536312556377226 - Time: 0.5165507793426514
None
```

Graph 10

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
2985191363911497 - Time: 0.6170670986175537
None
```

Graph 11

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
1310541476422742 - Time: 0.5928378105163574
None
```

Graph 12

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
20825406819544412 - Time: 0.7507920265197754
None
```

Graph 13

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
2924666692276716 - Time: 0.6149508953094482
None
```

Graph 14

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
8758237641815896 - Time: 0.6626641750335693
```

File - unknown

None

#### Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
29878868277545223 - Time: 0.8227400779724121  
None

#### Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5885124948454461 - Time: 0.6648399829864502  
None

#### Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
19838467424926165 - Time: 0.591188907623291  
None

#### Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
11297024288754187 - Time: 0.623661994934082  
None

#### Graph 19

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9194011936254896 - Time: 0.6150448322296143  
None

Test for graphsize 10

#### Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
850779136467672 - Time: 0.6094648838043213  
None

#### Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.  
113205218829208 - Time: 0.6564993858337402  
None

#### Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.



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33784569217207405 - Time: 0.6085209846496582  
None

Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
4612950977452286 - Time: 0.6486101150512695  
None

Graph 4

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
1168777057419169 - Time: 0.5241858959197998  
None

Graph 5

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
044044789115567 - Time: 0.5953950881958008  
None

Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
12039452902203607 - Time: 0.6252899169921875  
None

Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
726339025546757 - Time: 0.561884880065918  
None

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
652738888772592 - Time: 0.6190080642700195  
None

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
3547436014939933 - Time: 0.6346580982208252  
None

Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6063086754511247 - Time: 0.7022290229797363  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6441125032737318 - Time: 0.5706241130828857  
None

Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2846971036306698 - Time: 0.545738935470581  
None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2492454155493249 - Time: 0.9188880920410156  
None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
39705675702467147 - Time: 0.6198568344116211  
None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1076973646763904 - Time: 0.5494461059570312  
None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5195958328469317 - Time: 0.6198070049285889  
None

Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5224072535037649 - Time: 0.5618758201599121  
None

Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
4516002911853718 - Time: 0.5736649036407471  
None

Graph 19

File - unknown

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
8013746780583304 - Time: 0.7285909652709961
None
```

Test for graphsize 12

Graph 0

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
6150486301365916 - Time: 5.338129043579102
None
```

Graph 1

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
082427022828277 - Time: 5.6707682609558105
None
```

Graph 2

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
38475651674715294 - Time: 5.6991798877716064
None
```

Graph 3

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
560367844286219 - Time: 4.2997376918792725
None
```

Graph 4

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
44488729516555026 - Time: 8.932468891143799
None
```

Graph 5

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
8431061084135649 - Time: 5.336178302764893
None
```

Graph 6

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
7639394580685206 - Time: 4.30144476890564
None
```

Graph 7

File - unknown

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
7792806079405281 - Time: 4.945821046829224  
None

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
2591533310888252 - Time: 4.162120342254639  
None

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5954578349497766 - Time: 4.276559114456177  
None

Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6059122564815951 - Time: 4.1642680168151855  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
702289163217074 - Time: 4.093157052993774  
None

Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8736191784041978 - Time: 4.788191080093384  
None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6561829802817627 - Time: 4.209790945053101  
None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
4616685125603937 - Time: 4.1171910762786865  
None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.

File - unknown

2662849478245022 - Time: 4.746253967285156  
None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1582704298219042 - Time: 4.199706792831421  
None

Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6098161453602629 - Time: 4.623874664306641  
None

Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
2399354793810673 - Time: 4.1168272495269775  
None

Graph 19

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.  
201714058246395 - Time: 4.2676100730896  
None

Test for graphsize 14

Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
2801666702618846 - Time: 8.66117000579834  
None

Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9910337078295726 - Time: 4.219163179397583  
None

Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
7896917547366726 - Time: 4.388514041900635  
None

Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

File - unknown

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
32406091265609405 - Time: 8.468794107437134  
None

Graph 4

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
7434000061760955 - Time: 2.454277992248535  
None

Graph 5

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
5577618317755935 - Time: 7.747570037841797  
None

Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8226613726159684 - Time: 7.934882640838623  
None

Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
072236044635126 - Time: 4.491874694824219  
None

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8416300286743024 - Time: 8.554638862609863  
None

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.  
4431815381742013 - Time: 8.41966986656189  
None

Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6521493604439357 - Time: 8.18057131767273  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1170498230417039 - Time: 4.519714117050171  
None

Graph 12

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
6293034223394756 - Time: 8.203791856765747
None
```

Graph 13

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
0358230118990974 - Time: 4.463431119918823
None
```

