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File - unknown
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"/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=52086
import sys; print('Python %s on %s' % (sys.version, sys.platform))
sys.path.extend (['/Users/Daantje/Desktop/LMU\_Studium/Informatik/Skripte \ \& \ Co./Master/LMU\_Studium/Informatik/Skripte \ \&
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 ours_n_half_qbsolv...
                       Coalition structure value for ours_n_half_qbsolv: 0.028954843277226416
Time: 0.45525026321411133
None
           Graph 1
                       Running ours_n_half_qbsolv...
                       Coalition structure value for ours_n_half_qbsolv: 0.5708825220945002
Time: 0.4484879970550537
None
           Graph 2
                       Running ours_n_half_qbsolv...
                       Coalition structure value for ours_n_half_qbsolv: 0.00712843874983804
Time: 0.4516017436981201
None
           Graph 3
                       Running ours_n_half_qbsolv...
                       Coalition structure value for ours_n_half_qbsolv: 0.06152625301075432
Time: 0.51485276222229
None
           Graph 4
                       Running ours_n_half_qbsolv...
                       Coalition structure value for ours_n_half_qbsolv: 0.06396917936914548
Time: 0.5403389930725098
None
           Graph 5
                       Running ours_n_half_qbsolv...
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File - unknown
           Coalition structure value for ours_n_half_qbsolv: 0.10380144569396066
Time: 0.5097520351409912
None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.05554082850606079
Time: 0.45401811599731445
None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.038931269477402
                                                                                       Time
 : 0.45776891708374023
None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.042007430425400116
Time: 0.8829820156097412
None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.0010690439865044254
Time: 0.8086121082305908
None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.2197142340515299
Time: 0.6672329902648926
None
      Graph 11
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.2770576453315883
Time: 0.5251786708831787
None
      Graph 12
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.06753117632182892
Time: 0.48505210876464844
None
```

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.01673789206527232

Time: 0.46175479888916016

```
Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.03599345154763256
Time: 0.4612269401550293
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.10695262062797894
Time: 0.450761079788208
None
     Graph 16
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.06090302529973002
Time: 0.457399845123291
None
     Graph 17
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.37306828772501177
Time: 0.47457289695739746
None
     Graph 18
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.06615960564805334
Time: 0.4753539562225342
None
     Graph 19
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.24253747559571082
Time: 0.4579439163208008
None
Test for graphsize 6
     Graph 0
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.4037548984604129
Time: 0.4027738571166992
None
     Graph 1
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.14602401068624005
```

Time: 0.36295390129089355

```
Graph 2
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.12639840396634128
Time: 0.23533391952514648
None
     Graph 3
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.1447468748308225
Time: 0.3493990898132324
None
     Graph 4
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.2074140190053555
Time: 0.38385939598083496
None
     Graph 5
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.21629539194693592
Time: 0.27626895904541016
None
     Graph 6
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.1032573088773745
Time: 0.2748279571533203
None
     Graph 7
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.08555938986791745
Time: 0.34212183952331543
None
     Graph 8
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.13737909873700005
Time: 0.2665691375732422
None
```

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.23536312556377226

Time: 0.28299713134765625

```
Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.2985191363911497
Time: 0.37246274948120117
None
     Graph 11
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.1310541476422742
Time: 0.27529001235961914
None
     Graph 12
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.20825406819544412
Time: 0.45884227752685547
None
     Graph 13
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.2924666692276716
Time: 0.509268045425415
None
     Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.8758237641815896
Time: 0.2942540645599365
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.29878868277545223
Time: 0.44457125663757324
None
     Graph 16
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.5885124948454461
Time: 0.5419101715087891
None
     Graph 17
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.19838467424926165
Time: 0.4338343143463135
None
     Graph 18
          Running ours_n_half_qbsolv...
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Page 5 of 395

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File - unknown
           Coalition structure value for ours_n_half_qbsolv: 0.11297024288754187
Time: 0.43786001205444336
None
      Graph 19
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.9194011936254896
Time: 0.32820701599121094
None
Test for graphsize 8
      Graph 0
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.4037548984604129
Time: 0.4114799499511719
None
      Graph 1
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.14602401068624005
Time: 0.38893675804138184
None
      Graph 2
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.12639840396634128
 Time: 0.362001895904541
None
      Graph 3
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.1447468748308225
Time: 0.46114301681518555
None
      Graph 4
           Running ours_n_half_qbsolv...
```

Coalition structure value for ours_n_half_qbsolv: 0.2074140190053555

Time: 0.4373202323913574

None

Graph 5

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.21629539194693592

Time: 0.32854580879211426

None

```
File - unknown
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.1032573088773745
Time: 0.4512350559234619
None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.08555938986791745
Time: 0.40610218048095703
None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.13737909873700005
Time: 0.43006014823913574
None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.23536312556377226
Time: 0.35564708709716797
None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.2985191363911497
Time: 0.4431798458099365
None
      Graph 11
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.1310541476422742
Time: 0.4321107864379883
None
      Graph 12
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.20825406819544412
Time: 0.39627695083618164
None
      Graph 13
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.2924666692276716
Time: 0.4689617156982422
None
      Graph 14
```

Page 7 of 395

Coalition structure value for ours_n_half_qbsolv: 0.8758237641815896

Running ours_n_half_qbsolv...

Time: 0.5033988952636719

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File - unknown
 None
      Graph 15
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.29878868277545223
Time: 0.5013401508331299
None
      Graph 16
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.5885124948454461
Time: 0.3497049808502197
None
      Graph 17
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.19838467424926165
Time: 0.3714289665222168
None
      Graph 18
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.11297024288754187
Time: 0.471895694732666
None
      Graph 19
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.9194011936254896
Time: 0.3468048572540283
None
Test for graphsize 10
      Graph 0
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.850779136467672
                                                                                       Time
 : 4.907031059265137
None
      Graph 1
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.113205218829208
                                                                                       Time
 : 4.014008045196533
```

None

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.33784569217207405

```
File - unknown
 Time: 4.297800064086914
 None
      Graph 3
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.4612950977452286
 Time: 4.7481348514556885
None
      Graph 4
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.16780273947890834
 Time: 5.846839189529419
 None
      Graph 5
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.044044789115567
                                                                                       Time
 : 3.82757306098938
None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.12039452902203607
 Time: 4.955560922622681
 None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.726339025546757
                                                                                       Time
 : 4.120767831802368
None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.6527388888772592
 Time: 4.193333864212036
 None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.3547436014939933
 Time: 4.051339864730835
 None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.6588998527449874
 Time: 3.726469039916992
 None
```

```
Graph 11

Running ours_n_half_qbsolv...
Coalition structure value for
Time: 4.372550964355469
None

Graph 12
```

Coalition structure value for ours_n_half_qbsolv: 0.6441125032737318 .372550964355469

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.6905379099888833

Time: 4.432762145996094

None

Graph 13

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.2492454155493249

Time: 4.97504734992981

None

Graph 14

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.39705675702467147

Time: 3.9186949729919434

None

Graph 15

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.1076973646763904

Time: 3.760885000228882

None

Graph 16

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.5195958328469317

Time: 3.9897143840789795

None

Graph 17

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.5224072535037649

Time: 3.7670059204101562

None

Graph 18

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.4516002911853718

Time: 6.090534925460815

None

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File - unknown
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.8013746780583304
Time: 4.160125017166138
None
Test for graphsize 12
      Graph 0
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.6150486301365916
Time: 4.13246488571167
None
      Graph 1
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.082427022828277
                                                                                      Time
 : 4.352368354797363
None
      Graph 2
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.38475651674715294
Time: 5.417824983596802
None
      Graph 3
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.560367844286219 -
                                                                                      Time
 : 4.219621896743774
None
      Graph 4
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.44488729516555026
Time: 4.525758981704712
None
      Graph 5
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.8431061084135649
 Time: 4.130203008651733
None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.7639394580685206
```

None

Time: 6.209299802780151

```
Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.7792806079405281
Time: 6.986574172973633
None
     Graph 8
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.2591533310888252
Time: 5.458754777908325
None
     Graph 9
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.5954578349497766
Time: 4.039110898971558
None
     Graph 10
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.6059122564815951
Time: 4.591929197311401
None
     Graph 11
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.702289163217074
                                                                                     Time
: 4.253641128540039
None
     Graph 12
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.8736191784041978
Time: 4.118061065673828
None
     Graph 13
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.6561829802817627
Time: 4.486093044281006
None
     Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.4616685125603937
Time: 4.123047113418579
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.5777465750025783
```

Page 12 of 395

```
Time: 4.741348028182983
None
     Graph 16
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.1582704298219042
Time: 4.024915933609009
None
     Graph 17
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.6098161453602629
Time: 4.062011003494263
None
     Graph 18
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.2399354793810673
Time: 3.9769070148468018
None
     Graph 19
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 2.201714058246395
                                                                                      Time
: 3.9682869911193848
None
Test for graphsize 14
     Graph 0
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.2801666702618846
Time: 7.988658905029297
None
     Graph 1
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.9910337078295726
Time: 8.664955139160156
None
     Graph 2
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.7896917547366726
Time: 8.922871112823486
None
     Graph 3
          Running ours_n_half_qbsolv...
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File - unknown
           Coalition structure value for ours_n_half_qbsolv: 0.32406091265609405
Time: 7.5121848583221436
None
      Graph 4
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.7434000061760955
Time: 9.109986066818237
None
      Graph 5
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.5577618317755935
Time: 7.552680015563965
None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.8226613726159684
Time: 8.564152956008911
None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.072236044635126
                                                                                       Time
 : 8.547632932662964
None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.8416300286743024
Time: 7.603070020675659
None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.4431815381742013
Time: 7.7302398681640625
None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.6521493604439357
Time: 8.166853904724121
None
```

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.1170498230417039

Time: 8.053462028503418

```
Graph 12
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.6293034223394756
Time: 8.017744064331055
None
     Graph 13
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.0358230118990974
Time: 8.372568130493164
None
     Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.0806199836372201
Time: 7.439860820770264
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.6937347837068302
Time: 8.007526874542236
None
     Graph 16
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.8614475795839951
Time: 9.090716123580933
None
     Graph 17
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.9888065387748739
Time: 7.999910831451416
None
     Graph 18
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.8831225677352705
Time: 8.086829662322998
None
     Graph 19
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.7870756382366793
Time: 7.244682788848877
```

```
Test for graphsize 16
```

```
Graph 0
```

Coalition structure value for ours_n_half_qbsolv: 0.822906633005644 - Time

: 8.086747884750366

None

Graph 1

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.02240091914733 - Time

: 7.857347011566162

None

Graph 2

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.8919407950075495

Time: 11.45571780204773

None

Graph 3

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.8449224007561682

Time: 8.378441333770752

None

Graph 4

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.6262725262860229

Time: 8.110474109649658

None

Graph 5

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 3.2643274461642093

Time: 7.644551753997803

None

Graph 6

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.3304850667358323

Time: 8.298789978027344

None

Graph 7

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.0160665942924254

Time: 8.557381868362427

```
Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.9121356510589749
Time: 8.33942174911499
None
     Graph 9
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.9543621161819686
Time: 8.725677013397217
None
     Graph 10
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.8229066330056085
Time: 8.545534133911133
None
     Graph 11
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.0224009191474863
Time: 7.964416027069092
None
     Graph 12
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.8919407950071729
Time: 8.396705627441406
None
     Graph 13
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.8449224007551734
Time: 8.112817287445068
None
     Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.6262725262863498
Time: 8.53115701675415
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 0.5325696747462771
Time: 8.469996929168701
None
     Graph 16
          Running ours_n_half_qbsolv...
```

```
File - unknown
           Coalition structure value for ours_n_half_qbsolv: 0.9404045759696231
 Time: 8.257993936538696
None
      Graph 17
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.11076397406012
                                                                                     Time
 : 8.048779964447021
 None
      Graph 18
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.333519919451696
                                                                                       Time
 : 8.868342876434326
 None
      Graph 19
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.3821471550545326
 Time: 8.339829921722412
 None
Test for graphsize 18
      Graph 0
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.22958232134755 -
                                                                                     Time
 : 9.31945514678955
None
      Graph 1
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.9642698128749885
 Time: 9.27254605293274
 None
      Graph 2
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.7324635199480483
 Time: 10.17620587348938
 None
```

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.9489845542806634

Time: 8.71198582649231

None

```
File - unknown
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.5284612501546704
Time: 9.364115953445435
None
      Graph 5
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.5069596362593671
Time: 9.48422884941101
None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.4521889657959477
Time: 8.966702938079834
None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.0738307702452161
Time: 8.680871725082397
None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.9280845774882422
Time: 8.901468992233276
None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.2154281540707146
Time: 9.319596767425537
None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.4225599222920451
Time: 9.088865041732788
None
      Graph 11
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.2671337334371202
Time: 8.773422956466675
None
      Graph 12
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.550146932461665
                                                                                       Time
```

: 9.252694129943848

Graph 13 Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 0.23850950742086496 Time: 8.051563024520874 None Graph 14 Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 0.5123579767928774 Time: 8.341644048690796 None Graph 15 Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 0.7876205949141379 Time: 8.200098037719727 None Graph 16 Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 1.0064599804971195 Time: 9.033989191055298 None Graph 17 Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 0.9666033216792229 Time: 8.656708717346191 None Graph 18 Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 0.939148613571426 Time : 8.646838188171387 None Graph 19 Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 0.8620304898268571 Time: 9.496968030929565 None Test for graphsize 20 Graph 0

Running ours_n_half_qbsolv... Coalition structure value for ours_n_half_qbsolv: 1.2286198003634965

Page 20 of 395

```
File - unknown
 Time: 8.957147121429443
 None
      Graph 1
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.146804753056955
                                                                                       Time
 : 9.118481874465942
None
      Graph 2
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.1055289628951073
 Time: 9.581601858139038
 None
      Graph 3
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.9308740224380188
 Time: 9.138008117675781
 None
      Graph 4
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.759847876834371
                                                                                       Time
 : 8.857460021972656
 None
      Graph 5
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.8329240585346938
Time: 9.252250909805298
 None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.2720059272304098
 Time: 9.467457056045532
 None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.010634009675634
                                                                                       Time
 : 9.046591997146606
None
```

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 0.9555164697122933

Time: 9.267143964767456

```
File - unknown
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.1140725334617159
Time: 8.902369976043701
None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.1086714555953918
Time: 9.286368131637573
None
      Graph 11
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.3901409670808889
Time: 9.460500955581665
None
      Graph 12
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.8273616108029387
Time: 10.461238145828247
None
      Graph 13
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.5096587190417594
 Time: 9.055040121078491
None
```

Coalition structure value for ours_n_half_qbsolv: 1.142733334196528 Time : 10.727812051773071

None

Graph 15

Graph 14

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.338581728684872 -Time : 9.679483890533447

None

Graph 16

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.4018693972730745

Time: 9.549707174301147

None

```
File - unknown
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.516596878262611
                                                                                       Time
 : 9.684765100479126
None
      Graph 18
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.0512632971854572
Time: 9.451519966125488
None
      Graph 19
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.7348132032658938
Time: 9.0068359375
None
Test for graphsize 22
      Graph 0
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.3789109416829959
Time: 9.691012144088745
None
      Graph 1
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.1445445552090874
Time: 9.802418231964111
None
      Graph 2
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.1527341057839138
Time: 10.602858066558838
None
      Graph 3
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 0.8386235254101209
 Time: 10.836452960968018
None
      Graph 4
```

None

Time: 9.601394891738892

Running ours_n_half_qbsolv...

Coalition structure value for ours_n_half_qbsolv: 1.4141131952076123

```
Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.2311338513693997
Time: 9.995258092880249
None
     Graph 6
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.9295166795682377
Time: 9.043919086456299
None
     Graph 7
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.4769895353490199
Time: 10.14797306060791
None
     Graph 8
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.221000462496292
                                                                                     Time
: 9.534975051879883
None
     Graph 9
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.3166678866445665
Time: 10.194936752319336
None
     Graph 10
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.4844338943951811
Time: 10.0034921169281
None
     Graph 11
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.2221165947339898
Time: 11.113481998443604
None
     Graph 12
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.67675443249464 -
                                                                                    Time
: 9.42541790008545
None
     Graph 13
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.7808146272583585
```

Page 24 of 395

```
Time: 11.493162155151367
None
     Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.3645584596682312
Time: 9.848953008651733
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.2948763920489057
Time: 10.223450183868408
None
     Graph 16
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.3757912013005225
Time: 9.290250062942505
None
     Graph 17
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.108844836437882
                                                                                      Time
: 9.333538055419922
None
     Graph 18
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.3414015011873701
Time: 10.010905027389526
None
     Graph 19
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.7448801101228497
Time: 9.649780035018921
None
Test for graphsize 24
     Graph 0
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.7010052388675874
Time: 11.49429202079773
None
     Graph 1
```

File - unknown

Page 25 of 395

Running ours_n_half_qbsolv...

```
File - unknown
           Coalition structure value for ours_n_half_qbsolv: 1.3886139829530038
Time: 15.960822820663452
None
      Graph 2
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.5827599824100815
Time: 14.379832983016968
None
      Graph 3
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.5924746022500145
Time: 11.9326810836792
None
      Graph 4
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.57079474839486
                                                                                     Time
 : 12.775173902511597
None
      Graph 5
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.3426834078204877
Time: 11.700829982757568
None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.4906366941049853
Time: 12.438842058181763
None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.3171557162028549
Time: 12.312219858169556
None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.62116363968439
                                                                                      Time
 : 17.85806703567505
None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.1355862586534258
```

Time: 12.13265585899353

```
Graph 10
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.3721065249381823
Time: 12.09615683555603
None
     Graph 11
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.5708787552799706
Time: 15.372460126876831
None
     Graph 12
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.3241178248075869
Time: 13.953927993774414
None
     Graph 13
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.811060936422372 -
                                                                                     Time
: 13.787605047225952
None
     Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.816278325728014 -
                                                                                     Time
: 13.882957935333252
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.4883841820783488
Time: 12.237858057022095
None
     Graph 16
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.3263648141889561
Time: 14.107816934585571
None
     Graph 17
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.7055631245185978
Time: 12.348275899887085
None
```

```
Coalition structure value for ours_n_half_qbsolv: 1.447440198799562
                                                                                     Time
: 13.623709917068481
None
     Graph 19
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.9196240992240305
Time: 12.56090497970581
None
Test for graphsize 26
     Graph 0
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.9275312464485168
Time: 14.15300989151001
None
     Graph 1
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.9082577259881361
Time: 21.302387952804565
None
     Graph 2
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.5729638131652308
Time: 13.063504934310913
None
     Graph 3
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.9552111194626889
Time: 14.364240884780884
None
     Graph 4
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.5029838005635696
Time: 13.462782859802246
None
     Graph 5
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.4744191862071574
Time: 14.835041046142578
None
```

```
File - unknown
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.1619977227798017
 Time: 13.74171781539917
 None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.6961258350955077
 Time: 16.1199049949646
 None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.7862359408452448
 Time: 12.576892137527466
 None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.074759205108485
                                                                                       Time
 : 15.005388736724854
 None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.837086002332633
                                                                                       Time
 : 13.36803913116455
 None
      Graph 11
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.2409073975555813
 Time: 14.681916952133179
 None
      Graph 12
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.6795941655149207
 Time: 14.539838314056396
 None
      Graph 13
```

Coalition structure value for ours_n_half_qbsolv: 1.9878145093575128

Time: 13.364835262298584

None

Graph 14

Running ours_n_half_qbsolv...