Graph 14

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
0806199836372201 - Time: 8.5866219997406
None
```

Graph 15

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
6937347837068302 - Time: 4.60339093208313
None
```

Graph 16

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
8614475795839951 - Time: 8.719231128692627
None
```

Graph 17

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
9888065387748739 - Time: 8.719728231430054
None
```

Graph 18

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
8831225677352705 - Time: 7.8274781703948975
None
```

Graph 19

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
7870756382366793 - Time: 8.148431777954102
None
```

File- unknown

Test for graphsize 16

Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
822906633005644 - Time: 8.300755262374878  
None

Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
02240091914733 - Time: 8.25774097442627  
None

Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8919407950075495 - Time: 8.403807878494263  
None

Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5612410766959286 - Time: 8.003721237182617  
None

Graph 4

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6262725262860229 - Time: 8.890388011932373  
None

Graph 5

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 3.  
2643274461642093 - Time: 8.243237018585205  
None

Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3304850667358323 - Time: 7.931045055389404  
None

Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
0160665942924254 - Time: 8.443506956100464  
None



File - unknown

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9121356510589749 - Time: 8.36763596534729  
None

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9543621161819686 - Time: 8.52682900428772  
None

Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8229066330056085 - Time: 8.216832160949707  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
0224009191474863 - Time: 8.332677841186523  
None

Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8919407950071729 - Time: 7.7445549964904785  
None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5612410766953246 - Time: 8.061274766921997  
None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
6262725262863498 - Time: 9.040306806564331  
None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
5325696747462771 - Time: 8.118216276168823  
None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

File - unknown

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9404045759696231 - Time: 8.253973007202148  
None

Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
11076397406012 - Time: 8.087421894073486  
None

Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
333519919451696 - Time: 8.978892087936401  
None

Graph 19

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3821471550545326 - Time: 8.148782968521118  
None

Test for graphsize 18

Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
22958232134755 - Time: 9.822036027908325  
None

Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9642698128749885 - Time: 9.711483001708984  
None

Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
7324635199480483 - Time: 10.173932075500488  
None

Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9489845542806634 - Time: 9.492869138717651  
None

Graph 4

File - unknown

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
5284612501546704 - Time: 9.196677923202515
None
```

Graph 5

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
4472017538578399 - Time: 8.892806768417358
None
```

Graph 6

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
4521889657959477 - Time: 7.99320125579834
None
```

Graph 7

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
0738307702452161 - Time: 9.096367120742798
None
```

Graph 8

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
9280845774882422 - Time: 10.055125951766968
None
```

Graph 9

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
2154281540707146 - Time: 13.57491683959961
None
```

Graph 10

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
4225599222920451 - Time: 5.1693971157073975
None
```

Graph 11

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
2671337334371202 - Time: 3.917865037918091
None
```

Graph 12

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
550146932461665 - Time: 4.201284170150757
```

File - unknown

None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.

23850950742086496 - Time: 8.704566717147827

None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.

5123579767928774 - Time: 8.411900758743286

None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.

7876205949141379 - Time: 9.166954040527344

None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.

0064599804971195 - Time: 8.875668048858643

None

Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.

9666033216792229 - Time: 9.26306414604187

None

Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.

939148613571426 - Time: 9.27777099609375

None

Graph 19

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.

8367335977549857 - Time: 8.402173042297363

None

Test for graphsize 20

Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.

File - unknown

2286198003634965 - Time: 9.440802097320557  
None

Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
146804753056955 - Time: 9.1352379322052  
None

Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1055289628951073 - Time: 8.745665073394775  
None

Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9308740224380188 - Time: 9.23717212677002  
None

Graph 4

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
759847876834371 - Time: 9.427747011184692  
None

Graph 5

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
8329240585346938 - Time: 8.53908109664917  
None

Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1225920299782786 - Time: 9.317308187484741  
None

Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
010634009675634 - Time: 8.97698187828064  
None

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 0.  
9555164697122933 - Time: 8.96558403968811  
None

File - unknown

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1140725334617159 - Time: 10.168423891067505  
None

Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1086714555953918 - Time: 9.533950805664062  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3901409670808889 - Time: 8.790319919586182  
None

Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
8273616108029387 - Time: 11.728950023651123  
None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
5096587190417594 - Time: 8.847532033920288  
None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
142733334196528 - Time: 9.9222571849823  
None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
338581728684872 - Time: 9.225178718566895  
None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
4018693972730745 - Time: 9.614175796508789  
None

Graph 17

File - unknown

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
516596878262611 - Time: 9.370242834091187
None
```

Graph 18

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
0512632971854572 - Time: 9.168639898300171
None
```

Graph 19

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
7348132032658938 - Time: 8.79888105392456
None
```

Test for graphsize 22

Graph 0

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
1460945154662525 - Time: 8.284987926483154
None
```

Graph 1

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
1445445552090874 - Time: 11.916213035583496
None
```

Graph 2

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
1527341057839138 - Time: 10.71182107925415
None
```

Graph 3

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
8216137144361468 - Time: 10.307822942733765
None
```

Graph 4

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
4141131952076123 - Time: 10.217746019363403
None
```

Graph 5

File - unknown

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
2311338513693997 - Time: 10.880927324295044
None
```

Graph 6

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
8993361125891326 - Time: 9.654040813446045
None
```

Graph 7

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
4769895353490199 - Time: 9.995430946350098
None
```

Graph 8

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
221000462496292 - Time: 10.352163791656494
None
```

Graph 9

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
1680404260433903 - Time: 10.869966983795166
None
```

Graph 10

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
0045028770231923 - Time: 5.465435981750488
None
```

Graph 11

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
2221165947339898 - Time: 11.839196920394897
None
```

Graph 12

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
67675443249464 - Time: 9.984708786010742
None
```

Graph 13

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
```



File - unknown

7808146272583585 - Time: 10.071125984191895  
None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3645584596682312 - Time: 10.700371026992798  
None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
2948763920489057 - Time: 11.84083604812622  
None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3112265951911724 - Time: 10.23668909072876  
None

Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
108844836437882 - Time: 10.529106140136719  
None

Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3414015011873701 - Time: 10.589696884155273  
None

Graph 19

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
7448801101228497 - Time: 10.277593851089478  
None

Test for graphsize 24

Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
7010052388675874 - Time: 20.710248947143555  
None

Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

File - unknown

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3886139829530038 - Time: 19.86163902282715  
None

Graph 2

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
198788351719685 - Time: 14.76610517501831  
None

Graph 3

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
5924746022500145 - Time: 15.868286848068237  
None

Graph 4

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
57079474839486 - Time: 18.827868938446045  
None

Graph 5

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3426834078204877 - Time: 20.291155099868774  
None

Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
4906366941049853 - Time: 14.179985046386719  
None

Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
3171557162028549 - Time: 16.008440017700195  
None

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
62116363968439 - Time: 14.20219612121582  
None

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
1355862586534258 - Time: 14.609141111373901  
None

Graph 10

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
3721065249381823 - Time: 19.919395923614502
None
```

Graph 11

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
5708787552799706 - Time: 18.364006757736206
None
```

Graph 12

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
3241178248075869 - Time: 19.434075117111206
None
```

Graph 13

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
811060936422372 - Time: 19.555402040481567
None
```

Graph 14

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
816278325728014 - Time: 18.688134908676147
None
```

Graph 15

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
4883841820783488 - Time: 14.648226022720337
None
```

Graph 16

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 0.
9083523985759143 - Time: 14.773231029510498
None
```

Graph 17

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
7055631245185978 - Time: 15.959622144699097
None
```

Graph 18

File - unknown

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
447440198799562 - Time: 19.157248973846436
None
```

Graph 19

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
8848175083666376 - Time: 17.60665273666382
None
```

Test for graphsize 26

Graph 0

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
8950150644194181 - Time: 18.10651707649231
None
```

Graph 1

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
9082577259881361 - Time: 19.297926902770996
None
```

Graph 2

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
5050067783322802 - Time: 14.903794288635254
None
```

Graph 3

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
9552111194626889 - Time: 20.481967210769653
None
```

Graph 4

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
5029838005635696 - Time: 18.98208498954773
None
```

Graph 5

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
4744191862071574 - Time: 20.4782657623291
None
```

File - unknown

Graph 6

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.  
1619977227798017 - Time: 18.70159411430359  
None

Graph 7

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
6961258350955077 - Time: 18.557682037353516  
None

Graph 8

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
7862359408452448 - Time: 19.160458087921143  
None

Graph 9

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.  
074759205108485 - Time: 19.056015014648438  
None

Graph 10

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
837086002332633 - Time: 19.341460943222046  
None

Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
2409073975555813 - Time: 19.013677835464478  
None

Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
6795941655149207 - Time: 20.029041051864624  
None

Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
9713741990044937 - Time: 18.71994686126709  
None

Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

File- unknown

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
6557715426500152 - Time: 23.447179079055786  
None

Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
9392763337633028 - Time: 19.19960069656372  
None

Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
679067250405403 - Time: 19.426188945770264  
None

Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
7729039084590497 - Time: 19.43911099433899  
None

Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
94071205229843 - Time: 19.303040027618408  
None