```
File - unknown
           Coalition structure value for ours_n_half_qbsolv: 1.6557715426500152
 Time: 14.125404119491577
None
      Graph 15
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.9392763337633028
 Time: 13.105530977249146
 None
      Graph 16
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.679067250405403
                                                                                       Time
 : 15.885998964309692
 None
      Graph 17
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.7729039084590497
 Time: 15.877269983291626
 None
      Graph 18
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.0167658061418194
 Time: 13.170495986938477
 None
      Graph 19
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.2023526251088157
 Time: 12.41952395439148
 None
Test for graphsize 28
      Graph 0
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.102415248660037
 : 15.162356853485107
 None
      Graph 1
```

Coalition structure value for ours_n_half_qbsolv: 1.7564689501037805

Time: 16.618560075759888

None

```
File - unknown
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.9487780294415487
Time: 20.175445079803467
None
      Graph 3
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.7278676435872669
Time: 21.958024263381958
None
      Graph 4
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.9519000169963547
Time: 17.14864206314087
None
      Graph 5
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.844443706537085
                                                                                       Time
 : 16.9155170917511
None
      Graph 6
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 1.751562178646921 -
                                                                                      Time
 : 14.471650123596191
None
      Graph 7
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.147540277130666
                                                                                      Time
 : 16.921377182006836
None
      Graph 8
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.450492598571003
                                                                                      Time
 : 22.528064966201782
None
      Graph 9
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.632817062897253 -
                                                                                      Time
 : 13.851923942565918
None
      Graph 10
           Running ours_n_half_qbsolv...
           Coalition structure value for ours_n_half_qbsolv: 2.0368985620604505
```

Time: 15.760706901550293

```
Graph 11
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.824350813344246
                                                                                      Time
: 14.345557928085327
None
     Graph 12
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.928146562659343
                                                                                      Time
: 14.413226127624512
None
     Graph 13
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 2.6321889486832077
Time: 14.096265077590942
None
     Graph 14
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.634885555046111
                                                                                      Time
: 14.848925828933716
None
     Graph 15
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 2.2890933628745316
Time: 21.352387189865112
None
     Graph 16
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 2.569843289461332
                                                                                      Time
: 30.558384895324707
None
     Graph 17
          Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 1.8604912623196768
Time: 32.65317511558533
None
```

Graph 18

None

Time: 18.23242473602295

Coalition structure value for ours_n_half_qbsolv: 2.2661988687358203

```
Graph 19
```

```
Running ours_n_half_qbsolv...
          Coalition structure value for ours_n_half_qbsolv: 2.2211219918747673
Time: 22.72300696372986
None
Test for graphsize 4
     Graph 0
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.028954843277226416 -
                                                                                  Time:
0.28984808921813965
None
     Graph 1
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.5708825220945002
                                                                                Time: 0.
322908878326416
None
     Graph 2
          Running ours_n_gbsolv...
          Coalition structure value for ours_n_qbsolv: 0.00712843874983804 -
                                                                                 Time: 0
.33191394805908203
None
     Graph 3
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.06152625301075432 -
                                                                                 Time: 0
.280275821685791
None
     Graph 4
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.06396917936914548 -
                                                                                 Time: 0
.2745828628540039
None
     Graph 5
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.10380144569396066 -
                                                                                 Time: 0
.26746606826782227
None
     Graph 6
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.05554082850606079 -
                                                                                 Time: 0
.25983381271362305
None
```

```
Graph 7
```

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.038931269477402 - Time: 0.
2994718551635742
None

Graph 8

Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.042007430425400116 - Time: 0.25405120849609375 None

Graph 9

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.0010690439865044254 - Time
: 0.48781800270080566
None

Graph 10

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.2197142340515299 - Time: 0.3574080467224121

None

Graph 11

Running ours_n_qbsolv...
Coalition structure value for ours_n_qbsolv: 0.2770576453315883 - Time: 0.38608694076538086
None

Graph 12

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.06753117632182892 - Time: 0
.2580599784851074
None

Graph 13

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.01673789206527232 - Time: 0
.26181507110595703
None

Graph 14

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.03599345154763256 - Time: 0
.2778968811035156
None

```
File - unknown
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.10695262062797894 -
                                                                                  Time: 0
 .30209898948669434
None
      Graph 16
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.06090302529973002 -
                                                                                  Time: 0
 .2861311435699463
 None
      Graph 17
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.37306828772501177 -
                                                                                  Time: 0
 .344433069229126
 None
      Graph 18
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.06615960564805334 -
                                                                                  Time: 0
 .2596709728240967
 None
      Graph 19
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.24253747559571082 -
                                                                                  Time: 0
 .2638869285583496
 None
 Test for graphsize 6
      Graph 0
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.4037548984604129 -
                                                                                 Time: 0.
 4773099422454834
 None
      Graph 1
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.14602401068624005 -
                                                                                  Time: 0
 .34986400604248047
 None
      Graph 2
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.12639840396634128 -
                                                                                  Time: 0
 .3525409698486328
 None
```

```
Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.1447468748308225 -
                                                                                Time: 0.
3237311840057373
None
     Graph 4
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.2074140190053555 -
                                                                               Time: 0.
43668508529663086
None
     Graph 5
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.21629539194693592 -
                                                                                 Time: 0
.43529200553894043
None
     Graph 6
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.1032573088773745 -
                                                                                Time: 0.
4231259822845459
None
     Graph 7
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.08555938986791745 -
                                                                                 Time: 0
.5322949886322021
None
     Graph 8
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.13737909873700005 -
                                                                                 Time: 0
.3939220905303955
None
     Graph 9
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.23536312556377226 -
                                                                                 Time: 0
.41980886459350586
None
     Graph 10
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.2985191363911497 -
                                                                                Time: 0.
4262709617614746
None
     Graph 11
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.1310541476422742 - Time: 0.
                                       Page 36 of 395
```

```
38904809951782227
None
     Graph 12
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.20825406819544412 -
                                                                                Time: 0
.49501800537109375
None
     Graph 13
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.2924666692276716 - Time: 0.
5719292163848877
None
     Graph 14
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8758237641815896 -
                                                                               Time: 0.
4751279354095459
None
     Graph 15
          Running ours_n_gbsolv...
          Coalition structure value for ours_n_qbsolv: 0.29878868277545223 -
                                                                                Time: 0
.33173489570617676
None
     Graph 16
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.5885124948454461 -
                                                                               Time: 0.
38210177421569824
None
     Graph 17
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.19838467424926165 -
                                                                                Time: 0
.47808289527893066
None
     Graph 18
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.11297024288754187 -
                                                                                Time: 0
.45261192321777344
None
     Graph 19
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9194011936254896 - Time: 0.
3542201519012451
None
```

File - unknown

```
Test for graphsize 8
     Graph 0
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.4037548984604129 -
                                                                               Time: 6.
366536855697632
None
     Graph 1
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.14602401068624005 -
                                                                                Time: 5
.738640308380127
None
     Graph 2
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.12639840396634128 -
                                                                                Time: 5
.419951915740967
None
     Graph 3
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.1447468748308225 - Time: 6.
4911370277404785
None
     Graph 4
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.2074140190053555 -
                                                                               Time: 6.
625005006790161
None
     Graph 5
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.21629539194693592 -
                                                                                Time: 6
.244388818740845
None
     Graph 6
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.1032573088773745 -
                                                                               Time: 5.
791733980178833
None
     Graph 7
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.08555938986791745 -
.963766098022461
None
```

```
Graph 8
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.13737909873700005 -
.848496913909912
None
     Graph 9
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.23536312556377226 -
                                                                                Time: 5
.922765254974365
None
     Graph 10
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.2985191363911497 -
                                                                               Time: 6.
198762893676758
None
     Graph 11
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.1310541476422742 -
                                                                               Time: 6.
151033878326416
None
     Graph 12
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.20825406819544412 -
                                                                                Time: 6
.095246076583862
None
     Graph 13
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.2924666692276716 -
                                                                               Time: 6.
7779152393341064
None
     Graph 14
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8758237641815896 -
                                                                               Time: 6.
490775108337402
None
     Graph 15
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.29878868277545223 -
                                                                                Time: 5
.926822900772095
None
```

```
Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.5885124948454461 -
                                                                               Time: 6.
091378927230835
None
     Graph 17
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.19838467424926165 -
                                                                                Time: 6
.119234800338745
None
     Graph 18
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.11297024288754187 -
.339656829833984
None
     Graph 19
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9194011936254896 -
                                                                               Time: 5.
680765151977539
None
Test for graphsize 10
     Graph 0
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.850779136467672 - Time: 12.
719413995742798
None
     Graph 1
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.113205218829208 - Time: 11.
089908123016357
None
     Graph 2
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.33784569217207405 -
                                                                                Time:
10.751398086547852
None
     Graph 3
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.4612950977452286 -
                                                                               Time: 11
.411620140075684
None
```

```
File - unknown
      Graph 4
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.16780273947890834 -
                                                                                  Time:
 12.42754316329956
None
      Graph 5
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.044044789115567 - Time: 11.
 855721950531006
None
      Graph 6
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.12039452902203607 -
                                                                                  Time:
 12.124319076538086
 None
      Graph 7
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.726339025546757 -
                                                                                Time: 11.
 859588861465454
 None
      Graph 8
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.6527388888772592 -
                                                                                 Time: 9.
 8038010597229
 None
      Graph 9
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.3547436014939933 -
                                                                                 Time: 11
 .651700973510742
 None
      Graph 10
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.6588998527449874 -
                                                                                 Time: 11
 .04447889328003
 None
      Graph 11
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.6441125032737318 -
                                                                                 Time: 9.
```

931262969970703

None

Running ours_n_qbsolv...

```
File - unknown
           Coalition structure value for ours_n_qbsolv: 0.6905379099888833
                                                                                 Time: 11
 .049144983291626
None
      Graph 13
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.2492454155493249 -
                                                                                 Time: 10
 .664154052734375
 None
      Graph 14
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.39705675702467147 -
                                                                                  Time:
 11.648087978363037
None
      Graph 15
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.1076973646763904 -
                                                                                 Time: 12
 .414488077163696
 None
      Graph 16
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.5195958328469317 - Time: 11
 .200473070144653
 None
      Graph 17
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.5224072535037649 -
                                                                                 Time: 10
 .999941110610962
 None
      Graph 18
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.4516002911853718 -
                                                                               Time: 11
 .661543846130371
 None
      Graph 19
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.8013746780583304 -
                                                                                 Time: 10
 .332533121109009
 None
```

Test for graphsize 12

Graph 0

```
File - unknown
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.6150486301365916 -
                                                                                 Time: 10
 .817884922027588
None
      Graph 1
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.082427022828277 - Time: 11.
 361440896987915
 None
      Graph 2
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.38475651674715294 -
                                                                                  Time:
 10.321555137634277
 None
      Graph 3
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.560367844286219 - Time: 11.
 46773386001587
 None
      Graph 4
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.44488729516555026 -
                                                                                  Time: 9
 .73345398902893
 None
      Graph 5
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.8431061084135649 -
                                                                                 Time: 10
 .287637948989868
 None
      Graph 6
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.7639394580685206 -
                                                                                Time: 10
 .684376955032349
 None
      Graph 7
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.7792806079405281 -
                                                                                Time: 12
 .447888135910034
 None
      Graph 8
           Running ours_n_gbsolv...
```

.964241027832031

Coalition structure value for ours_n_qbsolv: 1.2591533310888252 -

Time: 10

```
Graph 9
```

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.5954578349497766 - Time: 10
.605165243148804

None

Graph 10

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.6059122564815951 - Time: 10 .523215770721436

None

Graph 11

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.702289163217074 - Time: 10.

5274338722229

None

Graph 12

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.8736191784041978 - Time: 10

.679038047790527

None

Graph 13

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.6561829802817627 - Time: 10

.72616195678711

None

Graph 14

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.4616685125603937 - Time: 11

.233975887298584

None

Graph 15

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.5777465750025783 - Time: 11

.258983135223389

None

Graph 16

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.1582704298219042 - Time: 11

.603833198547363

```
Graph 17
```

Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.6098161453602629 -Time: 15 .590258836746216 None Graph 18 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.2399354793810673 -Time: 13 .884028911590576 None Graph 19 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 2.201714058246395 - Time: 9. 09599781036377 None Test for graphsize 14 Graph 0 Running ours_n_gbsolv... Coalition structure value for ours_n_qbsolv: 1.2801666702618846 -Time: 9. 944605827331543 None Graph 1 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.9910337078295726 -Time: 9. 62280797958374 None Graph 2 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.7896917547366726 -Time: 12 .453035116195679 None Graph 3 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.32406091265609405 -Time: 9 .65132474899292 None Graph 4 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.7434000061760955 - Time: 10 .15867280960083 None

```
Graph 5
```

Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.5577618317755935 -Time: 10 .485903263092041

None

Graph 6

Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.8226613726159684 -

Time: 11

.128978967666626

None

Graph 7

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.072236044635126 - Time: 10.

49888825416565

None

Graph 8

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.8416300286743024 -Time: 10

.83828091621399

None

Graph 9

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 2.4431815381742013 -Time: 10

.076555013656616

None

Graph 10

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.6521493604439357 -Time: 10

.439033269882202

None

Graph 11

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.1170498230417039 -Time: 10

.726222038269043

None

Graph 12

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 0.6293034223394756 -

.495195150375366

None

Graph 13

```
Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.0358230118990974 - Time: 9.
946696996688843
None
     Graph 14
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.0806199836372201 -
433524131774902
None
     Graph 15
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.6937347837068302 - Time: 10
.056670904159546
None
     Graph 16
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8614475795839951 -
                                                                               Time: 10
.687610864639282
None
     Graph 17
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9888065387748739 - Time: 11
.001004934310913
None
     Graph 18
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8831225677352705 -
                                                                               Time: 11
.487739086151123
None
     Graph 19
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.7870756382366793 - Time: 9.
940073013305664
None
Test for graphsize 16
     Graph 0
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.822906633005644 - Time: 11.
475485801696777
None
```

File - unknown

```
Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.02240091914733 - Time: 11.
33233094215393
None
     Graph 2
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8919407950075495 -
                                                                               Time: 11
.468892097473145
None
     Graph 3
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8449224007561682 -
                                                                                Time: 12
.489625215530396
None
     Graph 4
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.6262725262860229 -
                                                                                Time: 10
.990787029266357
None
     Graph 5
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 3.2643274461642093 -
                                                                                Time: 9.
592061281204224
None
     Graph 6
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.3304850667358323 -
                                                                               Time: 10
.956983089447021
None
     Graph 7
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.0160665942924254 -
                                                                               Time: 11
.44489598274231
None
     Graph 8
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9121356510589749 -
                                                                                Time: 11
.162715196609497
None
     Graph 9
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9543621161819686 - Time: 12
                                      Page 48 of 395
```

```
.156587839126587
None
     Graph 10
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8229066330056085 -
                                                                               Time: 11
.638254880905151
None
     Graph 11
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.0224009191474863 -
                                                                               Time: 11
.255163192749023
None
     Graph 12
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8919407950071729 -
                                                                                Time: 11
.96918511390686
None
     Graph 13
          Running ours_n_gbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8449224007551734 -
                                                                               Time: 12
.866650819778442
None
     Graph 14
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.6262725262863498 -
                                                                                Time: 10
.86887812614441
None
     Graph 15
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.5325696747462771 -
                                                                                Time: 11
.264167070388794
None
     Graph 16
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9404045759696231 -
                                                                                Time: 12
.66426396369934
None
     Graph 17
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.11076397406012 - Time: 28.
075700044631958
None
```

File - unknown

```
File - unknown
      Graph 18
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.333519919451696 - Time: 11.
 421472072601318
 None
      Graph 19
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.3821471550545326 - Time: 13
 .145873069763184
 None
 Test for graphsize 18
      Graph 0
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.22958232134755 -
                                                                              Time: 11.
 863079309463501
 None
      Graph 1
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.9642698128749885 - Time: 31
 .880473136901855
 None
      Graph 2
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.7324635199480483 -
                                                                                Time: 11
 .547038078308105
 None
      Graph 3
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.9489845542806634 -
                                                                               Time: 11
 .121394872665405
 None
      Graph 4
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 0.5284612501546704 -
                                                                                 Time: 12
 .59692120552063
 None
```

Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 0.5069596362593671 - Time: 14

.225925922393799 None

```
Graph 6
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.4521889657959477 -
.564265966415405
None
     Graph 7
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.0738307702452161 -
                                                                               Time: 12
.160290002822876
None
     Graph 8
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9280845774882422 -
                                                                               Time: 12
.976973056793213
None
     Graph 9
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.2154281540707146 - Time: 11
.635850667953491
None
     Graph 10
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.4225599222920451 -
                                                                               Time: 13
.61027193069458
None
     Graph 11
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.2671337334371202 -
                                                                               Time: 50
.61955404281616
None
     Graph 12
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.550146932461665 - Time: 12.
508181095123291
None
     Graph 13
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.23850950742086496 -
                                                                                Time:
11.709410190582275
None
```

```
Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.5123579767928774 -
                                                                               Time: 11
.777942657470703
None
     Graph 15
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.7876205949141379 -
                                                                               Time: 15
.13178014755249
None
     Graph 16
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.0064599804971195 -
                                                                               Time: 11
.928826093673706
None
     Graph 17
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.9666033216792229 -
.00288200378418
None
     Graph 18
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.939148613571426 - Time: 17.
835447788238525
None
     Graph 19
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8620304898268571 - Time: 12
.089131116867065
None
Test for graphsize 20
     Graph 0
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.2286198003634965 -
                                                                               Time: 13
.617862939834595
None
     Graph 1
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.146804753056955 - Time: 13.
075796842575073
None
```

None

Graph 9

Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.1140725334617159 -Time: 14 .174054861068726 None

Graph 10

Running ours_n_qbsolv...