Graph 19

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.  
2023526251088157 - Time: 17.623682737350464  
None

Test for graphsize 28

Graph 0

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.  
102415248660037 - Time: 21.417719841003418  
None

Graph 1

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.  
7564689501037805 - Time: 20.27688217163086  
None

Graph 2

File - unknown

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
9487780294415487 - Time: 18.297701835632324
None
```

Graph 3

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
7278676435872669 - Time: 18.953183889389038
None
```

Graph 4

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
9519000169963547 - Time: 27.433779001235962
None
```

Graph 5

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
844443706537085 - Time: 18.353856801986694
None
```

Graph 6

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 1.
751562178646921 - Time: 20.283053159713745
None
```

Graph 7

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 2.
147540277130666 - Time: 18.364486932754517
None
```

Graph 8

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 2.
450492598571003 - Time: 19.76617693901062
None
```

Graph 9

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 2.
632817062897253 - Time: 18.578190088272095
None
```

Graph 10

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 2.
0368985620604505 - Time: 19.15330982208252
```

File - unknown

None

#### Graph 11

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.

824350813344246 - Time: 19.266040086746216

None

#### Graph 12

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.

8465934888184563 - Time: 18.82564926147461

None

#### Graph 13

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.

443438495511323 - Time: 17.598394870758057

None

#### Graph 14

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.

5605449668856437 - Time: 18.263099908828735

None

#### Graph 15

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.

2382389356448016 - Time: 21.230698108673096

None

#### Graph 16

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.

569843289461332 - Time: 21.38018798828125

None

#### Graph 17

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 1.

8604912623196768 - Time: 22.726892232894897

None

#### Graph 18

Running 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel...

Coalition structure value for 4\_split\_GCSQ\_at\_most\_qbsolv\_parallel: 2.

2661988687358203 - Time: 18.692754983901978

None



File - unknown

Graph 19

```
Running 4_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_at_most_qbsolv_parallel: 2.
13806478317035 - Time: 20.107502937316895
None
```

Test for graphsize 4

Graph 0

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
028954843277226416 - Time: 0.8145747184753418
None
```

Graph 1

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
5708825220945002 - Time: 0.8636980056762695
None
```

Graph 2

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
00712843874983804 - Time: 0.7746307849884033
None
```

Graph 3

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
06152625301075432 - Time: 0.37912988662719727
None
```

Graph 4

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
06396917936914548 - Time: 0.3946261405944824
None
```

Graph 5

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
10380144569396066 - Time: 0.39102792739868164
None
```

Graph 6

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
05554082850606079 - Time: 0.6208107471466064
None
```

File - unknown

Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
038931269477402 - Time: 0.7889692783355713  
None

Graph 8

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
042007430425400116 - Time: 0.39289093017578125  
None

Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
0010690439865044254 - Time: 0.8828248977661133  
None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
2197142340515299 - Time: 0.8345799446105957  
None

Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
2770576453315883 - Time: 0.8273952007293701  
None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
06753117632182892 - Time: 0.39522290229797363  
None

Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
01673789206527232 - Time: 0.39780211448669434  
None

Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
03599345154763256 - Time: 0.38968539237976074  
None

Graph 15

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
10695262062797894 - Time: 0.7889447212219238
None
```

Graph 16

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
06090302529973002 - Time: 0.4068610668182373
None
```

Graph 17

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
37306828772501177 - Time: 0.8597900867462158
None
```

Graph 18

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
06615960564805334 - Time: 0.3804140090942383
None
```

Graph 19

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
24253747559571082 - Time: 0.39121413230895996
None
```

Test for graphsize 6

Graph 0

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
4037548984604129 - Time: 0.8125689029693604
None
```

Graph 1

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
14602401068624005 - Time: 0.7264730930328369
None
```

Graph 2

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
12639840396634128 - Time: 0.5591888427734375
None
```

Graph 3

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
1447468748308225 - Time: 0.728640079498291
None
```

Graph 4

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
2074140190053555 - Time: 0.9722247123718262
None
```

Graph 5

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
21629539194693592 - Time: 0.8304400444030762
None
```

Graph 6

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
1032573088773745 - Time: 0.6110038757324219
None
```

Graph 7

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
08555938986791745 - Time: 0.564194917678833
None
```

Graph 8

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
13737909873700005 - Time: 0.6579790115356445
None
```

Graph 9

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
23536312556377226 - Time: 0.583683967590332
None
```

Graph 10

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
2985191363911497 - Time: 0.8617570400238037
None
```

Graph 11

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
```

File - unknown

1310541476422742 - Time: 0.672814130783081  
None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
2082540681954412 - Time: 0.7534499168395996  
None

Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
2924666692276716 - Time: 0.7668552398681641  
None

Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8758237641815896 - Time: 0.7705032825469971  
None

Graph 15

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
29878868277545223 - Time: 0.8393709659576416  
None

Graph 16

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5885124948454461 - Time: 0.8535597324371338  
None

Graph 17

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
19838467424926165 - Time: 0.8245692253112793  
None

Graph 18

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
11297024288754187 - Time: 0.9930379390716553  
None

Graph 19

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
9194011936254896 - Time: 0.5423789024353027  
None

Test for graphsize 8

Graph 0

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
4037548984604129 - Time: 0.6646890640258789  
None

Graph 1

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
14602401068624005 - Time: 0.7353360652923584  
None

Graph 2

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
12639840396634128 - Time: 0.6986660957336426  
None

Graph 3

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
1447468748308225 - Time: 0.7608821392059326  
None

Graph 4

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
2074140190053555 - Time: 0.6008083820343018  
None

Graph 5

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
21629539194693592 - Time: 0.7038590908050537  
None

Graph 6

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
1032573088773745 - Time: 0.6394717693328857  
None

Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
08555938986791745 - Time: 0.6707758903503418  
None

Graph 8

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
13737909873700005 - Time: 0.6153199672698975
None
```

Graph 9

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
23536312556377226 - Time: 0.6781198978424072
None
```

Graph 10

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
2985191363911497 - Time: 0.5538220405578613
None
```

Graph 11

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
1310541476422742 - Time: 0.603384256362915
None
```

Graph 12

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
20825406819544412 - Time: 0.7442760467529297
None
```

Graph 13

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
2924666692276716 - Time: 0.7872979640960693
None
```

Graph 14

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8758237641815896 - Time: 0.7620992660522461
None
```

Graph 15

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
29878868277545223 - Time: 0.6706559658050537
None
```

Graph 16

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
5885124948454461 - Time: 0.757713794708252
None
```

Graph 17

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
19838467424926165 - Time: 0.5899498462677002
None
```

Graph 18

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
11297024288754187 - Time: 0.7980039119720459
None
```

Graph 19

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
9194011936254896 - Time: 0.7916131019592285
None
```

Test for graphsize 10

Graph 0

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
850779136467672 - Time: 0.5611510276794434
None
```

Graph 1

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
113205218829208 - Time: 0.5987741947174072
None
```

Graph 2

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
33784569217207405 - Time: 0.5960767269134521
None
```

Graph 3

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
4612950977452286 - Time: 0.9402749538421631
None
```



File - unknown

Graph 4

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
16780273947890834 - Time: 0.5826711654663086  
None

Graph 5

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
044044789115567 - Time: 0.6580178737640381  
None

Graph 6

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
12039452902203607 - Time: 0.8179078102111816  
None

Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
726339025546757 - Time: 0.6793253421783447  
None

Graph 8

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
652738888772592 - Time: 0.6225237846374512  
None

Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
3547436014939933 - Time: 0.6459629535675049  
None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6588998527449874 - Time: 0.6179158687591553  
None

Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6441125032737318 - Time: 0.5755560398101807  
None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

File- unknown

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
690537909988833 - Time: 0.6261711120605469  
None

Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
2492454155493249 - Time: 0.6577877998352051  
None

Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
39705675702467147 - Time: 0.6240317821502686  
None

Graph 15

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
1076973646763904 - Time: 0.6254198551177979  
None

Graph 16

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5195958328469317 - Time: 0.6263668537139893  
None

Graph 17

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5224072535037649 - Time: 0.5500626564025879  
None

Graph 18

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
4516002911853718 - Time: 0.5850601196289062  
None

Graph 19

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
8013746780583304 - Time: 0.598625898361206  
None

Test for graphsize 12

Graph 0

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
6150486301365916 - Time: 0.6234567165374756
None
```

Graph 1

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
082427022828277 - Time: 0.649482011795044
None
```

Graph 2

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
38475651674715294 - Time: 0.8643510341644287
None
```

Graph 3

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
560367844286219 - Time: 0.6658182144165039
None
```

Graph 4

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
44488729516555026 - Time: 0.6607091426849365
None
```

Graph 5

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8431061084135649 - Time: 0.57340407371521
None
```

Graph 6

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
7639394580685206 - Time: 0.8553950786590576
None
```

Graph 7

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
7792806079405281 - Time: 0.5994610786437988
None
```

Graph 8

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
2591533310888252 - Time: 0.6291580200195312
```

File - unknown

None

Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5954578349497766 - Time: 0.5993320941925049