```
File - unknown
           Coalition structure value for ours_n_qbsolv: 1.1086714555953918 -
                                                                                 Time: 17
 .51886796951294
None
      Graph 11
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_gbsolv: 1.3901409670808889 -
                                                                                Time: 13
 .442625761032104
 None
      Graph 12
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.8273616108029387 -
                                                                                Time: 27
 .857670307159424
 None
      Graph 13
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.5096587190417594 -
                                                                                 Time: 13
 .313896894454956
 None
      Graph 14
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.142733334196528 - Time: 12.
 971129894256592
 None
      Graph 15
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.338581728684872 - Time: 30.
 55108404159546
 None
      Graph 16
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.4018693972730745 -
                                                                               Time: 17
 .54212999343872
 None
      Graph 17
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.516596878262611 - Time: 13.
 09779405593872
 None
      Graph 18
```

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.0512632971854572 - Time: 13 .100799083709717

171.613618850708

```
Graph 19
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.7348132032658938 -
.872034788131714
None
Test for graphsize 22
     Graph 0
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.3789109416829959 -
                                                                                Time: 27
.667361974716187
None
     Graph 1
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.1445445552090874
                                                                                Time: 24
.97315287590027
None
     Graph 2
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.1461222802185347 -
                                                                               Time: 28
.844217777252197
None
     Graph 3
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 0.8386235254101209 -
                                                                                Time: 20
.5884850025177
None
     Graph 4
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.4141131952076123 -
                                                                               Time: 27
.674304962158203
None
     Graph 5
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.2311338513693997 -
                                                                                Time: 21
.327574014663696
None
     Graph 6
          Running ours_n_gbsolv...
          Coalition structure value for ours_n_qbsolv: 1.9295166795682377 -
                                                                                Time:
```

```
Graph 7
          Running ours_n_gbsolv...
          Coalition structure value for ours_n_qbsolv: 1.4712094184558637 -
                                                                                Time: 58
.36727499961853
None
     Graph 8
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.221000462496292
                                                                               Time: 19.
32544708251953
None
     Graph 9
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.3166678866445665 -
                                                                                Time: 17
.566684007644653
None
     Graph 10
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.4844338943951811 -
                                                                                Time: 19
.948629140853882
None
     Graph 11
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.2221165947339898 -
                                                                                Time: 25
.07016897201538
None
     Graph 12
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.67675443249464 -
                                                                              Time: 18.
149388074874878
None
     Graph 13
          Running ours_n_qbsolv...
                                                                                Time: 20
          Coalition structure value for ours_n_qbsolv: 1.7808146272583585 -
.91954779624939
```

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.3645584596682312 - Time: 17 .448621034622192

None

File - unknown Graph 15 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.2948763920489057 - Time: 24 .436892986297607 None Graph 16 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.3757912013005225 -Time: 20 .142751932144165 None Graph 17 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.108844836437882 - Time: 44. 49805974960327 None Graph 18 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.3414015011873701 -Time: 20 .21123504638672 None Graph 19 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.7448801101228497 -Time: 23 .749680995941162 None Test for graphsize 24 Graph 0 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.7010052388675874 -Time: 21 .29390788078308 None Graph 1 Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.3886139829530038 -Time: 28 .507640838623047 None

Graph 2

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.5862663420935306 - Time: 26

.229536056518555

```
Graph 3
Runni
Coali
.33107089996338
None
```

Running ours_n_qbsolv... Coalition structure value for ours_n_qbsolv: 1.5924746022500145 - Time: 29 9996338

Graph 4

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.57079474839486 - Time: 25. 252697229385376

None

Graph 5

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.3426834078204877 - Time: 25
.330687046051025
None

Graph 6

Running ours_n_qbsolv...
Coalition structure value for ours_n_qbsolv: 1.4906366941049853 - Time: 27
.32138180732727
None

Graph 7

Running ours_n_qbsolv...
Coalition structure value for ours_n_qbsolv: 1.3171557162028549 - Time: 26
.876477241516113
None

Graph 8

Running ours_n_qbsolv...
Coalition structure value for ours_n_qbsolv: 1.62116363968439 - Time: 21.
100509881973267
None

Graph 9

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.1355862586534258 - Time: 29
.791132926940918
None

Graph 10

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.3721065249381823 - Time: 19
.90241527557373
None

Graph 11

```
File - unknown
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.5708787552799706 - Time: 34
 .11500024795532
 None
      Graph 12
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.3241178248075869 -
 .98284602165222
 None
      Graph 13
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.811060936422372 - Time: 24.
 21102786064148
 None
      Graph 14
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.816278325728014 - Time: 20.
 123151302337646
 None
      Graph 15
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.4883841820783488 - Time: 24
 .417749881744385
 None
      Graph 16
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.3263648141889561 -
                                                                                Time: 25
 .285276889801025
 None
      Graph 17
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.7055631245185978 -
                                                                                Time: 24
 .493202924728394
 None
      Graph 18
           Running ours_n_qbsolv...
           Coalition structure value for ours_n_qbsolv: 1.447440198799562 - Time: 25.
 09683895111084
 None
      Graph 19
           Running ours_n_gbsolv...
```

.2591769695282

Coalition structure value for ours_n_qbsolv: 1.9196240992240305 -

Time: 26

```
Test for graphsize 26
    Graph 0
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.9156887102354503 -
                                                                               Time: 35
.84304714202881
None
     Graph 1
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.9082577259881361 -
.70535898208618
None
     Graph 2
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.5665160834778646 -
.09205341339111
None
     Graph 3
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.9552111194626889 -
                                                                               Time: 29
.82627582550049
None
     Graph 4
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.4985803371273079 -
                                                                               Time: 31
.30045509338379
None
     Graph 5
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.4744191862071574 -
                                                                               Time: 30
.73689103126526
None
     Graph 6
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.1619977227798017 -
                                                                               Time: 36
.09975624084473
None
     Graph 7
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.6961258350955077 - Time: 32
```

Page 60 of 395

```
.69446110725403
None
     Graph 8
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.7862359408452448 -
                                                                                Time: 43
.65918707847595
None
     Graph 9
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.074759205108485 - Time: 31.
980926990509033
None
     Graph 10
          Running ours_n_qbsolv...
                                                                               Time: 28.
          Coalition structure value for ours_n_qbsolv: 1.837086002332633 -
300929069519043
None
     Graph 11
          Running ours_n_gbsolv...
          Coalition structure value for ours_n_qbsolv: 1.2340014372116315 -
                                                                              Time: 63
.64669489860535
None
     Graph 12
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.6736208482560073 -
                                                                                Time: 35
.851179122924805
None
     Graph 13
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.9869049549145643 -
                                                                                Time: 40
.63995909690857
None
     Graph 14
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.6557715426500152 -
                                                                                Time: 35
.771071910858154
None
     Graph 15
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.9392763337633028 - Time: 41
.912285804748535
None
```

File - unknown

```
Graph 16
Runn
Coal
50740885734558
```

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.679067250405403 - Time: 66.

None

Graph 17

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.7729039084590497 - Time: 29 .95441484451294

None

Graph 18

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 2.011121149555919 - Time: 30.

6529483795166

None

Graph 19

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 2.2023526251088157 - Time: 28

.395488023757935

None

Test for graphsize 28

Graph 0

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 2.098019343698631 - Time: 39.

05255913734436

None

Graph 1

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.7564689501037805 - Time: 32

.0927300453186

None

Graph 2

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.9383945413828343 - Time: 42

.099552154541016

None

Graph 3

Running ours_n_qbsolv...

Coalition structure value for ours_n_qbsolv: 1.7170872004043218 - Time: 85

.6919150352478

```
Graph 4
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.9433816397912764 -
.976540088653564
None
     Graph 5
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.8362611343706803 -
                                                                               Time: 34
.79466509819031
None
     Graph 6
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.751562178646921 - Time: 35.
24555015563965
None
     Graph 7
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.1266746184741123 -
                                                                               Time: 33
.437767028808594
None
     Graph 8
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.450492598571003 - Time: 49.
66573691368103
None
     Graph 9
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.632817062897253 - Time: 55.
29590606689453
None
     Graph 10
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.0368985620604505 -
                                                                               Time: 42
.86046624183655
None
     Graph 11
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.8200422533959753 -
                                                                               Time: 95
.7421669960022
None
```

```
Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.928146562659343 - Time: 37.
40799689292908
None
     Graph 13
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.6285374342288534 -
                                                                               Time: 48
.240216970443726
None
     Graph 14
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.640450401947703 -
3756308555603
None
     Graph 15
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.2890933628745316 -
.365135192871094
None
     Graph 16
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.569843289461332 - Time: 29.
71834707260132
None
     Graph 17
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 1.84836085541167 -
                                                                             Time: 67.
47993898391724
None
     Graph 18
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.2661988687358203 - Time: 51
.81355023384094
None
     Graph 19
          Running ours_n_qbsolv...
          Coalition structure value for ours_n_qbsolv: 2.2211219918747673 -
                                                                               Time: 38
.45964813232422
None
```

Test for graphsize 4

```
File - unknown
      Graph 0
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.028954843277226416
 Time: 0.27622079849243164
 None
      Graph 1
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.5708825220945002
 Time: 0.25899314880371094
 None
      Graph 2
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.00712843874983804
 Time: 0.31874585151672363
 None
      Graph 3
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.06152625301075432
 Time: 0.2535231113433838
 None
      Graph 4
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.06396917936914548
 Time: 0.24907994270324707
 None
      Graph 5
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.10380144569396066
 Time: 0.24598217010498047
 None
      Graph 6
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.05554082850606079
 Time: 0.2626497745513916
 None
      Graph 7
```

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.038931269477402

Time: 0.37748026847839355

None

Graph 8

Running n_split_GCSQ_qbsolv...

```
File - unknown
           Coalition structure value for n_split_GCSQ_qbsolv: 0.042007430425400116
Time: 0.2656099796295166
None
      Graph 9
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.0010690439865044254
        Time: 0.32805800437927246
None
      Graph 10
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.2197142340515299
Time: 0.26596808433532715
None
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.2770576453315883
Time: 0.26798176765441895
None
      Graph 12
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.06753117632182892
Time: 0.23938703536987305
None
      Graph 13
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.01673789206527232
Time: 0.25502800941467285
None
      Graph 14
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.03599345154763256
Time: 0.26523709297180176
None
      Graph 15
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.10695262062797894
Time: 0.2671840190887451
None
```

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.06090302529973002

Time: 0.32021594047546387

```
Graph 17
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.37306828772501177
Time: 0.2557711601257324
None
     Graph 18
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.06615960564805334
Time: 0.248856782913208
None
     Graph 19
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.24253747559571082
Time: 0.24826478958129883
None
Test for graphsize 6
     Graph 0
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.4037548984604129
Time: 0.35401010513305664
None
     Graph 1
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.14602401068624005
Time: 0.7689859867095947
None
     Graph 2
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.12639840396634128
Time: 0.3297231197357178
None
     Graph 3
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.1447468748308225
Time: 0.3372611999511719
None
     Graph 4
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.2074140190053555
Time: 0.5781021118164062
```

```
File - unknown
 None
      Graph 5
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.21629539194693592
Time: 0.48342394828796387
None
      Graph 6
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.1032573088773745
Time: 0.3574948310852051
None
      Graph 7
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.08555938986791745
Time: 0.38605403900146484
None
      Graph 8
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.13737909873700005
Time: 0.40279698371887207
None
      Graph 9
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.23536312556377226
Time: 0.5789308547973633
None
      Graph 10
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.2985191363911497
 Time: 0.529597282409668
None
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.1310541476422742
```

Time: 0.5239889621734619

None

Graph 12

Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.20825406819544412

Time: 0.5065410137176514

```
File - unknown
```

Graph 13 Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.2924666692276716 Time: 0.40494394302368164 None Graph 14 Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.8758237641815896 Time: 0.5528247356414795 None Graph 15 Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.29878868277545223 Time: 0.5626459121704102 None Graph 16 Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.5885124948454461 Time: 0.37626028060913086 None Graph 17 Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.19838467424926165 Time: 0.594789981842041 None Graph 18 Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.11297024288754187 Time: 0.6046571731567383 None Graph 19 Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.9194011936254896 Time: 0.3550138473510742 None Test for graphsize 8 Graph 0 Running n_split_GCSQ_qbsolv...

Time: 4.413311958312988

None

Coalition structure value for n_split_GCSQ_qbsolv: 0.4037548984604129

```
Graph 1
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.14602401068624005
Time: 5.901482105255127
None
     Graph 2
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.12639840396634128
Time: 6.847181081771851
None
     Graph 3
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.1447468748308225
Time: 5.883054971694946
None
     Graph 4
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.2074140190053555
Time: 5.661410808563232
None
     Graph 5
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.21629539194693592
Time: 4.08901309967041
None
     Graph 6
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.1032573088773745
Time: 6.148316860198975
None
     Graph 7
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.08555938986791745
Time: 5.5560221672058105
None
     Graph 8
```

None

Time: 6.361877918243408

Running n_split_GCSQ_qbsolv...

Graph 9

Coalition structure value for n_split_GCSQ_qbsolv: 0.13737909873700005

```
File - unknown
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.23536312556377226
Time: 11.696261167526245
None
      Graph 10
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.2985191363911497
Time: 5.3951921463012695
None
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.1310541476422742
Time: 4.773912191390991
None
      Graph 12
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.20825406819544412
Time: 5.5950751304626465
None
      Graph 13
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.2924666692276716
Time: 5.518043041229248
None
      Graph 14
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.8758237641815896
Time: 5.449270009994507
None
      Graph 15
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.29878868277545223
Time: 5.136590003967285
None
      Graph 16
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.5885124948454461
Time: 5.040482997894287
None
      Graph 17
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.19838467424926165
```

Time: 5.395438194274902

```
File - unknown
 None
      Graph 18
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.11297024288754187
Time: 5.291859865188599
None
      Graph 19
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.9194011936254896
Time: 4.926350831985474
None
Test for graphsize 10
      Graph 0
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.850779136467672
Time: 12.900227069854736
None
      Graph 1
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.113205218829208
Time: 15.516552925109863
None
      Graph 2
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.33784569217207405
Time: 9.664949893951416
None
      Graph 3
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.4612950977452286
Time: 11.47475790977478
None
      Graph 4
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.16780273947890834
Time: 19.495815753936768
```

None

Graph 5

Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 1.044044789115567

```
Time: 9.794798851013184
None
     Graph 6
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.12039452902203607
Time: 10.77012825012207
None
     Graph 7
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.726339025546757
Time: 9.135562896728516
None
     Graph 8
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6527388888772592
Time: 9.192152738571167
None
     Graph 9
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.3547436014939933
Time: 11.182435035705566
None
     Graph 10
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6588998527449874
Time: 9.678404808044434
None
     Graph 11
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6441125032737318
Time: 10.557234764099121
None
     Graph 12
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6905379099888833
Time: 10.938217878341675
None
     Graph 13
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.24811584418140598
Time: 10.384322881698608
None
```

```
Graph 14
None
```

Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 0.39705675702467147

Time: 9.534660816192627

Graph 15

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.1076973646763904

Time: 10.16549301147461

None

Graph 16

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.5195958328469317

Time: 9.67091417312622

None

Graph 17

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.5224072535037649

Time: 9.332015991210938

None

Graph 18

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.4516002911853718

Time: 11.032753944396973

None

Graph 19

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.8013746780583304

Time: 9.041183948516846

None

Test for graphsize 12

Graph 0

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.6150486301365916

Time: 11.413413286209106

None

Graph 1

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.082427022828277

Time: 16.333243131637573

None

```
Graph 2
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.38475651674715294
Time: 10.509506940841675
None
     Graph 3
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.560367844286219
Time: 10.747428894042969
None
     Graph 4
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.44488729516555026
Time: 10.585642099380493
None
     Graph 5
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.8431061084135649
Time: 10.0049889087677
None
     Graph 6
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6906440869451487
Time: 11.654722929000854
None
     Graph 7
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.7792806079405281
Time: 11.04923391342163
None
     Graph 8
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2197341966872415
Time: 16.617935180664062
None
     Graph 9
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.5954578349497766
Time: 10.238047122955322
None
```

```
Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6059122564815951
Time: 9.654682874679565
None
     Graph 11
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.702289163217074
Time: 8.935702085494995
None
     Graph 12
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.8736191784041978
Time: 9.716632843017578
None
     Graph 13
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6561829802817627
Time: 8.80691909790039
None
     Graph 14
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.4616685125603937
Time: 9.936798334121704
None
     Graph 15
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.5777465750025783
Time: 10.769788026809692
None
     Graph 16
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.1582704298219042
Time: 9.992691993713379
None
     Graph 17
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6098161453602629
Time: 9.597182035446167
None
     Graph 18
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.20687289710536305
                                       Page 76 of 395
```

```
Time: 20.466256141662598
None
     Graph 19
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 2.201714058246395
Time: 8.736890077590942
None
Test for graphsize 14
     Graph 0
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2801666702618846
Time: 10.095700979232788
None
     Graph 1
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.9910337078295726
Time: 10.218866109848022
None
     Graph 2
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.7896917547366726
Time: 10.07753324508667
None
     Graph 3
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.32406091265609405
Time: 10.749109029769897
None
     Graph 4
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.7434000061760955
Time: 10.691509008407593
None
     Graph 5
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.5577618317755935
Time: 10.220140218734741
None
     Graph 6
          Running n_split_GCSQ_qbsolv...
```

```
File - unknown
           Coalition structure value for n_split_GCSQ_qbsolv: 0.8226613726159684
Time: 11.435950994491577
None
      Graph 7
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.072236044635126
Time: 9.488914966583252
None
      Graph 8
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.8416300286743024
Time: 9.536869764328003
None
      Graph 9
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.4431815381742013
Time: 10.700378894805908
None
      Graph 10
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.6521493604439357
Time: 9.704543113708496
None
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.1170498230417039
Time: 10.308466911315918
None
      Graph 12
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.6293034223394756
Time: 10.749682188034058
None
      Graph 13
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.0358230118990974
Time: 8.68732738494873
None
      Graph 14
           Running n_split_GCSQ_qbsolv...
```

Page 78 of 395

Time: 9.620186805725098

None

Coalition structure value for n_split_GCSQ_qbsolv: 1.0806199836372201

```
Graph 15
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.6937347837068302
Time: 10.142371892929077
None
     Graph 16
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.8614475795839951
Time: 10.598466157913208
None
     Graph 17
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.9888065387748739
Time: 9.888198852539062
None
     Graph 18
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.8831225677352705
Time: 10.163308143615723
None
     Graph 19
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.7870756382366793
Time: 10.329382181167603
None
Test for graphsize 16
     Graph 0
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.822906633005644
Time: 11.306581020355225
None
     Graph 1
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.02240091914733 -
                                                                                     Time
: 10.836871862411499
None
     Graph 2
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.8919407950075495
Time: 12.06973910331726
```

```
File - unknown
 None
      Graph 3
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.829213515647254
Time: 19.561336755752563
None
      Graph 4
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.6262725262860229
Time: 10.870086908340454
None
      Graph 5
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 3.2643274461642093
Time: 10.252529859542847
None
      Graph 6
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.3304850667358323
Time: 10.956981182098389
None
      Graph 7
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.0160665942924254
 Time: 11.113505125045776
None
      Graph 8
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.9121356510589749
 Time: 11.318367004394531
None
      Graph 9
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.9543621161819686
 Time: 10.95086407661438
```

None

Graph 10

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.8229066330056085

Time: 11.127204179763794

None

```
File - unknown
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.0224009191474863
 Time: 11.053534030914307
 None
      Graph 12
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.8919407950071729
 Time: 11.225929975509644
 None
      Graph 13
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.8292135156461526
 Time: 13.438215970993042
 None
      Graph 14
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.6262725262863498
 Time: 10.905910968780518
 None
      Graph 15
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.5325696747462771
 Time: 10.106663942337036
 None
      Graph 16
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.9404045759696231
 Time: 11.135161876678467
 None
      Graph 17
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.11076397406012
                                                                                       Time
 : 12.785380840301514
 None
      Graph 18
```

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.32083345744728575

Time: 12.708828926086426

None

Graph 19

Running n_split_GCSQ_qbsolv...