None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6059122564815951 - Time: 0.630983829498291

None

Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
702289163217074 - Time: 0.5877351760864258

None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8736191784041978 - Time: 0.8197100162506104

None

Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6561829802817627 - Time: 0.6999607086181641

None

Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
4616685125603937 - Time: 0.6331198215484619

None

Graph 15

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5777465750025783 - Time: 0.6597468852996826

None

Graph 16

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
1582704298219042 - Time: 0.6825101375579834

None

File - unknown

Graph 17

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6098161453602629 - Time: 0.5765681266784668  
None

Graph 18

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
2399354793810673 - Time: 0.58866286277771  
None

Graph 19

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 2.  
201714058246395 - Time: 0.6287939548492432  
None

Test for graphsize 14

Graph 0

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
2801666702618846 - Time: 0.7083530426025391  
None

Graph 1

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
9910337078295726 - Time: 0.3336949348449707  
None

Graph 2

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
7896917547366726 - Time: 0.35155296325683594  
None

Graph 3

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
32406091265609405 - Time: 0.713284969329834  
None

Graph 4

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
7434000061760955 - Time: 0.332643985748291  
None

File - unknown

Graph 5

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
5577618317755935 - Time: 0.7258040904998779  
None

Graph 6

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8226613726159684 - Time: 0.6564631462097168  
None

Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
072236044635126 - Time: 0.353132963180542  
None

Graph 8

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8416300286743024 - Time: 0.6930129528045654  
None

Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 2.  
4431815381742013 - Time: 0.8158230781555176  
None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6521493604439357 - Time: 0.6641101837158203  
None

Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
1170498230417039 - Time: 0.36226725578308105  
None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6293034223394756 - Time: 0.8763129711151123  
None

Graph 13

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
0358230118990974 - Time: 0.3684673309326172
None
```

Graph 14

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
0806199836372201 - Time: 0.7008397579193115
None
```

Graph 15

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
6937347837068302 - Time: 0.3639400005340576
None
```

Graph 16

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8614475795839951 - Time: 0.6679239273071289
None
```

Graph 17

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
9888065387748739 - Time: 0.6408069133758545
None
```

Graph 18

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8831225677352705 - Time: 0.7809031009674072
None
```

Graph 19

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
7870756382366793 - Time: 0.6797769069671631
None
```

Test for graphsize 16

Graph 0

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
822906633005644 - Time: 4.842511892318726
None
```

Graph 1

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
02240091914733 - Time: 4.487606048583984
None
```

#### Graph 2

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8919407950075495 - Time: 8.725250720977783
None
```

#### Graph 3

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8449224007561682 - Time: 8.460545778274536
None
```

#### Graph 4

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
6262725262860229 - Time: 4.610342025756836
None
```

#### Graph 5

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 3.
2643274461642093 - Time: 4.584978818893433
None
```

#### Graph 6

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
3304850667358323 - Time: 4.70793604850769
None
```

#### Graph 7

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
0160665942924254 - Time: 4.957579851150513
None
```

#### Graph 8

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
9121356510589749 - Time: 5.109567165374756
None
```

#### Graph 9

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
```



File - unknown

9543621161819686 - Time: 4.687554836273193  
None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8229066330056085 - Time: 4.717177867889404  
None

Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
0224009191474863 - Time: 4.405673980712891  
None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8919407950071729 - Time: 8.693814754486084  
None

Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8449224007551734 - Time: 8.441874980926514  
None

Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
6262725262863498 - Time: 4.73164176940918  
None

Graph 15

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5325696747462771 - Time: 4.63729190826416  
None

Graph 16

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
9404045759696231 - Time: 4.789435148239136  
None

Graph 17

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
11076397406012 - Time: 5.024010181427002  
None

File - unknown

Graph 18

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
333519919451696 - Time: 5.685197830200195  
None

Graph 19

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3821471550545326 - Time: 4.745671987533569  
None

Test for graphsize 18

Graph 0

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
22958232134755 - Time: 10.148680925369263  
None

Graph 1

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
9642698128749885 - Time: 9.630420923233032  
None

Graph 2

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
7324635199480483 - Time: 11.094007730484009  
None

Graph 3

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
9489845542806634 - Time: 9.431150674819946  
None

Graph 4

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5284612501546704 - Time: 9.784862041473389  
None

Graph 5

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
5069596362593671 - Time: 11.06315016746521  
None

Graph 6

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
4521889657959477 - Time: 10.126792192459106
None
```

Graph 7

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
0738307702452161 - Time: 11.332226991653442
None
```

Graph 8

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
9280845774882422 - Time: 9.529924869537354
None
```