```
File - unknown
           Coalition structure value for n_split_GCSQ_qbsolv: 1.3821471550545326
Time: 10.200292110443115
None
Test for graphsize 18
      Graph 0
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.22958232134755
                                                                                       Time
 : 14.681445837020874
None
      Graph 1
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.9642698128749885
Time: 15.568413972854614
None
      Graph 2
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.7072683537860129
Time: 12.462469816207886
None
      Graph 3
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.9489845542806634
 Time: 13.65496301651001
None
      Graph 4
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.5284612501546704
Time: 12.810190200805664
None
      Graph 5
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.494232309698738
Time: 12.855201005935669
None
      Graph 6
```

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.4521889657959477

Time: 21.246124982833862

None

```
Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.057077612790799
Time: 13.474926233291626
None
     Graph 8
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.9280845774882422
Time: 14.940912961959839
None
     Graph 9
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.210532672925261
Time: 19.884320974349976
None
     Graph 10
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.4225599222920451
Time: 17.79016613960266
None
     Graph 11
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2671337334371202
Time: 11.422316074371338
None
     Graph 12
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.550146932461665
Time: 12.90148401260376
None
     Graph 13
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.23850950742086496
Time: 11.864968061447144
None
     Graph 14
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.5123579767928774
Time: 11.366310834884644
None
     Graph 15
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.7876205949141379
Time: 13.898494005203247
```

```
File - unknown
 None
      Graph 16
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.0064599804971195
Time: 15.938693761825562
None
      Graph 17
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.9666033216792229
Time: 13.889884233474731
None
      Graph 18
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.939148613571426
Time: 49.75558519363403
None
      Graph 19
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 0.8620304898268571
Time: 18.20268678665161
None
Test for graphsize 20
      Graph 0
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.2286198003634965
Time: 23.729317665100098
None
      Graph 1
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.146804753056955
Time: 14.097624063491821
None
      Graph 2
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.0725655216466237
Time: 26.329344034194946
None
      Graph 3
```

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.9308740224380188

Page 84 of 395

```
Time: 14.543779134750366
None
     Graph 4
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.759847876834371
Time: 14.089468717575073
None
     Graph 5
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.8213851966348287
Time: 35.39776682853699
None
     Graph 6
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2666614126037032
Time: 13.577724933624268
None
     Graph 7
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.9972942571237198
Time: 16.24716091156006
None
     Graph 8
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.9467069404227004
Time: 26.209793090820312
None
     Graph 9
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.1140725334617159
Time: 13.9464430809021
None
     Graph 10
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.106028459068071
Time: 13.817237854003906
None
     Graph 11
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.3752637068366909
Time: 22.048784971237183
None
```

```
Graph 12
None
```

Running n_split_GCSQ_qbsolv... Coalition structure value for n_split_GCSQ_qbsolv: 1.8273616108029387

Time: 24.18636202812195

Graph 13

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.5096587190417594

Time: 14.088012933731079

None

Graph 14

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.1348249735878184

Time: 19.456444025039673

None

Graph 15

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.338581728684872

Time: 18.376405000686646

None

Graph 16

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.4009851038289298

Time: 16.46391797065735

None

Graph 17

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.516596878262611

Time: 18.92665386199951

None

Graph 18

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.0512632971854572

Time: 16.714359998703003

None

Graph 19

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 0.7323671428806193

Time: 14.904628276824951

None

Test for graphsize 22

```
Graph 0
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.3653384590551525
Time: 25.00772500038147
None
     Graph 1
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.0739699207607742
Time: 26.421115159988403
None
     Graph 2
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.1368123276469433
Time: 39.192107915878296
None
     Graph 3
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 0.8386235254101209
Time: 23.917418003082275
None
     Graph 4
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.4097420592785213
Time: 22.14245319366455
None
     Graph 5
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2310423936949846
Time: 23.533358097076416
None
     Graph 6
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.9295166795682377
Time: 17.005769968032837
None
     Graph 7
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.4659617230274975
Time: 21.307711839675903
None
```

Page 87 of 395

```
Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2159275550361173
Time: 25.144752264022827
None
     Graph 9
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.3166678866445665
Time: 20.242825984954834
None
     Graph 10
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.483336132956616
Time: 32.558342933654785
None
     Graph 11
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2103189918461652
Time: 30.421932220458984
None
     Graph 12
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.67675443249464
                                                                                      Time
: 22.287033081054688
None
     Graph 13
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.778020549731309
Time: 20.297732830047607
None
     Graph 14
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.3645584596682312
Time: 21.435863256454468
None
     Graph 15
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2724212548784877
Time: 23.73441219329834
None
     Graph 16
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.3230030884491555
                                       Page 88 of 395
```

```
Time: 21.718132972717285
None
     Graph 17
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.0992768590827993
Time: 37.10926008224487
None
     Graph 18
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.3022504861101467
Time: 22.220954179763794
None
     Graph 19
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.7448801101228497
Time: 45.06826686859131
None
Test for graphsize 24
     Graph 0
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.7010052388675874
Time: 30.068289041519165
None
     Graph 1
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.3191236218356153
Time: 33.71019792556763
None
     Graph 2
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.5643424697537327
Time: 26.810179948806763
None
     Graph 3
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.5127331467438836
Time: 21.53572106361389
None
     Graph 4
          Running n_split_GCSQ_qbsolv...
```

```
File - unknown
           Coalition structure value for n_split_GCSQ_qbsolv: 1.48391056249028
                                                                                       Time
 : 25.41290307044983
None
      Graph 5
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.334973134628079
 Time: 25.034320831298828
 None
      Graph 6
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.4906366941049853
 Time: 52.80216431617737
 None
      Graph 7
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.3171557162028549
 Time: 28.964495182037354
 None
      Graph 8
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.62116363968439
                                                                                       Time
 : 30.3106951713562
 None
      Graph 9
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.0916210895631195
 Time: 30.8549063205719
 None
      Graph 10
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.3552402788992381
 Time: 23.189049005508423
 None
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.5708787552799706
 Time: 46.56202507019043
 None
```

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.3241178248075869

Time: 24.959270000457764

None

```
Graph 13
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.811060936422372
Time: 52.092421770095825
None
     Graph 14
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.816278325728014
Time: 26.274492025375366
None
     Graph 15
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.45910564291961 -
                                                                                     Time
: 58.34063982963562
None
     Graph 16
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.2734788102569894
Time: 23.599411010742188
None
     Graph 17
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.670000430535758
Time: 66.92252016067505
None
     Graph 18
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.4102581796202855
Time: 31.338263988494873
None
     Graph 19
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.9196240992240305
Time: 27.769126176834106
None
Test for graphsize 26
     Graph 0
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.924372461402875
```

Time: 30.253671884536743

```
File - unknown
 None
      Graph 1
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.9021085839914207
Time: 39.56366014480591
None
      Graph 2
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.5473390433473568
Time: 33.9194769859314
None
      Graph 3
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.9210608615300018
Time: 35.82274603843689
None
      Graph 4
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.4777361604879076
Time: 34.11905813217163
None
      Graph 5
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.4528314635799973
Time: 38.1728081703186
None
      Graph 6
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.1619977227798017
 Time: 50.99891710281372
None
      Graph 7
```

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.6777853823269524

Time: 30.944063186645508

None

Graph 8

Running n_split_GCSQ_qbsolv...

Coalition structure value for n_split_GCSQ_qbsolv: 1.757139557731783

Time: 35.34952974319458

None

```
File - unknown
      Graph 9
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.9882471806254145
 Time: 34.14958477020264
 None
      Graph 10
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.8356853607051633
 Time: 33.33248281478882
 None
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.1624400683647664
 Time: 29.826671838760376
 None
      Graph 12
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.6000606581789611
 Time: 34.47951412200928
 None
      Graph 13
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.942255775106041
 Time: 35.52723479270935
 None
      Graph 14
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.6557715426500152
 Time: 76.50722098350525
 None
      Graph 15
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.8955523803161398
 Time: 55.24494290351868
 None
      Graph 16
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.6007552418929762
```

None

Time: 45.59138607978821

Running n_split_GCSQ_qbsolv...

```
File - unknown
           Coalition structure value for n_split_GCSQ_qbsolv: 1.7636705426843378
Time: 27.117603063583374
None
      Graph 18
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.0167658061418194
Time: 98.49341106414795
None
      Graph 19
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.2023526251088157
Time: 30.897012948989868
None
Test for graphsize 28
      Graph 0
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.025318269393452
Time: 120.99761390686035
None
      Graph 1
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.7355358235144465
 Time: 42.52296018600464
None
      Graph 2
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.921749715146447
Time: 68.90475392341614
None
      Graph 3
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.683839809996904
Time: 69.50818991661072
None
      Graph 4
           Running n_split_GCSQ_qbsolv...
```

Coalition structure value for n_split_GCSQ_qbsolv: 1.8098480922075524

Time: 44.99426507949829

None

```
File - unknown
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.8286629976481734
Time: 31.260669946670532
None
      Graph 6
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.713991222239386
Time: 59.429157733917236
None
      Graph 7
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.147540277130666
Time: 61.496089220047
None
      Graph 8
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.446060771581969
Time: 36.76617217063904
None
      Graph 9
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.629313505363541
Time: 31.76369619369507
None
      Graph 10
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.026689318811087
Time: 55.00009512901306
None
      Graph 11
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.8200422533959753
Time: 45.926027059555054
None
      Graph 12
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 1.8612004863818612
Time: 39.805957078933716
None
      Graph 13
           Running n_split_GCSQ_qbsolv...
           Coalition structure value for n_split_GCSQ_qbsolv: 2.626002199101926
 Time: 59.79996418952942
```

```
Graph 14
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.6279839200269706
Time: 36.73928999900818
None
     Graph 15
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 2.2473891097944403
Time: 60.00540900230408
None
     Graph 16
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 2.506344179216171
Time: 54.90453124046326
None
     Graph 17
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 1.841879106429559
Time: 75.16962194442749
None
     Graph 18
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 2.2603564613965332
Time: 63.01729393005371
None
     Graph 19
          Running n_split_GCSQ_qbsolv...
          Coalition structure value for n_split_GCSQ_qbsolv: 2.2211219918747673
Time: 65.52990484237671
None
Test for graphsize 4
     Graph 0
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.028954843277226416 -
                                                                                   Time:
0.4176928997039795
None
     Graph 1
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.5708825220945002 -
                                                                                 Time: 0.
                                       Page 96 of 395
```

```
39593982696533203
None
     Graph 2
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.00712843874983804 -
                                                                                 Time: 0
.3919517993927002
None
     Graph 3
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.06152625301075432 -
                                                                                 Time: 0
.39531707763671875
None
     Graph 4
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.06396917936914548 -
                                                                                 Time: 0
.39224791526794434
None
     Graph 5
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.10380144569396066 -
                                                                                 Time: 0
.4035947322845459
None
     Graph 6
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.05554082850606079 -
                                                                                 Time: 0
.41509389877319336
None
     Graph 7
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.038931269477402 -
                                                                               Time: 0.
3996880054473877
None
     Graph 8
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.042007430425400116 -
                                                                                  Time:
0.39853620529174805
None
     Graph 9
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.0010690439865044254 -
                                                                                   Time
: 0.4195370674133301
None
```

```
Graph 10
```

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.2197142340515299 - Time: 0.

458132266998291

None

Graph 11

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.2770576453315883 - Time: 0.

4463632106781006

None

Graph 12

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.06753117632182892 - Time: 0

.4018440246582031

None

Graph 13

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.01673789206527232 - Time: 0

.38842010498046875

None

Graph 14

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.03599345154763256 - Time: 0

.39406394958496094

None

Graph 15

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.10695262062797894 - Time: 0

.3937830924987793

None

Graph 16

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.06090302529973002 - Time: 0

.41222405433654785

None

Graph 17

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.37306828772501177 - Time: 0

.4145548343658447

None

```
File - unknown
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.06615960564805334 -
                                                                                  Time: 0
 .42226314544677734
None
      Graph 19
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.24253747559571082 -
                                                                                  Time: 0
 .3938291072845459
 None
Test for graphsize 6
      Graph 0
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.4037548984604129 -
                                                                                 Time: 0.
 5175650119781494
 None
      Graph 1
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.14602401068624005 -
                                                                                  Time: 0
 .38793087005615234
 None
      Graph 2
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.12639840396634128 -
                                                                                  Time: 0
 .3831329345703125
 None
      Graph 3
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.1447468748308225 -
                                                                                 Time: 0.
 39449620246887207
 None
      Graph 4
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.2074140190053555 -
                                                                                 Time: 0.
 47193288803100586
 None
      Graph 5
```

Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 0.21629539194693592 -Time: 0 .4187150001525879

None

```
Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.1032573088773745 -
                                                                               Time: 0.
360461950302124
None
     Graph 7
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.08555938986791745 -
                                                                                 Time: 0
.5737299919128418
None
     Graph 8
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.13737909873700005 -
                                                                                 Time: 0
.2835531234741211
None
     Graph 9
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.23536312556377226 -
                                                                                 Time: 0
.444943904876709
None
     Graph 10
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.2985191363911497 -
                                                                                Time: 0.
51155686378479
None
     Graph 11
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.1310541476422742 -
                                                                               Time: 0.
319608211517334
None
     Graph 12
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.20825406819544412 -
                                                                                 Time: 0
.4967160224914551
None
     Graph 13
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.2924666692276716 -
                                                                                Time: 0.
5872719287872314
None
     Graph 14
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8758237641815896 - Time: 0.
                                      Page 100 of 395
```

```
5266947746276855
None
     Graph 15
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.29878868277545223 -
                                                                                 Time: 0
.5306949615478516
None
     Graph 16
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.5885124948454461 - Time: 0.
5520482063293457
None
     Graph 17
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.19838467424926165 -
                                                                                 Time: 0
.4327223300933838
None
     Graph 18
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.11297024288754187 -
                                                                                 Time: 0
.5167217254638672
None
     Graph 19
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9194011936254896 -
                                                                                Time: 0.
4441378116607666
None
Test for graphsize 8
     Graph 0
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.4037548984604129 -
                                                                                Time: 4.
383203029632568
None
     Graph 1
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.14602401068624005 -
                                                                                 Time: 5
.572636127471924
None
     Graph 2
          Running R-QUBO_qbsolv...
```

```
File - unknown
           Coalition structure value for R-QUBO_qbsolv: 0.12639840396634128 -
                                                                                 Time: 5
 .253772020339966
None
      Graph 3
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.1447468748308225 -
                                                                                Time: 5.
 870438098907471
 None
      Graph 4
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.2074140190053555 - Time: 5.
 553184986114502
 None
      Graph 5
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.21629539194693592 -
                                                                                 Time: 6
 .011661767959595
 None
      Graph 6
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.1032573088773745 - Time: 5.
 932618141174316
 None
      Graph 7
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.08555938986791745 -
                                                                                 Time: 6
 .073285102844238
 None
      Graph 8
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.13737909873700005 -
                                                                                 Time: 4
 .954071044921875
 None
      Graph 9
           Running R-QUBO_gbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.23536312556377226 -
                                                                                 Time: 5
```

.4632041454315186

Graph 10

None

Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 0.2985191363911497 -597219944000244 None

```
Graph 11
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.1310541476422742 -
569093942642212
None
     Graph 12
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.20825406819544412 -
                                                                                Time: 5
.9778501987457275
None
     Graph 13
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.2924666692276716 -
                                                                               Time: 7.
1997010707855225
None
     Graph 14
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8758237641815896 - Time: 5.
425296306610107
None
     Graph 15
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.29878868277545223 -
                                                                                Time: 5
.45816707611084
None
     Graph 16
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.5885124948454461 -
                                                                               Time: 5.
231046915054321
None
     Graph 17
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.19838467424926165 -
                                                                                Time: 5
.075874090194702
None
     Graph 18
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.11297024288754187 -
                                                                                Time: 7
.064138174057007
None
```

```
Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9194011936254896 -
                                                                                Time: 5.
3505589962005615
None
Test for graphsize 10
     Graph 0
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.850779136467672
                                                                              Time: 4.
994215726852417
None
     Graph 1
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.113205218829208 -
744457960128784
None
     Graph 2
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.33784569217207405 -
                                                                                Time: 4
.998020172119141
None
     Graph 3
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.4612950977452286 -
                                                                               Time: 5.
728049039840698
None
     Graph 4
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.16780273947890834 -
                                                                                Time: 6
.5688300132751465
None
     Graph 5
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.044044789115567 - Time: 5.
053763151168823
None
     Graph 6
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.12039452902203607 -
                                                                                Time: 6
.754239797592163
None
```

```
File - unknown
      Graph 7
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.726339025546757 - Time: 4.
 96697998046875
None
      Graph 8
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.6527388888772592 -
                                                                                 Time: 5.
 049371957778931
None
      Graph 9
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.3547436014939933 -
                                                                                 Time: 4.
 665855884552002
 None
      Graph 10
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.6588998527449874
                                                                                 Time: 4.
 857956171035767
 None
      Graph 11
           Running R-QUBO_gbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.6441125032737318 -
                                                                                 Time: 4.
 898032188415527
 None
      Graph 12
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.6905379099888833 -
                                                                                 Time: 6.
 15814995765686
 None
      Graph 13
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.2492454155493249 -
                                                                                 Time: 6.
 088475942611694
 None
```

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.39705675702467147 - Time: 5
.1889495849609375

None

Graph 15

Running R-QUBO_qbsolv...

```
File - unknown
           Coalition structure value for R-QUBO_qbsolv: 1.1076973646763904 -
                                                                                Time: 5.
 191857814788818
None
      Graph 16
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.5195958328469317 -
                                                                                Time: 4.
 634670257568359
 None
      Graph 17
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.5224072535037649 - Time: 4.
 488347768783569
None
      Graph 18
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.4516002911853718 -
                                                                                Time: 5.
 7690911293029785
 None
      Graph 19
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.8013746780583304 - Time: 4.
 959655046463013
 None
 Test for graphsize 12
      Graph 0
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.6150486301365916 -
                                                                                Time: 9.
 432737112045288
 None
      Graph 1
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.082427022828277 - Time: 9.
 941558122634888
 None
      Graph 2
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.38475651674715294 -
                                                                                 Time: 9
 .88506007194519
 None
```

```
File - unknown
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.560367844286219 - Time: 9.
606523990631104
None
     Graph 4
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.44488729516555026 -
                                                                                 Time: 9
 .29640793800354
None
     Graph 5
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.8431061084135649 -
                                                                                Time: 9.
 174291849136353
None
     Graph 6
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.7639394580685206 -
                                                                                Time: 11
 .619696140289307
None
     Graph 7
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.7792806079405281 - Time: 9.
 94966197013855
None
     Graph 8
           Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.2591533310888252 -
                                                                                Time: 10
 .027918815612793
None
     Graph 9
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.5954578349497766 -
                                                                                Time: 9.
 2288179397583
None
     Graph 10
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.6059122564815951 -
                                                                                Time: 9.
 32033634185791
None
     Graph 11
           Running R-QUBO_gbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.702289163217074 - Time: 9.
```

239237785339355

```
Graph 12
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8736191784041978 -
                                                                                Time: 8.
947757005691528
None
     Graph 13
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.6561829802817627 -
                                                                               Time: 9.
902672052383423
None
     Graph 14
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.4616685125603937 -
                                                                                Time: 9.
273986101150513
None
     Graph 15
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.5777465750025783 -
                                                                                Time: 9.
741679906845093
None
     Graph 16
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.1582704298219042 -
                                                                                Time: 8.
909600019454956
None
     Graph 17
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.6098161453602629 -
                                                                               Time: 9.
333370923995972
None
     Graph 18
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.2399354793810673 -
                                                                               Time: 10
.186848163604736
None
```

Coalition structure value for R-QUBO_qbsolv: 2.201714058246395 - Time: 9.

Page 108 of 395

Running R-QUBO_qbsolv...

Graph 19

964589834213257

None

```
Test for graphsize 14
     Graph 0
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.2801666702618846 -
                                                                               Time: 9.
685891151428223
None
     Graph 1
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9910337078295726 - Time: 10
.238359212875366
None
     Graph 2
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.7896917547366726 -
                                                                                Time: 10
.535990238189697
None
     Graph 3
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.32406091265609405 -
                                                                                 Time: 9
.348552942276001
None
     Graph 4
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.7434000061760955 -
                                                                                Time: 11
.326427936553955
None
     Graph 5
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.5577618317755935 -
                                                                               Time: 9.
367712020874023
None
     Graph 6
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8226613726159684 -
                                                                               Time: 9.
753190040588379
None
     Graph 7
```

Page 109 of 395

Coalition structure value for R-QUBO_qbsolv: 1.072236044635126 - Time: 10.

Running R-QUBO_qbsolv...

017728090286255

```
Graph 8

Runni
Coali
393757820129395
None
```

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.8416300286743024 - Time: 9.
29395

Graph 9

Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 2.4431815381742013 - Time: 9. 867244005203247 None

Graph 10

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 0.6521493604439357 - Time: 9.
193763256072998
None

Graph 11

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.1170498230417039 - Time: 9. 521910905838013
None

Graph 12

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 0.6293034223394756 - Time: 9. 154327154159546
None

Graph 13

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.0358230118990974 - Time: 10
.082805871963501
None

Graph 14

Running R-QUB0_qbsolv...

Coalition structure value for R-QUB0_qbsolv: 1.0806199836372201 - Time: 9.666796684265137

None

Graph 15

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 0.6937347837068302 - Time: 9.638378858566284
None

```
File - unknown
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.8614475795839951 - Time: 8.
 655292272567749
None
      Graph 17
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.9888065387748739 -
                                                                                Time: 8.
 777412176132202
 None
      Graph 18
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.8831225677352705 - Time: 9.
 665579795837402
 None
      Graph 19
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.7870756382366793 -
                                                                                Time: 9.
 532449007034302
 None
Test for graphsize 16
      Graph 0
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.822906633005644 - Time: 10.
 25449013710022
 None
      Graph 1
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.02240091914733 - Time: 10.
 219290733337402
 None
      Graph 2
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.8919407950075495 -
                                                                                Time: 10
 .275552034378052
 None
      Graph 3
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.8449224007561682 - Time: 10
 .14826512336731
 None
```

```
Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.6262725262860229 -
                                                                                Time: 10
.734522819519043
None
     Graph 5
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 3.2643274461642093 -
                                                                               Time: 9.
794970750808716
None
     Graph 6
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.3304850667358323 -
                                                                                Time: 10
.523973941802979
None
     Graph 7
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.0160665942924254 -
                                                                                Time: 10
.357363939285278
None
     Graph 8
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9121356510589749 -
                                                                                Time: 10
.574258804321289
None
     Graph 9
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9543621161819686 -
                                                                               Time: 9.
875231981277466
None
     Graph 10
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8229066330056085 -
                                                                               Time: 10
.11217188835144
None
     Graph 11
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.0224009191474863 -
                                                                                Time: 10
.46600604057312
None
     Graph 12
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8919407950071729 - Time: 9.
                                      Page 112 of 395
```

```
97512698173523
None
     Graph 13
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8449224007551734 -
                                                                               Time: 10
.395472049713135
None
     Graph 14
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.6262725262863498 - Time: 10
.114237070083618
None
     Graph 15
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.5325696747462771 -
                                                                               Time: 9.
897944927215576
None
     Graph 16
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9404045759696231 -
                                                                              Time: 9.
999975204467773
None
     Graph 17
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.11076397406012 -
                                                                             Time: 10.
67584490776062
None
     Graph 18
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.333519919451696 - Time: 10.
958790302276611
None
     Graph 19
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.3821471550545326 -
                                                                               Time: 10
.809860229492188
None
Test for graphsize 18
     Graph 0
          Running R-QUBO_qbsolv...
```

Page 113 of 395

File - unknown

```
File - unknown
           Coalition structure value for R-QUBO_qbsolv: 1.22958232134755 -
                                                                              Time: 14.
 463643074035645
None
      Graph 1
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.9642698128749885 -
                                                                                Time: 13
 .598144054412842
None
      Graph 2
           Running R-QUBO_qbsolv...
                                                                                Time: 12
           Coalition structure value for R-QUBO_qbsolv: 0.7324635199480483 -
 .887001037597656
None
      Graph 3
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.9489845542806634 -
                                                                                 Time: 13
 .724995136260986
None
      Graph 4
           Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.5284612501546704 -
                                                                                Time: 12
 .705899953842163
None
      Graph 5
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.5069596362593671 -
                                                                                Time: 13
 .73152494430542
None
      Graph 6
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.4521889657959477 -
                                                                                 Time: 11
 .508769035339355
None
      Graph 7
           Running R-QUBO_gbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.0738307702452161 -
                                                                                 Time: 14
 .204869985580444
None
```

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.9280845774882422 - Time: 11

.249161958694458

```
Graph 9
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.2154281540707146 -
.381863832473755
None
     Graph 10
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.4225599222920451 -
                                                                               Time: 12
.586184024810791
None
     Graph 11
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.2671337334371202 -
                                                                               Time: 11
.778332948684692
None
     Graph 12
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.550146932461665 - Time: 11.
030476093292236
None
     Graph 13
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.23850950742086496 -
                                                                                Time:
11.873939990997314
None
     Graph 14
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.5123579767928774 -
                                                                               Time: 11
.179481744766235
None
     Graph 15
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.7876205949141379 -
                                                                               Time: 12
.883906841278076
None
     Graph 16
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.0064599804971195 -
                                                                               Time: 13
.631624937057495
```

```
Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9666033216792229 -
                                                                               Time: 12
.04284381866455
None
     Graph 18
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.939148613571426 -
                                                                              Time: 13.
38598108291626
None
     Graph 19
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.8620304898268571 -
.121047019958496
None
Test for graphsize 20
     Graph 0
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.2286198003634965 -
                                                                               Time: 11
.80458688735962
None
     Graph 1
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.146804753056955 - Time: 14.
24943208694458
None
     Graph 2
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.1055289628951073 -
                                                                               Time: 14
.049562215805054
None
     Graph 3
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 0.9308740224380188 -
                                                                               Time: 13
.305114269256592
None
     Graph 4
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.759847876834371 - Time: 13.
062036037445068
None
```

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.8329240585346938 -Time: 13

.63188099861145

None

Graph 6

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.2720059272304098 -Time: 13

.25345516204834

None

Graph 7

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.010634009675634 - Time: 14.

236795902252197

None

Graph 8

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 0.9555164697122933 -Time: 13

.126391649246216

None

Graph 9

Running R-QUBO_gbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.1140725334617159 -Time: 14

.242166996002197

None

Graph 10

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.1086714555953918 -

.102712154388428

None

Graph 11

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.3901409670808889 Time: 14

.408185005187988

None

Graph 12

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.8273616108029387 -Time: 14

.267133235931396

None

Graph 13

Running R-QUBO_qbsolv...

Page 117 of 395

```
File-unknown

Coalition structure value for R-QUBO_qbsolv: 1.5096587190417594 - Time: 15
.142730951309204
None
```

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.142733334196528 - Time: 14.
140756368637085
None

Graph 15

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.338581728684872 - Time: 14.
626819133758545
None

Graph 16

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.4018693972730745 - Time: 17
.38131093978882
None

Graph 17

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.516596878262611 - Time: 13. 739375114440918

None

Graph 18

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.0512632971854572 - Time: 15
.93445611000061
None

Graph 19

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 0.7348132032658938 - Time: 13
.309458017349243
None

Test for graphsize 22

Graph 0

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.3789109416829959 - Time: 20
.310651302337646
None

```
File - unknown
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.1445445552090874 - Time: 19
 .768062829971313
 None
      Graph 2
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.1527341057839138 -
 .30322504043579
 None
      Graph 3
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 0.8386235254101209 -
                                                                                Time: 20
 .497061014175415
 None
      Graph 4
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.4141131952076123 -
                                                                                Time: 20
 .05885887145996
 None
      Graph 5
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.2311338513693997 -
                                                                                Time: 23
 .202532052993774
 None
      Graph 6
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.9295166795682377 -
                                                                                Time: 19
 .10936403274536
 None
      Graph 7
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.4769895353490199 -
                                                                                Time: 23
 .37247085571289
 None
      Graph 8
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.221000462496292 - Time: 19.
 665982007980347
 None
      Graph 9
           Running R-QUBO_gbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.3166678866445665 - Time: 19
```

.59038805961609

```
Graph 10
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.4844338943951811 -
                                                                                Time: 20
.623671054840088
None
     Graph 11
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.2221165947339898
                                                                                Time: 21
.892914056777954
None
     Graph 12
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.67675443249464 -
                                                                              Time: 18.
682590007781982
None
     Graph 13
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.7808146272583585 -
                                                                                Time: 20
.630645036697388
None
     Graph 14
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.3645584596682312 -
.8178870677948
None
```

Time: 18

Graph 15

Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.2948763920489057 -Time: 20 .34786820411682 None

Graph 16

Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.3757912013005225 -Time: 25 .046308040618896 None

Graph 17

Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.108844836437882 - Time: 20. 138481855392456 None

.143847942352295

None

Graph 18 Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.3414015011873701 - Time: 19 .85304284095764 None Graph 19 Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.7448801101228497 -Time: 19 .92967391014099 None Test for graphsize 24 Graph 0 Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.7010052388675874 -Time: 23 .49996519088745 None Graph 1 Running R-QUBO_gbsolv... Coalition structure value for R-QUBO_qbsolv: 1.3886139829530038 -Time: 26 .271035194396973 None Graph 2 Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.5862663420935306 -Time: 24 .793992042541504 None Graph 3 Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.5924746022500145 -Time: 24 .41015076637268 None Graph 4 Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.57079474839486 -Time: 23. 637029886245728 None Graph 5 Running R-QUBO_qbsolv... Coalition structure value for R-QUBO_qbsolv: 1.3426834078204877 - Time: 23

Page 121 of 395

```
Graph 6
```

Running R-QUB0_qbsolv...

Coalition structure value for R-QUB0_qbsolv: 1.4906366941049853 - Time: 22
.532828092575073

None

Graph 7

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.3171557162028549 - Time: 24

.515637636184692

None

Graph 8

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.62116363968439 - Time: 22.

778130292892456

None

Graph 9

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.1355862586534258 - Time: 25

.424153804779053

None

Graph 10

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.3721065249381823 - Time: 22

.92832899093628

None

Graph 11

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.5708787552799706 - Time: 26

.06284809112549

None

Graph 12

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.3241178248075869 - Time: 26

.509942054748535

None

Graph 13

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.811060936422372 - Time: 23.

734945058822632

None

```
File - unknown
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.816278325728014 - Time: 24.
 109410762786865
None
      Graph 15
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.4883841820783488 -
 .07561206817627
 None
      Graph 16
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.3263648141889561 - Time: 24
 .40928077697754
 None
      Graph 17
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.7055631245185978 -
                                                                                Time: 21
 .26640224456787
 None
      Graph 18
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.447440198799562 - Time: 22.
 93104100227356
 None
      Graph 19
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.9196240992240305 - Time: 24
 .53562903404236
 None
 Test for graphsize 26
      Graph 0
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.9275312464485168 -
                                                                                Time: 30
 .075576066970825
 None
      Graph 1
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.9082577259881361 - Time: 30
```

.55769395828247

```
Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.5729638131652308 -
                                                                                Time: 27
.14976477622986
None
     Graph 3
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.9552111194626889 -
                                                                               Time: 29
.43686294555664
None
     Graph 4
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.5029838005635696 -
                                                                                Time: 27
.826187133789062
None
     Graph 5
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.4744191862071574 -
.191821813583374
None
     Graph 6
          Running R-QUBO_gbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.1619977227798017 -
                                                                               Time: 25
.89163327217102
None
     Graph 7
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.6961258350955077 -
                                                                               Time: 25
.6663498878479
None
     Graph 8
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.7862359408452448 - Time: 25
.665949821472168
None
     Graph 9
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.074759205108485 - Time: 25.
96830177307129
None
     Graph 10
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.837086002332633 - Time: 27.
                                      Page 124 of 395
```

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File - unknown
 987585067749023
 None
      Graph 11
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.2409073975555813 -
                                                                                 Time: 33
 .48282194137573
 None
      Graph 12
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.6795941655149207 -
                                                                                 Time: 27
 .493380069732666
 None
      Graph 13
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.9878145093575128 -
                                                                                 Time: 27
 .229539155960083
 None
      Graph 14
           Running R-QUBO_gbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.6557715426500152 -
                                                                               Time: 32
 .91769886016846
 None
      Graph 15
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.9392763337633028 -
                                                                                 Time: 29
 .651570320129395
 None
      Graph 16
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.679067250405403 - Time: 32.
 135892152786255
 None
      Graph 17
           Running R-QUBO_qbsolv...
           Coalition structure value for R-QUBO_qbsolv: 1.7729039084590497 -
                                                                                 Time: 30
 .368387699127197
 None
      Graph 18
```

Coalition structure value for R-QUBO_qbsolv: 2.0167658061418194 - Time: 27

Running R-QUBO_qbsolv...

.396961212158203

```
Graph 19
```

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 2.2023526251088157 - Time: 24
.139298677444458
None

Test for graphsize 28

Graph 0

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 2.102415248660037 - Time: 36. 407768964767456
None

Graph 1

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.7564689501037805 - Time: 38
.13467288017273
None

Graph 2

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.9487780294415487 - Time: 36
.25650095939636

None

Graph 3

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.7278676435872669 - Time: 38
.82771301269531
None

Graph 4

Running R-QUBO_qbsolv...
Coalition structure value for R-QUBO_qbsolv: 1.9519000169963547 - Time: 33
.30541181564331
None

Graph 5

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.844443706537085 - Time: 42
33503699302673
None

Graph 6

Running R-QUBO_qbsolv...

Coalition structure value for R-QUBO_qbsolv: 1.751562178646921 - Time: 36.
78734111785889
None

```
Graph 7
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.147540277130666 - Time: 31.
1463360786438
None
     Graph 8
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.450492598571003 - Time: 37.
40861177444458
None
     Graph 9
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.632817062897253 - Time: 34.
81558799743652
None
     Graph 10
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.0368985620604505 - Time: 40
.3748779296875
None
     Graph 11
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.824350813344246 - Time: 44.
877249002456665
None
     Graph 12
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.928146562659343 - Time: 42.
67049598693848
None
     Graph 13
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.6328182331980727 -
                                                                               Time: 38
.435778856277466
None
     Graph 14
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.640450401947703 - Time: 42.
68698477745056
None
```

```
Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.2890933628745316 -
                                                                                 Time: 47
.097681283950806
None
     Graph 16
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.569843289461332 -
                                                                               Time: 39.
9107551574707
None
     Graph 17
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 1.8604912623196768 -
.022555112838745
None
     Graph 18
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.2661988687358203
                                                                                 Time: 34
.564918994903564
None
     Graph 19
          Running R-QUBO_qbsolv...
          Coalition structure value for R-QUBO_qbsolv: 2.2211219918747673 -
                                                                                 Time: 43
.8302903175354
None
Done running tests for non-iterative algorithms with qbsolv.
Created directory: results/eon_data/quantum/qbsolv/parallel
Test for graphsize 4
     Graph 0
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.028954843277226416
       Time: 0.8445460796356201
None
     Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.5708825220945002
Time: 0.9247281551361084
None
     Graph 2
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.00712843874983804
       Time: 0.8515100479125977
None
```

```
Graph 3
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.06152625301075432
       Time: 0.4238698482513428
None
     Graph 4
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.06396917936914548
       Time: 0.42394518852233887
None
     Graph 5
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.10380144569396066
       Time: 0.43156886100769043
None
     Graph 6
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.05554082850606079
       Time: 0.4293859004974365
None
     Graph 7
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.038931269477402
Time: 0.9064059257507324
None
     Graph 8
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.042007430425400116
       Time: 0.4388260841369629
None
     Graph 9
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.0010690439865044254
       Time: 0.8795137405395508
None
     Graph 10
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.2197142340515299
Time: 0.8558337688446045
None
```

```
Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.2770576453315883
Time: 0.8524730205535889
None
     Graph 12
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.06753117632182892
       Time: 0.47322702407836914
None
     Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.01673789206527232
       Time: 0.4278748035430908
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.03599345154763256
       Time: 0.4430351257324219
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.10695262062797894
       Time: 0.8666229248046875
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.06090302529973002
       Time: 0.4389519691467285
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.37306828772501177
       Time: 0.9014089107513428
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.06615960564805334
       Time: 0.43525099754333496
None
     Graph 19
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.24253747559571082
                                       Page 130 of 395
```

```
Time: 0.457805871963501
None
Test for graphsize 6
     Graph 0
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.4037548984604129
Time: 1.0455758571624756
None
     Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.14602401068624005
       Time: 1.0444259643554688
None
     Graph 2
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.12639840396634128
       Time: 1.0399680137634277
None
     Graph 3
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.1447468748308225
Time: 1.4667670726776123
None
     Graph 4
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.2074140190053555
Time: 1.509342908859253
None
     Graph 5
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.21629539194693592
       Time: 1.0637180805206299
None
     Graph 6
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.1032573088773745
Time: 1.047706127166748
None
     Graph 7
          Running GCS-Q_qbsolv_parallel...
```

File - unknown

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File - unknown
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.08555938986791745
        Time: 1.5734539031982422
None
      Graph 8
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.13737909873700005
        Time: 1.0828449726104736
None
      Graph 9
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.23536312556377226
        Time: 1.0403780937194824
None
      Graph 10
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.2985191363911497
Time: 1.5053677558898926
None
      Graph 11
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.1310541476422742
Time: 0.9911770820617676
None
      Graph 12
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.20825406819544412
        Time: 1.051563024520874
None
      Graph 13
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.20854127218900942
        Time: 1.0490009784698486
None
      Graph 14
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.8758237641815896
Time: 1.4840879440307617
None
      Graph 15
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.29878868277545223
```

Time: 1.537978172302246

```
Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.5885124948454461
Time: 1.0327777862548828
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.19838467424926165
       Time: 1.0796730518341064
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.11297024288754187
       Time: 1.528757095336914
None
     Graph 19
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.9194011936254896
Time: 1.0359230041503906
None
Test for graphsize 8
     Graph 0
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.4037548984604129
Time: 0.9618010520935059
None
     Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.14602401068624005
       Time: 0.9897489547729492
None
     Graph 2
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.12639840396634128
       Time: 1.0176870822906494
None
     Graph 3
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.1447468748308225
Time: 1.4482901096343994
```

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File - unknown
 None
      Graph 4
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.2074140190053555
Time: 1.5269689559936523
None
      Graph 5
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.21629539194693592
        Time: 0.9785909652709961
None
      Graph 6
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.1032573088773745
Time: 0.9696028232574463
None
      Graph 7
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.08555938986791745
        Time: 1.4789628982543945
None
      Graph 8
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.13737909873700005
        Time: 0.997445821762085
None
      Graph 9
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.23536312556377226
        Time: 0.9483017921447754
None
      Graph 10
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.2985191363911497
Time: 1.5598711967468262
None
      Graph 11
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.1310541476422742
Time: 0.9519221782684326
```

```
File - unknown
      Graph 12
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.20825406819544412
        Time: 0.9603757858276367
 None
      Graph 13
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.20854127218900942
        Time: 0.9915697574615479
 None
      Graph 14
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.8758237641815896
 Time: 1.5099079608917236
 None
      Graph 15
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.29878868277545223
        Time: 1.4044420719146729
 None
      Graph 16
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.5885124948454461
 Time: 0.9874269962310791
 None
      Graph 17
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.19838467424926165
        Time: 1.031677007675171
None
      Graph 18
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.11297024288754187
        Time: 1.5203168392181396
 None
      Graph 19
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9194011936254896
 Time: 0.9617249965667725
 None
```

Test for graphsize 10

```
Graph 0
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.850779136467672
Time: 1.9142160415649414
None
     Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 2.094089420337781
Time: 1.4209940433502197
None
     Graph 2
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.33784569217207405
       Time: 1.3816990852355957
None
     Graph 3
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.4612950977452286
Time: 0.9191641807556152
None
     Graph 4
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.14424407994825117
       Time: 1.4180731773376465
None
     Graph 5
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.044044789115567
Time: 1.3847203254699707
None
     Graph 6
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.12039452902203607
       Time: 1.4148821830749512
None
     Graph 7
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.726339025546757
Time: 1.4463000297546387
None
```

```
Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6527388888772592
Time: 0.9680860042572021
None
     Graph 9
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.3547436014939933
Time: 0.9543759822845459
None
     Graph 10
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6414529812823204
Time: 1.450551986694336
None
     Graph 11
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6441125032737318
Time: 0.9236140251159668
None
     Graph 12
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6905379099888833
Time: 1.3978240489959717
None
     Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.2492454155493249
Time: 0.9404540061950684
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.39705675702467147
       Time: 1.4178190231323242
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.1076973646763904
Time: 1.4225599765777588
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.5195958328469317
Time: 0.9460000991821289
```

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 None
      Graph 17
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.5224072535037649
Time: 1.4198589324951172
None
      Graph 18
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.4516002911853718
Time: 1.3693251609802246
None
      Graph 19
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.8013746780583304
Time: 0.9164190292358398
None
Test for graphsize 12
      Graph 0
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.6150486301365916
Time: 0.912696123123169
None
      Graph 1
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.082427022828277
Time: 1.3169419765472412
None
      Graph 2
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.38475651674715294
        Time: 0.8620989322662354
None
      Graph 3
           Running GCS-Q_qbsolv_parallel...
```

Coalition structure value for GCS-Q_qbsolv_parallel: 0.560367844286219

Time: 0.8789827823638916

None

Graph 4

Running GCS-Q_qbsolv_parallel... Coalition structure value for GCS-Q_qbsolv_parallel: 0.44488729516555026

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        Time: 0.763279914855957
None
      Graph 5
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.8431061084135649
Time: 0.8748600482940674
None
      Graph 6
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.7639394580685206
Time: 1.3821961879730225
None
      Graph 7
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.7792806079405281
Time: 1.320815086364746
None
      Graph 8
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.2591533310888252
Time: 1.3331272602081299
None
      Graph 9
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.5954578349497766
Time: 0.8963119983673096
None
      Graph 10
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.6059122564815951
Time: 1.3855249881744385
None
      Graph 11
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.702289163217074
Time: 1.333794116973877
None
      Graph 12
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.8736191784041978
 Time: 0.9135689735412598
```

```
Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6561829802817627
Time: 0.866919994354248
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3546157387198363
Time: 1.2831950187683105
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.5777465750025783
Time: 1.4318101406097412
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.1420601440215776
Time: 1.2497210502624512
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6098161453602629
Time: 0.877281904220581
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.2399354793810673
Time: 1.2870457172393799
None
     Graph 19
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 2.201714058246395
Time: 1.3347277641296387
None
Test for graphsize 14
```