Graph 9

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
2154281540707146 - Time: 14.614377975463867
None
```

Graph 10

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
4225599222920451 - Time: 4.386592864990234
None
```

Graph 11

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
2671337334371202 - Time: 4.512603998184204
None
```

Graph 12

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
550146932461665 - Time: 4.39683198928833
None
```

Graph 13

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
23850950742086496 - Time: 9.162279844284058
None
```

Graph 14

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
5123579767928774 - Time: 8.928162097930908
None
```

Graph 15

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
7876205949141379 - Time: 10.25215220451355
None
```

Graph 16

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
0064599804971195 - Time: 10.254865884780884
None
```

Graph 17

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
9666033216792229 - Time: 10.061148166656494
None
```

Graph 18

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
939148613571426 - Time: 10.66133189201355
None
```

Graph 19

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8620304898268571 - Time: 12.3266122341156
None
```

Test for graphsize 20

Graph 0

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
2286198003634965 - Time: 9.459628105163574
None
```

Graph 1

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
146804753056955 - Time: 11.207932233810425
None
```

File - unknown

Graph 2

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
1055289628951073 - Time: 11.322510957717896  
None

Graph 3

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
9308740224380188 - Time: 9.673879861831665  
None

Graph 4

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
759847876834371 - Time: 8.913310766220093  
None

Graph 5

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
8329240585346938 - Time: 10.878365993499756  
None

Graph 6

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
2720059272304098 - Time: 9.718450784683228  
None

Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
010634009675634 - Time: 10.659120082855225  
None

Graph 8

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 0.  
9555164697122933 - Time: 9.987778186798096  
None

Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
1140725334617159 - Time: 9.864789009094238  
None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

File- unknown

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
1086714555953918 - Time: 11.070725202560425  
None

Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3901409670808889 - Time: 10.112914085388184  
None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
8273616108029387 - Time: 10.200196743011475  
None

Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
5096587190417594 - Time: 9.925516605377197  
None

Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
142733334196528 - Time: 10.12900972366333  
None

Graph 15

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
338581728684872 - Time: 9.36286997795105  
None

Graph 16

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
4018693972730745 - Time: 10.446758031845093  
None

Graph 17

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
516596878262611 - Time: 10.780338764190674  
None

Graph 18

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
0512632971854572 - Time: 10.126617908477783  
None

Graph 19

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
7348132032658938 - Time: 9.8869469165802
None
```

Test for graphsize 22

Graph 0

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
3789109416829959 - Time: 10.634768962860107
None
```

Graph 1

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
1445445552090874 - Time: 11.194646835327148
None
```

Graph 2

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
1527341057839138 - Time: 10.329134941101074
None
```

Graph 3

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 0.
8386235254101209 - Time: 9.809282064437866
None
```

Graph 4

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
4141131952076123 - Time: 9.936118125915527
None
```

Graph 5

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
2311338513693997 - Time: 11.089210033416748
None
```

Graph 6

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
9295166795682377 - Time: 9.352726936340332
```

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None

#### Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
4769895353490199 - Time: 9.846626043319702  
None

#### Graph 8

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
221000462496292 - Time: 10.29044508934021  
None

#### Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3166678866445665 - Time: 11.323318004608154  
None

#### Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
4844338943951811 - Time: 9.663515090942383  
None

#### Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
2221165947339898 - Time: 9.872745990753174  
None

#### Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
67675443249464 - Time: 10.406696796417236  
None

#### Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
7808146272583585 - Time: 10.059364318847656  
None

#### Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3645584596682312 - Time: 9.883944034576416  
None



File - unknown

Graph 15

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
2948763920489057 - Time: 10.924302101135254  
None

Graph 16

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3757912013005225 - Time: 10.1685631275177  
None

Graph 17

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
108844836437882 - Time: 11.047903060913086  
None

Graph 18

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3414015011873701 - Time: 11.461457014083862  
None

Graph 19

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
7448801101228497 - Time: 9.363420248031616  
None

Test for graphsize 24

Graph 0

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
7010052388675874 - Time: 10.02269172668457  
None

Graph 1

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3886139829530038 - Time: 10.801038980484009  
None

Graph 2

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
5862663420935306 - Time: 10.399074077606201  
None

File - unknown

Graph 3

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
5924746022500145 - Time: 10.558851957321167  
None

Graph 4

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
57079474839486 - Time: 10.58153510093689  
None

Graph 5

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3426834078204877 - Time: 10.468887090682983  
None

Graph 6

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
4906366941049853 - Time: 10.7654550075531  
None

Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3171557162028549 - Time: 11.325996160507202  
None

Graph 8

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
62116363968439 - Time: 9.780197858810425  
None

Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
1355862586534258 - Time: 10.851511001586914  
None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
3721065249381823 - Time: 10.946558952331543  
None

Graph 11

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
5708787552799706 - Time: 9.557257890701294
None
```