Running GCS-Q_qbsolv_parallel... Coalition structure value for GCS-Q_qbsolv_parallel: 1.2801666702618846 Time: 0.6033680438995361 None

```
Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.9910337078295726
Time: 0.28615903854370117
None
     Graph 2
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.7896917547366726
Time: 0.28287720680236816
None
     Graph 3
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.32406091265609405
       Time: 0.574692964553833
None
     Graph 4
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.7434000061760955
Time: 0.29511213302612305
None
     Graph 5
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.5577618317755935
Time: 0.5730447769165039
None
     Graph 6
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.8226613726159684
Time: 0.9645709991455078
None
     Graph 7
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.072236044635126
Time: 0.28987693786621094
None
     Graph 8
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.8416300286743024
Time: 0.6288602352142334
None
```

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Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 2.4431815381742013
Time: 0.5668470859527588
None
     Graph 10
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6521493604439357
Time: 0.5963640213012695
None
     Graph 11
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.1170498230417039
Time: 0.2812931537628174
None
     Graph 12
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6293034223394756
Time: 1.016780138015747
None
     Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.0358230118990974
Time: 0.2909870147705078
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.0806199836372201
Time: 0.6134350299835205
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6937347837068302
Time: 0.23985576629638672
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.8614475795839951
Time: 0.6052639484405518
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.9888065387748739
                                       Page 142 of 395
```

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Time: 0.5988099575042725
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.8831225677352705
Time: 0.9911270141601562
None
     Graph 19
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.7870756382366793
Time: 0.6546947956085205
None
Test for graphsize 16
     Graph 0
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.822906633005644
Time: 0.7146368026733398
None
     Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.02240091914733
Time: 0.7661571502685547
None
     Graph 2
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.8919407950075495
Time: 0.48075008392333984
None
     Graph 3
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.8196815933776946
Time: 0.4860100746154785
None
     Graph 4
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6262725262860229
Time: 0.7585396766662598
None
     Graph 5
          Running GCS-Q_qbsolv_parallel...
```

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           Coalition structure value for GCS-Q_qbsolv_parallel: 3.2643274461642093
Time: 0.7271909713745117
None
      Graph 6
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.3304850667358323
Time: 0.707226037979126
None
      Graph 7
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.0160665942924254
Time: 0.7429301738739014
None
      Graph 8
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9121356510589749
Time: 0.541370153427124
None
      Graph 9
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9543621161819686
Time: 0.5096099376678467
None
      Graph 10
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.8229066330056085
Time: 0.6875848770141602
None
      Graph 11
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.0224009191474863
Time: 0.7850632667541504
None
      Graph 12
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.8919407950071729
Time: 0.48507213592529297
None
      Graph 13
```

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Running GCS-Q_qbsolv_parallel... Coalition structure value for GCS-Q_qbsolv_parallel: 0.8196815933778865 Time: 0.4925849437713623

```
Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.6262725262863498
Time: 0.736191987991333
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.5325696747462771
Time: 0.7601988315582275
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.9404045759696231
Time: 0.7830362319946289
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.0815657970830443
Time: 0.7399327754974365
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.333519919451696
Time: 0.7964191436767578
None
     Graph 19
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3821471550545326
Time: 0.7353198528289795
None
Test for graphsize 18
     Graph 0
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.22958232134755
Time: 0.5177221298217773
None
     Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.9642698128749885
Time: 0.7483639717102051
```

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 None
      Graph 2
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.7324635199480483
Time: 0.5046508312225342
None
      Graph 3
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9489845542806634
Time: 0.8133909702301025
None
      Graph 4
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.5284612501546704
Time: 0.5179519653320312
None
      Graph 5
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.48980244996036504
        Time: 1.0533959865570068
None
      Graph 6
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.4521889657959477
Time: 0.8069369792938232
None
      Graph 7
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.0738307702452161
 Time: 0.7427780628204346
None
      Graph 8
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9280845774882422
 Time: 0.5244951248168945
```

None

Graph 9

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.2009069438743012

Time: 0.7594890594482422

None

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File - unknown
      Graph 10
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.4225599222920451
Time: 0.2417898178100586
None
      Graph 11
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.2671337334371202
 Time: 0.25781869888305664
None
      Graph 12
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.550146932461665
 Time: 0.2341318130493164
None
      Graph 13
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.23834967177599253
        Time: 0.4616398811340332
None
      Graph 14
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.5123579767928774
Time: 0.5058069229125977
None
      Graph 15
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.7845770152238103
Time: 0.7575058937072754
None
      Graph 16
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.0013286853347196
Time: 0.8168549537658691
None
      Graph 17
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9666033216792229
Time: 0.4730539321899414
```

None

Running GCS-Q_qbsolv_parallel...

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           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9363513562122208
Time: 0.48238110542297363
None
      Graph 19
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.8620304898268571
Time: 0.7099449634552002
None
Test for graphsize 20
      Graph 0
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.2286198003634965
Time: 0.763139009475708
None
      Graph 1
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.146804753056955
Time: 0.7731499671936035
None
      Graph 2
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.1026852377632395
 Time: 0.9753479957580566
None
      Graph 3
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.9308740224380188
Time: 0.800590991973877
None
      Graph 4
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.759847876834371
Time: 0.578603982925415
None
      Graph 5
```

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 0.7916099307551931

Time: 1.2022368907928467

None

```
Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.2711272966671245
Time: 0.8342199325561523
None
     Graph 7
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.010634009675634
Time: 0.7868750095367432
None
     Graph 8
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.939637938111396
Time: 1.0681359767913818
None
     Graph 9
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.1140725334617159
Time: 0.4667019844055176
None
     Graph 10
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.0960441630965505
Time: 0.7688989639282227
None
     Graph 11
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3901409670808889
Time: 0.700840950012207
None
     Graph 12
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.8273616108029387
Time: 0.5649690628051758
None
     Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.5096587190417594
Time: 0.5368142127990723
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.142733334196528
Time: 0.6118807792663574
```

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 None
      Graph 15
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.338581728684872
Time: 0.8527610301971436
None
      Graph 16
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.4018693972730745
Time: 0.5795068740844727
None
      Graph 17
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.516596878262611
Time: 0.5468959808349609
None
      Graph 18
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.0512632971854572
Time: 0.7723672389984131
None
      Graph 19
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 0.7348132032658938
Time: 0.4835929870605469
None
Test for graphsize 22
      Graph 0
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.3662271298697704
Time: 0.7894108295440674
None
      Graph 1
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.1445445552090874
Time: 0.9490480422973633
None
```

Graph 2

Running GCS-Q_qbsolv_parallel...

Page 150 of 395

Coalition structure value for GCS-Q_qbsolv_parallel: 1.1327657004309728

```
Time: 0.8079290390014648
None
     Graph 3
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 0.8183394709073113
Time: 0.9479360580444336
None
     Graph 4
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.4141131952076123
Time: 0.7848446369171143
None
     Graph 5
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.2311338513693997
Time: 0.5424933433532715
None
     Graph 6
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.9260262036996991
Time: 0.5611860752105713
None
     Graph 7
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.4593783482958784
Time: 0.8445639610290527
None
     Graph 8
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.221000462496292
Time: 0.8064861297607422
None
     Graph 9
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3166678866445665
Time: 0.7513809204101562
None
     Graph 10
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.4543770177705042
Time: 0.7535879611968994
None
```

File - unknown

```
Graph 11
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.2095289251892822
Time: 0.8530759811401367
None
     Graph 12
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.67675443249464
Time: 0.8905432224273682
None
     Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.7808146272583585
Time: 0.7449970245361328
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3645584596682312
Time: 0.86415696144104
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.2948763920489057
Time: 0.5641510486602783
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3065803939983311
Time: 0.6703817844390869
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.108844836437882
Time: 0.8094921112060547
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
```

None

Time: 0.8242218494415283

Coalition structure value for GCS-Q_qbsolv_parallel: 1.3414015011873701

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File - unknown
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.7448801101228497
Time: 0.7855696678161621
None
Test for graphsize 24
      Graph 0
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.6957292952497127
Time: 1.0635199546813965
None
      Graph 1
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.3648258997912563
Time: 0.8870620727539062
None
      Graph 2
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.5862663420935306
Time: 0.9980449676513672
None
      Graph 3
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.5758503856590522
Time: 1.20338773727417
None
      Graph 4
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.5177594295021066
Time: 0.7973229885101318
None
      Graph 5
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.3426834078204877
 Time: 0.534276008605957
None
      Graph 6
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.4906366941049853
Time: 0.7831990718841553
None
```

```
Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.303891450093154
Time: 0.841386079788208
None
     Graph 8
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.5651120069379019
Time: 0.5256071090698242
None
     Graph 9
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.1184043332784839
Time: 0.8938970565795898
None
     Graph 10
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3694392886737887
Time: 0.7883431911468506
None
     Graph 11
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.5448915746994771
Time: 0.7945139408111572
None
     Graph 12
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.3241178248075869
Time: 0.554163932800293
None
     Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.811060936422372
Time: 0.5565629005432129
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.816278325728014
Time: 0.4950416088104248
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.4883841820783488
                                       Page 154 of 395
```

```
Time: 0.7734971046447754
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.314858975952312
Time: 0.8213682174682617
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.6836232991019457
Time: 0.8589141368865967
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.447440198799562
Time: 0.8296194076538086
None
     Graph 19
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.9031811436474015
Time: 0.8457670211791992
None
Test for graphsize 26
     Graph 0
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.9255824808106539
Time: 0.9013669490814209
None
     Graph 1
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.9082577259881361
Time: 1.1534290313720703
None
     Graph 2
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.5576083280462925
Time: 0.7730700969696045
None
     Graph 3
          Running GCS-Q_qbsolv_parallel...
```

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File - unknown
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.9552111194626889
Time: 1.0505421161651611
None
      Graph 4
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.4980253640183747
Time: 0.8193879127502441
None
      Graph 5
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.4744191862071574
Time: 0.8912878036499023
None
      Graph 6
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.1619977227798017
Time: 0.7739968299865723
None
      Graph 7
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.664779258764888
Time: 1.1301229000091553
None
      Graph 8
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.680836918072643
Time: 0.7525949478149414
None
      Graph 9
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.0715227296308143
Time: 0.8660850524902344
None
      Graph 10
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.80854649725606
Time: 0.8482239246368408
None
      Graph 11
```

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.2234965467332017

Time: 0.86490797996521

None

```
Graph 12
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.659938258767916
Time: 1.032684087753296
None
     Graph 13
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.9708575516204547
Time: 0.5326070785522461
None
     Graph 14
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.6557715426500152
Time: 0.5496549606323242
None
     Graph 15
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.9258545958374498
Time: 0.7616219520568848
None
     Graph 16
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.6503967364751233
Time: 0.8277246952056885
None
     Graph 17
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.7514283684036869
Time: 0.8893640041351318
None
     Graph 18
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 1.9671809150709052
Time: 0.997769832611084
None
     Graph 19
          Running GCS-Q_qbsolv_parallel...
          Coalition structure value for GCS-Q_qbsolv_parallel: 2.160091522388214
Time: 0.9146461486816406
None
```

```
Test for graphsize 28
```

```
Graph 0
```

Running GCS-Q_qbsolv_parallel... Coalition structure value for GCS-Q_qbsolv_parallel: 2.102415248660037 Time: 0.9053590297698975

None

Graph 1

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.7564689501037805

Time: 1.1062960624694824

None

Graph 2

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.9487780294415487

Time: 0.9183750152587891

None

Graph 3

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.7278676435872669

Time: 0.9831938743591309

None

Graph 4

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.9519000169963547

Time: 0.8238809108734131

None

Graph 5

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.8267031207920468

Time: 0.9092638492584229

None

Graph 6

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 1.751562178646921

Time: 0.7832839488983154

None

Graph 7

Running GCS-Q_qbsolv_parallel...

Coalition structure value for GCS-Q_qbsolv_parallel: 2.1394510325771066

Time: 0.8325800895690918

None

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File - unknown
      Graph 8
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.450492598571003
 Time: 1.0354499816894531
 None
      Graph 9
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.632817062897253
 Time: 0.7858538627624512
 None
      Graph 10
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.026689318811087
 Time: 0.9355030059814453
 None
      Graph 11
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.8044621873622972
 Time: 0.8401122093200684
 None
      Graph 12
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.8678105117869919
 Time: 0.8875341415405273
 None
      Graph 13
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.6328182331980727
 Time: 1.0414838790893555
 None
      Graph 14
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.640450401947703
 Time: 0.570214033126831
 None
      Graph 15
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.2890933628745316
 Time: 0.7706618309020996
```

None

Running GCS-Q_qbsolv_parallel...

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File - unknown
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.569843289461332
Time: 0.9046337604522705
None
      Graph 17
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 1.8262216593219236
Time: 0.863192081451416
None
      Graph 18
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.216753238826982
Time: 0.8489868640899658
None
      Graph 19
           Running GCS-Q_qbsolv_parallel...
           Coalition structure value for GCS-Q_qbsolv_parallel: 2.2211219918747673
Time: 0.7429311275482178
 Done running tests for GCS-Q with qbsolv in True mode.
 Created directory: results/eon_data/quantum/qbsolv/parallel/k=3
Test for graphsize 4
      Graph 0
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.028954843277226416 - Time: 0.8342897891998291
None
      Graph 1
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.5708825220945002
                     - Time: 0.8620338439941406
None
      Graph 2
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.00712843874983804 - Time: 0.7782740592956543
None

Graph 3

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.06152625301075432 - Time: 0.4034309387207031

None

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.2770576453315883 - Time: 0.8014638423919678 None

Graph 12

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

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File - unknown
```

```
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.06753117632182892 - Time: 0.3931310176849365
None
     Graph 13
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.01673789206527232 - Time: 0.40610599517822266
None
     Graph 14
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.03599345154763256 - Time: 0.3941347599029541
None
     Graph 15
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.10695262062797894 - Time: 0.7935953140258789
None
     Graph 16
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.06090302529973002 - Time: 0.3998570442199707
None
     Graph 17
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.37306828772501177 - Time: 0.876446008682251
None
     Graph 18
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.06615960564805334 - Time: 0.4091489315032959
None
     Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.24253747559571082 - Time: 0.39309191703796387
None
Test for graphsize 6
```

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File - unknown
           Running 3_split_ours_iterative_exactly_gbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.4037548984604129
                    - Time: 0.5321290493011475
None
      Graph 1
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.14602401068624005 - Time: 0.5198206901550293
 None
      Graph 2
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.12639840396634128
                     - Time: 0.5413010120391846
None
      Graph 3
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.1447468748308225 - Time: 0.5625758171081543
 None
      Graph 4
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.2074140190053555 - Time: 0.6258091926574707
None
      Graph 5
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.21629539194693592 - Time: 0.6059839725494385
None
      Graph 6
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
                    - Time: 0.5683550834655762
 0.1032573088773745
None
      Graph 7
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

0.08555938986791745 - Time: 0.6299870014190674

None

Graph 8

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.13737909873700005 - Time: 0.5232000350952148

```
Graph 9
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.23536312556377226 - Time: 0.5226612091064453
None

Graph 10

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.2985191363911497 - Time: 0.6084518432617188
None

Graph 11

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.1310541476422742 - Time: 0.532141923904419

None

Graph 12

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.20825406819544412 - Time: 0.6604139804840088

None

Graph 13

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.2924666692276716 - Time: 0.5553450584411621
None

Graph 14

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

0.8758237641815896 - Time: 0.6987929344177246

None

Graph 15

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.29878868277545223 - Time: 0.6852250099182129

None

Graph 16

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.5885124948454461 - Time: 0.5710580348968506
None

None

```
Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.19838467424926165
                    - Time: 0.5565018653869629
None
     Graph 18
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.11297024288754187 - Time: 0.5595760345458984
None
     Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.9194011936254896 - Time: 0.5035750865936279
None
Test for graphsize 8
     Graph 0
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.4037548984604129 - Time: 0.5319092273712158
None
     Graph 1
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.14602401068624005 - Time: 0.5018439292907715
None
     Graph 2
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.12639840396634128 - Time: 0.5411128997802734
None
     Graph 3
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.1447468748308225 - Time: 0.5280518531799316
None
     Graph 4
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.2074140190053555
                   - Time: 0.5275330543518066
```

```
Graph 5
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.21629539194693592 - Time: 0.5205399990081787
None

Graph 6

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.1032573088773745 - Time: 0.5706501007080078
None

Graph 7

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.08555938986791745 - Time: 0.7230560779571533

None

Graph 8

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.13737909873700005 - Time: 0.5656509399414062
None

Graph 9

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.23536312556377226 - Time: 0.5947611331939697

None

Graph 10

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.2985191363911497 - Time: 0.611562967300415
None

Graph 11

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.1310541476422742 - Time: 0.5471837520599365
None

Graph 12

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.20825406819544412 - Time: 0.5016648769378662
None

```
File - unknown
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.2924666692276716 - Time: 0.7592551708221436
None
     Graph 14
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8758237641815896 - Time: 0.5938007831573486
None
     Graph 15
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.29878868277545223 - Time: 0.5053980350494385
None
     Graph 16
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.5885124948454461 - Time: 0.5180130004882812
None
     Graph 17
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.19838467424926165 - Time: 0.5320179462432861
None
     Graph 18
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.11297024288754187 - Time: 0.5557632446289062
None
     Graph 19
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
                    - Time: 0.5657179355621338
 0.9194011936254896
None
Test for graphsize 10
     Graph 0
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.850779136467672 - Time: 0.8563740253448486 None

```
Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.113205218829208 - Time: 0.554069995880127
None
     Graph 2
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.33784569217207405 - Time: 0.6041080951690674
None
     Graph 3
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.4612950977452286 - Time: 0.5579550266265869
None
     Graph 4
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.16780273947890834 - Time: 0.8303282260894775
None
     Graph 5
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.044044789115567 - Time: 0.6319639682769775
None
     Graph 6
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.12039452902203607 - Time: 0.5488109588623047
None
     Graph 7
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.726339025546757 - Time: 0.5312719345092773
None
     Graph 8
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.6527388888772592 - Time: 0.583712100982666
None
     Graph 9
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.5195958328469317 - Time: 0.6043961048126221
None

Graph 17

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

0.5224072535037649 - Time: 0.6491971015930176

None

```
Graph 18
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.4516002911853718 - Time: 0.6585798263549805
None

Graph 19

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.8013746780583304 - Time: 0.7578449249267578
None

Test for graphsize 12

Graph 0

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.6150486301365916 - Time: 0.6339151859283447

None

Graph 1

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

1.082427022828277 - Time: 0.8212668895721436

None

Graph 2

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.38475651674715294 - Time: 0.8142757415771484

None

Graph 3

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.560367844286219 - Time: 0.5730481147766113
None

Graph 4

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.44488729516555026 - Time: 0.6653721332550049

None

Graph 5

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8431061084135649 - Time: 0.613732099533081

None

```
Graph 6
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.7639394580685206 - Time: 0.6310851573944092
None
     Graph 7
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.7792806079405281
                   - Time: 0.6834383010864258
None
     Graph 8
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2591533310888252 - Time: 0.8387100696563721
None
     Graph 9
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.5954578349497766
                   - Time: 0.6392929553985596
None
     Graph 10
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.6059122564815951 - Time: 0.7093768119812012
None
     Graph 11
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.702289163217074 - Time: 0.7314469814300537
None
     Graph 12
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8736191784041978 - Time: 0.661639928817749
None
     Graph 13
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.6561829802817627 - Time: 0.6529648303985596
None
```

```
Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.4616685125603937 - Time: 0.637660026550293
None
     Graph 15
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.5777465750025783 - Time: 0.6763789653778076
None
     Graph 16
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.1582704298219042 - Time: 0.6343660354614258
None
     Graph 17
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.6098161453602629 - Time: 0.5988378524780273
None
     Graph 18
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.2399354793810673 - Time: 0.6530861854553223
None
     Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.201714058246395 - Time: 0.3760981559753418
None
Test for graphsize 14
     Graph 0
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2801666702618846 - Time: 0.7126898765563965
None
     Graph 1
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.9910337078295726 - Time: 0.33191490173339844
None
```

```
Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.7896917547366726
                   - Time: 0.3502378463745117
None
     Graph 3
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.32406091265609405 - Time: 0.7735490798950195
None
     Graph 4
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.7434000061760955 - Time: 0.3332066535949707
None
     Graph 5
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.5577618317755935 - Time: 0.7180740833282471
None
     Graph 6
          Running 3_split_ours_iterative_exactly_gbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8226613726159684 - Time: 0.6647968292236328
None
     Graph 7
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.072236044635126 - Time: 0.3562140464782715
None
     Graph 8
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8416300286743024 - Time: 0.7417118549346924
None
     Graph 9
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.4431815381742013 - Time: 0.7669289112091064
None
     Graph 10
```

Page 173 of 395

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

File - unknown Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.6521493604439357 - Time: 0.6996438503265381 None Graph 11 Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 1.1170498230417039 - Time: 0.32585906982421875 None Graph 12 Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: - Time: 0.7452681064605713 0.6293034223394756 None Graph 13 Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 1.0358230118990974 - Time: 0.32872915267944336 None Graph 14 Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 1.0806199836372201 - Time: 0.6697399616241455 None Graph 15 Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.6937347837068302 - Time: 0.32973694801330566 None Graph 16 Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.8614475795839951 - Time: 0.7010350227355957 None Graph 17 Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.9888065387748739 - Time: 0.7012579441070557 None

Graph 18

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: - Time: 0.677739143371582 0.8831225677352705 None

```
Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.7870756382366793 - Time: 0.7978150844573975
None
Test for graphsize 16
     Graph 0
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.822906633005644 - Time: 5.0333051681518555
None
     Graph 1
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.02240091914733 - Time: 5.094650030136108
None
     Graph 2
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8919407950075495 - Time: 10.47286605834961
None
     Graph 3
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8449224007561682 - Time: 8.757498025894165
None
     Graph 4
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
                   - Time: 6.016005277633667
0.6262725262860229
None
     Graph 5
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
3.2643274461642093 - Time: 4.0980188846588135
None
     Graph 6
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
                   - Time: 5.661442995071411
1.3304850667358323
```

```
Graph 7
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.0160665942924254 - Time: 4.880967855453491
None

Graph 8

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.9121356510589749 - Time: 5.375679016113281
None

Graph 9

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.9543621161819686 - Time: 5.625460147857666
None

Graph 10

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8229066330056085 - Time: 5.0564610958099365

None

Graph 11

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.0224009191474863 - Time: 5.0788421630859375
None

Graph 12

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8919407950071729 - Time: 10.346286058425903
None

Graph 13

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8449224007551734 - Time: 9.714457750320435
None

Graph 14

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.6262725262863498 - Time: 5.902698040008545
None

```
File - unknown
      Graph 15
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.5325696747462771
                    - Time: 5.001279830932617
None
      Graph 16
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.9404045759696231 - Time: 6.015689849853516
None
      Graph 17
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.0815657970830443 - Time: 4.9035749435424805
None
      Graph 18
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.333519919451696 - Time: 5.243511199951172
 None
      Graph 19
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.3821471550545326 - Time: 5.1136720180511475
 None
Test for graphsize 18
      Graph 0
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.22958232134755 - Time: 9.966622829437256
None
      Graph 1
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.9642698128749885 - Time: 9.582310199737549 None

Graph 2

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.7324635199480483 - Time: 9.505037069320679 None

```
Graph 3
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.9489845542806634 - Time: 10.00672197341919
None

Graph 4

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.5284612501546704 - Time: 9.729809045791626
None

Graph 5

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.5069596362593671 - Time: 10.095278024673462
None

Graph 6

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.4521889657959477 - Time: 10.32534670829773

None

Graph 7

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.0738307702452161 - Time: 9.361043930053711
None

Graph 8

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.9280845774882422 - Time: 9.596402168273926
None

Graph 9

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2154281540707146 - Time: 14.457890748977661
None

Graph 10

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.4225599222920451 - Time: 4.828851938247681
None

```
File - unknown
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2671337334371202 -
                        Time: 4.762472152709961
None
     Graph 12
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.550146932461665 - Time: 4.787915945053101
None
     Graph 13
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.23850950742086496
                     - Time: 10.357851028442383
None
     Graph 14
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.5123579767928774 - Time: 9.59610915184021
None
     Graph 15
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.7876205949141379 - Time: 9.465825080871582
None
     Graph 16
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.0064599804971195 - Time: 9.753382921218872
None
     Graph 17
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
                    - Time: 9.635639190673828
 0.9666033216792229
None
     Graph 18
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 0.939148613571426 - Time: 9.601501941680908
None
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 0.8620304898268571 - Time: 9.517461061477661

```
Test for graphsize 20
     Graph 0
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2286198003634965 - Time: 9.649930000305176
None
     Graph 1
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.146804753056955 - Time: 9.626008987426758
None
     Graph 2
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.1055289628951073 - Time: 15.83407998085022
None
     Graph 3
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.9308740224380188
                   - Time: 9.054094076156616
None
     Graph 4
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.759847876834371 - Time: 9.449403762817383
None
     Graph 5
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8329240585346938
                   - Time: 14.533553838729858
None
     Graph 6
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2720059272304098 - Time: 9.782189130783081
None
     Graph 7
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
```

1.338581728684872

None

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Time: 10.233412265777588

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

Page 181 of 395

```
Graph 16
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.4018693972730745 - Time: 9.756357908248901
None

Graph 17

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

1.516596878262611 - Time: 9.955816984176636

None

Graph 18

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.0512632971854572 - Time: 10.214659929275513
None

Graph 19

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.7348132032658938 - Time: 9.810993909835815
None

Test for graphsize 22

Graph 0

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3789109416829959 - Time: 10.710129737854004
None

Graph 1

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.1445445552090874 - Time: 9.456485748291016
None

Graph 2

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.1527341057839138 - Time: 13.615219354629517

None

Graph 3

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
0.8386235254101209 - Time: 10.052953720092773
None

```
Graph 4
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.4141131952076123 - Time: 9.777401208877563
None
     Graph 5
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
                       Time: 10.083186149597168
1.2311338513693997
None
     Graph 6
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.9295166795682377 - Time: 9.604014158248901
None
     Graph 7
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.4769895353490199
                   - Time: 9.985146760940552
None
     Graph 8
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.221000462496292 - Time: 9.99278998374939
None
     Graph 9
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3166678866445665 - Time: 9.961636304855347
None
     Graph 10
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.4844338943951811 - Time: 14.240511894226074
None
     Graph 11
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2221165947339898 - Time: 10.119860887527466
None
```

```
Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.67675443249464 - Time: 9.60339093208313
None
     Graph 13
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.778020549731309 - Time: 15.012658834457397
None
     Graph 14
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3645584596682312 - Time: 9.999465227127075
None
     Graph 15
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2948763920489057 - Time: 9.724978923797607
None
     Graph 16
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3757912013005225 - Time: 10.227605819702148
None
     Graph 17
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.108844836437882 - Time: 9.980259895324707
None
     Graph 18
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3414015011873701
                   - Time: 9.904481887817383
None
     Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.7448801101228497 - Time: 9.69602108001709
None
```

Test for graphsize 24

```
Graph 0
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.7010052388675874
                   - Time: 9.761574029922485
None
     Graph 1
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3886139829530038 - Time: 9.564388275146484
None
     Graph 2
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.5862663420935306 - Time: 13.126924991607666
None
     Graph 3
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.5920712457888229 - Time: 14.85931396484375
None
     Graph 4
          Running 3_split_ours_iterative_exactly_gbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.57079474839486 - Time: 9.580688953399658
None
     Graph 5
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3426834078204877 - Time: 9.837852001190186
None
     Graph 6
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.4906366941049853 - Time: 9.431324243545532
None
     Graph 7
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.3171557162028549 - Time: 9.916149139404297
None
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

None

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File - unknown
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.62116363968439 - Time: 9.507160902023315
None
     Graph 9
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.1344824494506014 - Time: 9.496667861938477
None
     Graph 10
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.3721065249381823
                    - Time: 9.684852838516235
None
     Graph 11
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.5708787552799706 - Time: 8.976284980773926
None
     Graph 12
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.3241178248075869 - Time: 9.667072057723999
None
     Graph 13
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.811060936422372 - Time: 10.35964584350586
None
     Graph 14
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.816278325728014 - Time: 10.480721950531006
None
     Graph 15
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.4883841820783488 - Time: 9.879087924957275
None
     Graph 16
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.3263648141889561 - Time: 9.867717027664185
```

```
Graph 17
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.6946591168662763 - Time: 13.892948865890503
None
     Graph 18
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.447440198799562
                  - Time: 10.048299074172974
None
     Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.9196240992240305 - Time: 10.654476881027222
None
Test for graphsize 26
     Graph 0
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.9275312464485168 - Time: 10.595968008041382
None
     Graph 1
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.9082577259881361 - Time: 10.18186616897583
None
     Graph 2
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.5656923329069414 - Time: 13.6628999710083
None
     Graph 3
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.9552111194626889 - Time: 9.900699853897095
None
     Graph 4
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
                   - Time: 10.027331113815308
1.4980253640183747
```

```
Graph 5
```

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.4744191862071574 - Time: 9.587299823760986
None

Graph 6

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.1619977227798017 - Time: 10.299992084503174

None

Graph 7

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.6961258350955077 - Time: 14.683482885360718
None

Graph 8

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

1.7862359408452448 - Time: 14.856902837753296

None

Graph 9

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.074759205108485 - Time: 13.532112836837769

None

Graph 10

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

1.837086002332633 - Time: 17.325096130371094

None

Graph 11

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.2409073975555813 - Time: 10.654007196426392

None

Graph 12

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.6794175267784794 - Time: 9.731780052185059
None

2.102415248660037

None

```
Graph 13
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.9878145093575128
                   - Time: 11.710126638412476
None
     Graph 14
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.6557715426500152 - Time: 11.288302898406982
None
     Graph 15
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.9392763337633028 - Time: 11.09382176399231
None
     Graph 16
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.679067250405403 - Time: 10.455601215362549
None
     Graph 17
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.7729039084590497 - Time: 9.920419216156006
None
     Graph 18
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.0167658061418194 - Time: 9.82508397102356
None
     Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.2023526251088157 - Time: 9.815510988235474
None
Test for graphsize 28
     Graph 0
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
```

Page 189 of 395

Time: 10.143253087997437

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

```
File - unknown
      Graph 1
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.7564689501037805 - Time: 10.288304090499878
None
      Graph 2
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.9487780294415487 - Time: 11.545249223709106
None
      Graph 3
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
 1.7278676435872669 - Time: 11.128651142120361
None
      Graph 4
           Running 3_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
```

None

1.9519000169963547 - Time: 11.040224075317383

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 1.844443706537085 - Time: 17.959992170333862 None

Graph 6

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 1.751562178646921 - Time: 10.168480157852173 None

Graph 7

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 2.147540277130666 - Time: 10.15027904510498 None

Graph 8

Running 3_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel: 2.450492598571003 - Time: 14.702138900756836 None

Graph 9

```
File-unknown

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.618419717509653 - Time: 14.480294942855835

None

Graph 10

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
```

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

Graph 11

None

2.0368985620604505 - Time: 9.521595239639282

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

1.824350813344246 - Time: 14.660838842391968

None

Graph 12

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.928146562659343 - Time: 9.671469926834106

None

Graph 13

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.6328182331980727 - Time: 10.415956974029541
None

Graph 14

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
1.640450401947703 - Time: 10.271291017532349
None

Graph 15

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.2890933628745316 - Time: 9.794994831085205

None

Graph 16

Running 3_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.569843289461332 - Time: 9.814536094665527
None

Graph 17

Running 3_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:

1.8604912623196768 - Time: 20.11001420021057

```
Graph 18
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.259898913320299 - Time: 18.834201097488403
None
     Graph 19
          Running 3_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_exactly_qbsolv_parallel:
2.2211219918747673 - Time: 10.637343883514404
None
Test for graphsize 4
     Graph 0
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.028954843277226416 - Time: 0.7780802249908447
None
     Graph 1
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5708825220945002 - Time: 0.8692448139190674
None
     Graph 2
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.00712843874983804 - Time: 0.7760822772979736
None
     Graph 3
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.06152625301075432
                        Time: 0.4088280200958252
None
     Graph 4
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.06396917936914548 - Time: 0.3903779983520508
None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

```
File - unknown
 0.10380144569396066
                     - Time: 0.4176759719848633
None
     Graph 6
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.05554082850606079 - Time: 0.3948860168457031
None
     Graph 7
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.038931269477402 - Time: 0.786552906036377
None
     Graph 8
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.042007430425400116 - Time: 0.38980984687805176
 None
     Graph 9
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.0010690439865044254 - Time: 0.8161637783050537
None
     Graph 10
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.2197142340515299 - Time: 0.7840216159820557
None
     Graph 11
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
                    - Time: 0.796379804611206
 0.2770576453315883
None
     Graph 12
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.06753117632182892 - Time: 0.40680503845214844
None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.01673789206527232 - Time: 0.3990640640258789

None

```
Graph 14
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.03599345154763256 - Time: 0.4222719669342041

None

Graph 15

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.10695262062797894 - Time: 0.7904598712921143

None

Graph 16

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.06090302529973002 - Time: 0.40126681327819824
None

Graph 17

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.37306828772501177 - Time: 0.8532528877258301

None

Graph 18

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.06615960564805334 - Time: 0.39665699005126953
None

Graph 19

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.24253747559571082 - Time: 0.38854384422302246
None

Test for graphsize 6

Graph 0

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.4037548984604129 - Time: 0.6920459270477295
None

Graph 1

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.14602401068624005 - Time: 0.6973528861999512
None

```
Graph 2
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.12639840396634128 - Time: 0.5638329982757568
None
     Graph 3
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 0.7388129234313965
0.1447468748308225
None
     Graph 4
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.2074140190053555 - Time: 0.8182859420776367
None
     Graph 5
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.21629539194693592 - Time: 0.6049249172210693
None
     Graph 6
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.1032573088773745
                   - Time: 0.5954649448394775
None
     Graph 7
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.08555938986791745 - Time: 0.6233611106872559
None
     Graph 8
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.13737909873700005 - Time: 0.5388717651367188
None
     Graph 9
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.23536312556377226 - Time: 0.5748908519744873
None
```

```
Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.2985191363911497 - Time: 0.7761249542236328
None
     Graph 11
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.1310541476422742 - Time: 0.5822138786315918
None
     Graph 12
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.20825406819544412 - Time: 0.7608840465545654
None
     Graph 13
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.2924666692276716 - Time: 0.8487968444824219
None
     Graph 14
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8758237641815896 - Time: 0.7559812068939209
None
     Graph 15
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.29878868277545223 - Time: 0.8656189441680908
None
     Graph 16
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5885124948454461
                   - Time: 0.9065039157867432
None
     Graph 17
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.19838467424926165 - Time: 0.7882599830627441
None
     Graph 18
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
```

```
File - unknown
 0.11297024288754187 - Time: 0.7954339981079102
None
     Graph 19
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.9194011936254896 - Time: 0.7483658790588379
None
Test for graphsize 8
     Graph 0
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.4037548984604129 - Time: 0.6528282165527344
None
     Graph 1
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.14602401068624005 - Time: 0.7462868690490723
 None
     Graph 2
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.12639840396634128 - Time: 0.6742501258850098
None
     Graph 3
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.1447468748308225 - Time: 0.6801912784576416
None
     Graph 4
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.2074140190053555 - Time: 0.6772699356079102
None
     Graph 5
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.21629539194693592 - Time: 0.7038528919219971
None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

None

```
File - unknown
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.1032573088773745 - Time: 0.7171967029571533
None
     Graph 7
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.08555938986791745 - Time: 0.7632520198822021
None
     Graph 8
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.13737909873700005
                     - Time: 0.7254691123962402
None
     Graph 9
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.23536312556377226 - Time: 0.6576051712036133
None
     Graph 10
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.2985191363911497 - Time: 0.680387020111084
None
     Graph 11
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.1310541476422742 - Time: 0.746675968170166
None
     Graph 12
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.20825406819544412 - Time: 0.7656641006469727
None
     Graph 13
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.2924666692276716 - Time: 0.7434971332550049
 None
     Graph 14
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.8758237641815896 - Time: 0.8704378604888916
```

```
Graph 15
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.29878868277545223 - Time: 0.8500251770019531
None
     Graph 16
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5885124948454461
                   - Time: 0.6299448013305664
None
     Graph 17
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.19838467424926165 - Time: 0.677741289138794
None
     Graph 18
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.11297024288754187 - Time: 0.7833800315856934
None
     Graph 19
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9194011936254896
                   - Time: 0.657844066619873
None
Test for graphsize 10
     Graph 0
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.850779136467672 - Time: 0.6731691360473633
None
     Graph 1
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.113205218829208 - Time: 0.6887750625610352
None
     Graph 2
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.33784569217207405 - Time: 0.770205020904541
```

```
Graph 3
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.4612950977452286 - Time: 0.8361279964447021
None

Graph 4

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.16780273947890834 - Time: 0.7122948169708252

None

Graph 5

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.044044789115567 - Time: 0.7568550109863281

None

Graph 6

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.12039452902203607 - Time: 0.8223719596862793

None

Graph 7

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.726339025546757 - Time: 0.7919669151306152

None

Graph 8

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6527388888772592 - Time: 0.6984231472015381

None

Graph 9

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.3547436014939933 - Time: 0.6063268184661865

None

Graph 10

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6588998527449874 - Time: 0.6769580841064453
None

```
Graph 11
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6441125032737318
                   - Time: 0.6132779121398926
None
     Graph 12
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6905379099888833 - Time: 0.5638978481292725
None
     Graph 13
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.2492454155493249 - Time: 0.7572150230407715
None
     Graph 14
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.39705675702467147 - Time: 0.6677699089050293
None
     Graph 15
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.1076973646763904 - Time: 0.658958911895752
None
     Graph 16
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5195958328469317 - Time: 0.6028001308441162
None
     Graph 17
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5224072535037649 - Time: 0.580787181854248
None
     Graph 18
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.4516002911853718 - Time: 0.7330169677734375
None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

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File - unknown
```

```
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.8013746780583304 - Time: 0.6325991153717041
None
Test for graphsize 12
     Graph 0
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6150486301365916 - Time: 0.5822949409484863
None
     Graph 1
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.082427022828277 - Time: 0.6228878498077393
None
     Graph 2
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.38475651674715294 - Time: 0.7197270393371582
None
     Graph 3
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.560367844286219 - Time: 0.6381750106811523
None
     Graph 4
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.44488729516555026 - Time: 0.6541311740875244
None
     Graph 5
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8431061084135649 - Time: 0.6464221477508545
None
     Graph 6
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.7639394580685206 - Time: 1.092904806137085
None
```

```
File-unknown

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

0.7792806079405281 - Time: 0.633540153503418

None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.2591533310888252 - Time: 0.7914407253265381
None

Graph 9

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5954578349497766 - Time: 0.60906982421875

None

Graph 10

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6059122564815951 - Time: 0.7326252460479736
None

Graph 11

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.702289163217074 - Time: 0.6478641033172607
None

Graph 12

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8736191784041978 - Time: 0.6875100135803223
None

Graph 13

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6561829802817627 - Time: 0.627722978591919

None

Graph 14

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.4616685125603937 - Time: 0.6651730537414551
None

Graph 15

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5777465750025783 - Time: 0.9393830299377441