Graph 12

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
3241178248075869 - Time: 11.622896909713745
None
```

Graph 13

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
811060936422372 - Time: 10.103752851486206
None
```

Graph 14

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
816278325728014 - Time: 10.46263337135315
None
```

Graph 15

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
4883841820783488 - Time: 10.638057947158813
None
```

Graph 16

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
3263648141889561 - Time: 12.959150791168213
None
```

Graph 17

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
7055631245185978 - Time: 14.201066017150879
None
```

Graph 18

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
447440198799562 - Time: 11.416263103485107
None
```

Graph 19

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
9196240992240305 - Time: 10.871946096420288
```

File - unknown

None

Test for graphsize 26

Graph 0

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.

9275312464485168 - Time: 11.61916184425354

None

Graph 1

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.

9082577259881361 - Time: 11.809506177902222

None

Graph 2

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.

5729638131652308 - Time: 12.494747877120972

None

Graph 3

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.

9552111194626889 - Time: 10.43578815460205

None

Graph 4

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.

5029838005635696 - Time: 11.807317972183228

None

Graph 5

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.

4744191862071574 - Time: 10.622209072113037

None

Graph 6

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 2.

1619977227798017 - Time: 9.509496927261353

None

Graph 7

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...

Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.

File - unknown

6961258350955077 - Time: 10.851402044296265  
None

Graph 8

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
7862359408452448 - Time: 10.025519132614136  
None

Graph 9

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 2.  
074759205108485 - Time: 10.762625932693481  
None

Graph 10

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
837086002332633 - Time: 11.01307487487793  
None

Graph 11

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
2409073975555813 - Time: 11.800668001174927  
None

Graph 12

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
6795941655149207 - Time: 10.609488010406494  
None

Graph 13

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
9878145093575128 - Time: 10.321789979934692  
None

Graph 14

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
6557715426500152 - Time: 13.493004083633423  
None

Graph 15

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
9392763337633028 - Time: 10.471250057220459  
None

File - unknown

Graph 16

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
679067250405403 - Time: 10.581922769546509  
None

Graph 17

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
7729039084590497 - Time: 10.945820093154907  
None

Graph 18

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 2.  
0167658061418194 - Time: 10.522153854370117  
None

Graph 19

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 2.  
2023526251088157 - Time: 10.024099111557007  
None

Test for graphsize 28

Graph 0

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 2.  
102415248660037 - Time: 10.58173394203186  
None

Graph 1

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
7564689501037805 - Time: 11.444308996200562  
None

Graph 2

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
9487780294415487 - Time: 10.572426080703735  
None

Graph 3

Running 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel...  
Coalition structure value for 4\_split\_R\_QUB0-iterative\_qbsolv\_parallel: 1.  
7278676435872669 - Time: 10.708650827407837  
None

Graph 4

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
9519000169963547 - Time: 10.87598705291748
None
```

Graph 5

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
844443706537085 - Time: 10.954567909240723
None
```

Graph 6

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
751562178646921 - Time: 10.798187971115112
None
```

Graph 7

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
147540277130666 - Time: 9.728862047195435
None
```

Graph 8

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
450492598571003 - Time: 11.407140016555786
None
```

Graph 9

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
632817062897253 - Time: 10.18217921257019
None
```

Graph 10

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
0368985620604505 - Time: 10.118299007415771
None
```

Graph 11

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
824350813344246 - Time: 10.939491033554077
None
```

Graph 12

File - unknown

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
928146562659343 - Time: 11.177101850509644
None
```

#### Graph 13

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
6328182331980727 - Time: 10.284661054611206
None
```

#### Graph 14

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
640450401947703 - Time: 12.328670978546143
None
```

#### Graph 15

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
2890933628745316 - Time: 11.646737813949585
None
```

#### Graph 16

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
569843289461332 - Time: 10.726635932922363
None
```

#### Graph 17

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 1.
8604912623196768 - Time: 10.296056747436523
None
```

#### Graph 18

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
2661988687358203 - Time: 10.329067945480347
None
```

#### Graph 19

```
Running 4_split_R_QUB0-iterative_qbsolv_parallel...
Coalition structure value for 4_split_R_QUB0-iterative_qbsolv_parallel: 2.
2211219918747673 - Time: 10.889669179916382
None
Done running tests for k-split algorithms with qbsolv in True mode for k=4.
```