```
File - unknown
 None
      Graph 16
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.1582704298219042 - Time: 0.7613742351531982
None
      Graph 17
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.6098161453602629 - Time: 0.7970938682556152
None
      Graph 18
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.2399354793810673 - Time: 0.8824560642242432
None
      Graph 19
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 2.201714058246395 - Time: 0.8084471225738525
None
Test for graphsize 14
      Graph 0
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
```

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel: 1.2801666702618846 - Time: 0.7022011280059814 None

Graph 1

Running 3_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel: 0.9910337078295726 - Time: 0.3389449119567871 None

Graph 2

Running 3_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel: 0.7896917547366726 - Time: 0.330366849899292 None

Graph 3

Running 3_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6521493604439357 - Time: 0.7308349609375
None

Graph 11

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.1170498230417039 - Time: 0.3358588218688965
None

```
Graph 12
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

0.6293034223394756 - Time: 0.6399827003479004

None

Graph 13

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.0358230118990974 - Time: 0.35308003425598145

None

Graph 14

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.0806199836372201 - Time: 0.6939530372619629

None

Graph 15

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6937347837068302 - Time: 0.3239469528198242
None

Graph 16

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8614475795839951 - Time: 0.6756670475006104
None

Graph 17

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9888065387748739 - Time: 0.6511497497558594

None

Graph 18

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8831225677352705 - Time: 0.679189920425415

None

Graph 19

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.7870756382366793 - Time: 0.7137269973754883
None

Test for graphsize 16

```
Graph 0
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.822906633005644 - Time: 5.008778095245361
None
     Graph 1
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.02240091914733 - Time: 4.923573970794678
None
     Graph 2
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8919407950075495 - Time: 8.82194209098816
None
     Graph 3
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8449224007561682
                   - Time: 8.945051908493042
None
     Graph 4
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6262725262860229
                   - Time: 4.899889230728149
None
     Graph 5
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
3.2643274461642093 - Time: 4.800332069396973
None
     Graph 6
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.3304850667358323 - Time: 5.301965713500977
None
     Graph 7
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.0160665942924254 - Time: 5.041987180709839
None
```

```
Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9121356510589749 - Time: 5.06610894203186
None
     Graph 9
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9543621161819686 - Time: 4.943154811859131
None
     Graph 10
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8229066330056085 - Time: 5.018681764602661
None
     Graph 11
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.0224009191474863 - Time: 4.912407875061035
None
     Graph 12
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8919407950071729
                   - Time: 8.921380996704102
None
     Graph 13
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8449224007551734 - Time: 8.889012098312378
None
     Graph 14
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.6262725262863498
                       Time: 5.027980089187622
None
     Graph 15
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5325696747462771 - Time: 4.635256052017212
None
     Graph 16
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
```

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File - unknown
 0.9404045759696231 - Time: 4.903757095336914
None
     Graph 17
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.11076397406012 - Time: 4.922928094863892
None
     Graph 18
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.333519919451696 - Time: 5.600872993469238
None
     Graph 19
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.3821471550545326 - Time: 5.246912956237793
 None
Test for graphsize 18
     Graph 0
           Running 3_split_ours_iterative_at_most_gbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.22958232134755 - Time: 8.94531774520874
None
     Graph 1
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9642698128749885 - Time: 9.908904790878296
None
     Graph 2
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.7324635199480483 - Time: 12.76042890548706
None
     Graph 3
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.9489845542806634 - Time: 9.11910605430603
 None
     Graph 4
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
```

Page 209 of 395

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           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.5284612501546704 - Time: 9.694023847579956
None
     Graph 5
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.5069596362593671 - Time: 10.384708166122437
None
     Graph 6
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.4521889657959477 - Time: 10.314242124557495
None
     Graph 7
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.0738307702452161 - Time: 9.20871114730835
None
     Graph 8
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.9280845774882422 - Time: 8.959772109985352
None
     Graph 9
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.2154281540707146 - Time: 9.230678081512451
None
     Graph 10
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 0.4225599222920451
                    - Time: 4.352532863616943
 None
     Graph 11
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.2671337334371202 - Time: 4.780708312988281
None
     Graph 12
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
```

0.550146932461665 - Time: 4.610684871673584

None

1.2286198003634965

```
Graph 13
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.23850950742086496 - Time: 9.248242139816284
None
     Graph 14
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.5123579767928774
                   - Time: 8.969828128814697
None
     Graph 15
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.7876205949141379 - Time: 9.317108869552612
None
     Graph 16
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.0064599804971195
                   - Time: 9.43156385421753
None
     Graph 17
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9666033216792229
                   - Time: 9.46011996269226
None
     Graph 18
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.939148613571426 - Time: 9.497416257858276
None
     Graph 19
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8620304898268571 - Time: 10.4636070728302
None
Test for graphsize 20
     Graph 0
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 9.269416093826294
```

```
None
     Graph 1
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.146804753056955 - Time: 9.56348180770874
None
     Graph 2
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.1055289628951073 - Time: 9.22150468826294
None
     Graph 3
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9308740224380188 - Time: 9.558093070983887
None
     Graph 4
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.759847876834371 - Time: 9.34145998954773
None
     Graph 5
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8329240585346938 - Time: 14.150398015975952
None
     Graph 6
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.2720059272304098
                   - Time: 9.332328081130981
None
     Graph 7
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.010634009675634 - Time: 9.405725955963135
None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.9555164697122933 - Time: 9.458816051483154
None

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.4018693972730745 - Time: 9.361905097961426
None

Graph 17

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

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Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.516596878262611
                  - Time: 9.495960235595703
None
     Graph 18
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.0512632971854572 - Time: 9.976234912872314
None
     Graph 19
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.7348132032658938
                   - Time: 9.40447998046875
None
Test for graphsize 22
     Graph 0
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.3789109416829959 - Time: 9.507962226867676
None
     Graph 1
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.1445445552090874 - Time: 9.792434930801392
None
     Graph 2
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.1527341057839138 - Time: 9.909416913986206
None
     Graph 3
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
0.8386235254101209 - Time: 9.559077978134155
None
     Graph 4
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.4141131952076123 - Time: 9.637877702713013
None
```

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File - unknown
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.2311338513693997 - Time: 9.815912961959839
None
     Graph 6
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.9295166795682377 - Time: 9.47275996208191
None
     Graph 7
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.4769895353490199
                    - Time: 9.417371988296509
None
     Graph 8
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.221000462496292 - Time: 9.766372919082642
None
     Graph 9
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.3166678866445665 - Time: 9.879370927810669
None
     Graph 10
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.4844338943951811 - Time: 9.36173391342163
None
     Graph 11
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
                    - Time: 9.769376039505005
 1.2221165947339898
None
     Graph 12
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.67675443249464 - Time: 9.85536789894104
 None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.7808146272583585 - Time: 9.259339094161987

```
Graph 14
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.3645584596682312 - Time: 9.830434083938599
None
     Graph 15
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.2948763920489057 - Time: 10.009371995925903
None
     Graph 16
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.3757912013005225 - Time: 9.324784994125366
None
     Graph 17
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.108844836437882 - Time: 9.564574956893921
None
     Graph 18
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.3414015011873701 - Time: 9.800076007843018
None
     Graph 19
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.7448801101228497
                   - Time: 10.159993171691895
None
Test for graphsize 24
     Graph 0
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
```

None

1.7010052388675874 - Time: 10.44494080543518

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

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File - unknown
 1.3886139829530038
                    - Time: 9.908519268035889
None
     Graph 2
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.5862663420935306 - Time: 10.051144123077393
None
     Graph 3
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.5924746022500145
                    - Time: 9.84951114654541
None
     Graph 4
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.57079474839486 - Time: 9.458844900131226
 None
     Graph 5
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.3426834078204877 - Time: 10.034417152404785
None
     Graph 6
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.4906366941049853 - Time: 9.580202102661133
None
     Graph 7
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
                    - Time: 10.145111083984375
 1.3171557162028549
None
     Graph 8
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.62116363968439 - Time: 9.362995147705078
None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.1355862586534258 - Time: 9.577636003494263

None

```
Graph 10
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.3721065249381823 - Time: 9.41372799873352

None

Graph 11

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.5708787552799706 - Time: 10.290361166000366

None

Graph 12

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.3241178248075869 - Time: 9.690342903137207

None

Graph 13

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.811060936422372 - Time: 9.579048156738281

None

Graph 14

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.816278325728014 - Time: 10.01335096359253

None

Graph 15

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.4883841820783488 - Time: 9.766506910324097

None

Graph 16

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.3263648141889561 - Time: 9.876634120941162

None

Graph 17

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.7055631245185978 - Time: 9.784732103347778

None

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File-unknown

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.447440198799562 - Time: 9.70380187034607

None
```

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.9196240992240305 - Time: 10.419899940490723

None

Test for graphsize 26

Graph 0

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.9275312464485168 - Time: 9.632797241210938

None

Graph 1

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.9082577259881361 - Time: 10.000541925430298

None

Graph 2

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.5729638131652308 - Time: 9.809160947799683
None

Graph 3

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.9552111194626889 - Time: 9.664896965026855

None

Graph 4

Running 3_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:

1.5029838005635696 - Time: 9.632600784301758

None

Graph 5

Running 3_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.4744191862071574 - Time: 9.708414077758789
None

```
Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.1619977227798017 - Time: 9.718998908996582
None
     Graph 7
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.6961258350955077 - Time: 9.562324047088623
None
     Graph 8
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.7862359408452448 - Time: 10.02313494682312
None
     Graph 9
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.074759205108485 - Time: 10.016748905181885
None
     Graph 10
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.837086002332633 - Time: 10.270068883895874
None
     Graph 11
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.2409073975555813 - Time: 10.387725830078125
None
     Graph 12
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.6795941655149207
                   - Time: 9.900990962982178
None
     Graph 13
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.9878145093575128 - Time: 10.95161509513855
None
     Graph 14
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
```

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File - unknown
 1.6557715426500152 - Time: 10.449238061904907
None
     Graph 15
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.9392763337633028 - Time: 9.880691051483154
None
     Graph 16
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.679067250405403 - Time: 9.870917081832886
None
     Graph 17
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.7729039084590497 - Time: 10.019840002059937
None
     Graph 18
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 2.0167658061418194 - Time: 9.829271793365479
None
     Graph 19
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 2.2023526251088157 - Time: 9.903006076812744
None
Test for graphsize 28
     Graph 0
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 2.102415248660037 - Time: 9.5172278881073
None
     Graph 1
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
 1.7564689501037805 - Time: 10.022450923919678
None
     Graph 2
           Running 3_split_ours_iterative_at_most_qbsolv_parallel...
```

Page 221 of 395

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File - unknown
```

```
Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.9487780294415487 - Time: 10.284444808959961
None
     Graph 3
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.7278676435872669 - Time: 10.136719942092896
None
     Graph 4
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.9519000169963547 - Time: 10.143041133880615
None
     Graph 5
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.844443706537085 - Time: 10.132338285446167
None
     Graph 6
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.751562178646921 - Time: 9.827172040939331
None
     Graph 7
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.147540277130666 - Time: 9.688863039016724
None
     Graph 8
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.450492598571003 - Time: 10.228111028671265
None
     Graph 9
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.632817062897253 - Time: 10.198675155639648
None
     Graph 10
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 10.149003028869629
2.0368985620604505
None
```

```
Graph 11
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.824350813344246 - Time: 9.899441957473755
None
     Graph 12
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
                  - Time: 9.814473867416382
1.928146562659343
None
     Graph 13
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.6328182331980727 - Time: 10.533029079437256
None
     Graph 14
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.640450401947703
                      Time: 11.391059875488281
None
     Graph 15
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.2890933628745316
                   - Time: 10.845412969589233
None
     Graph 16
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.569843289461332 - Time: 10.401445865631104
None
     Graph 17
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
1.8595852110181426 - Time: 10.215253114700317
None
     Graph 18
          Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.2647800818577153 - Time: 9.769949197769165
None
```

```
Running 3_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_ours_iterative_at_most_qbsolv_parallel:
2.2211219918747673 - Time: 10.754554033279419
None
Test for graphsize 4
     Graph 0
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
028954843277226416 - Time: 0.8045089244842529
None
     Graph 1
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5708825220945002 - Time: 0.9005241394042969
None
     Graph 2
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
00712843874983804 - Time: 0.8257179260253906
None
     Graph 3
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
06152625301075432 - Time: 0.40927577018737793
None
     Graph 4
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
06396917936914548
                      Time: 0.38915514945983887
None
     Graph 5
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
10380144569396066 - Time: 0.39542198181152344
None
     Graph 6
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
05554082850606079 - Time: 0.3896310329437256
None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
03599345154763256 - Time: 0.3820040225982666
None

Graph 15

Running 3_split_GCSQ_exactly_qbsolv_parallel...

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File - unknown
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 10695262062797894 - Time: 0.827916145324707
None
     Graph 16
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 06090302529973002 - Time: 0.39023685455322266
None
     Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
37306828772501177 - Time: 0.8726668357849121
None
     Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 06615960564805334 - Time: 0.3758080005645752
None
     Graph 19
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 24253747559571082 - Time: 0.4116079807281494
None
Test for graphsize 6
     Graph 0
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 4037548984604129 - Time: 0.482985258102417
None
     Graph 1
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 14602401068624005 - Time: 0.5510039329528809
None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

12639840396634128 - Time: 0.5193727016448975

None

```
File - unknown
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
1447468748308225 - Time: 0.5003178119659424
None
      Graph 4
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 2074140190053555 - Time: 0.639746904373169
 None
      Graph 5
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 21629539194693592 - Time: 0.6234340667724609
None
      Graph 6
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 1032573088773745 - Time: 0.5534229278564453
None
      Graph 7
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 08555938986791745 - Time: 0.5780332088470459
None
      Graph 8
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
13737909873700005 - Time: 0.5804967880249023
None
      Graph 9
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 23536312556377226 - Time: 0.5394868850708008
None
      Graph 10
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 2985191363911497 - Time: 0.6232190132141113
 None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

1310541476422742 - Time: 0.5522410869598389

```
Graph 12
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
20825406819544412 - Time: 0.564443826675415
None
     Graph 13
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
2924666692276716 - Time: 0.5435850620269775
None
     Graph 14
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
8758237641815896 - Time: 0.6622941493988037
None
     Graph 15
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
29878868277545223 - Time: 0.7255611419677734
None
     Graph 16
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5885124948454461 - Time: 0.5161712169647217
None
     Graph 17
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
19838467424926165
                      Time: 0.5601348876953125
None
     Graph 18
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
11297024288754187 - Time: 0.6160519123077393
None
```

9194011936254896 - Time: 0.5129368305206299

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Graph 19

None

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

08555938986791745

None

```
Test for graphsize 8
     Graph 0
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
4037548984604129 - Time: 0.6187248229980469
None
     Graph 1
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
14602401068624005 - Time: 0.49947690963745117
None
     Graph 2
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
12639840396634128 - Time: 0.5168929100036621
None
     Graph 3
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
1447468748308225 - Time: 0.5090208053588867
None
     Graph 4
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
2074140190053555 - Time: 0.6257627010345459
None
     Graph 5
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
21629539194693592
                  - Time: 0.6677289009094238
None
     Graph 6
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
1032573088773745 - Time: 0.5512762069702148
None
     Graph 7
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
```

Time: 0.5033469200134277

```
Graph 8

Running 3_split_GCSQ_exactly_qbsolv_parallel...
Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

13737909873700005 - Time: 0.5302960872650146

None

Graph 9

Running 3_split_GCSQ_exactly_qbsolv_parallel...
Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

23536312556377226 - Time: 0.5884649753570557

None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

2985191363911497 - Time: 0.6828799247741699

None

Graph 11

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

1310541476422742 - Time: 0.6210918426513672

None

Graph 12

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

20825406819544412 - Time: 0.6946079730987549

None

Graph 13

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
2924666692276716 - Time: 0.5050089359283447

None

Graph 14

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.8758237641815896 - Time: 0.5583276748657227

None

Graph 15

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

29878868277545223 - Time: 0.6024489402770996

None

```
File - unknown
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5885124948454461 - Time: 0.582874059677124
None
      Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 19838467424926165 - Time: 0.5544469356536865
None
      Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 11297024288754187 - Time: 0.6597609519958496
None
      Graph 19
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 9194011936254896 - Time: 0.6594266891479492
 None
Test for graphsize 10
      Graph 0
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 850779136467672
                 - Time: 0.9342572689056396
None
      Graph 1
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
 113205218829208 - Time: 0.7468447685241699
None
      Graph 2
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 33784569217207405 - Time: 0.698632001876831
None
      Graph 3
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

4612950977452286 - Time: 0.5932879447937012

None

```
Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
16780273947890834 - Time: 0.6666028499603271
None
     Graph 5
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
044044789115567 - Time: 0.5532820224761963
None
     Graph 6
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
12039452902203607 - Time: 0.6747829914093018
None
     Graph 7
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
726339025546757 - Time: 0.7535498142242432
None
     Graph 8
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6527388888772592 - Time: 0.6264877319335938
None
     Graph 9
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
3547436014939933 - Time: 0.6289401054382324
None
     Graph 10
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6588998527449874 - Time: 0.5862982273101807
None
     Graph 11
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6441125032737318 - Time: 0.6555378437042236
None
     Graph 12
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
```

```
File - unknown
 6905379099888833 - Time: 0.7612197399139404
None
      Graph 13
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 2492454155493249 - Time: 0.937842845916748
None
      Graph 14
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 39705675702467147 - Time: 0.6132199764251709
None
      Graph 15
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 1076973646763904 - Time: 0.8487112522125244
 None
      Graph 16
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5195958328469317 - Time: 0.6684048175811768
None
      Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5224072535037649 - Time: 0.752223014831543
None
      Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 4516002911853718 - Time: 0.7895102500915527
None
      Graph 19
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 8013746780583304 - Time: 0.5873908996582031
None
Test for graphsize 12
      Graph 0
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
                                       Page 233 of 395
```

```
File - unknown
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 6150486301365916 - Time: 0.9163649082183838
None
     Graph 1
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 082427022828277 - Time: 0.6728711128234863
None
     Graph 2
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 38475651674715294 - Time: 0.7393691539764404
None
     Graph 3
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 560367844286219 - Time: 0.7176840305328369
None
     Graph 4
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 44488729516555026 - Time: 0.8005383014678955
None
     Graph 5
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 8431061084135649 - Time: 0.7752418518066406
None
     Graph 6
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 7639394580685206 - Time: 0.6680669784545898
None
     Graph 7
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 7792806079405281 - Time: 0.6596641540527344
 None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
2591533310888252 - Time: 0.6697728633880615
None

```
Graph 9
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5954578349497766 - Time: 0.6974620819091797
None
     Graph 10
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6059122564815951 - Time: 0.644232988357544
None
     Graph 11
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
702289163217074 - Time: 0.6042430400848389
None
     Graph 12
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
8736191784041978 - Time: 0.7524988651275635
None
     Graph 13
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6561829802817627 - Time: 0.6853640079498291
None
     Graph 14
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
4616685125603937 - Time: 0.692209005355835
None
     Graph 15
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5777465750025783 - Time: 0.6482341289520264
None
     Graph 16
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
1582704298219042 - Time: 0.6596059799194336
None
```

```
Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6098161453602629 - Time: 0.7505767345428467
None
     Graph 18
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
2399354793810673 - Time: 0.6676762104034424
None
     Graph 19
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
201714058246395 - Time: 0.42746996879577637
None
Test for graphsize 14
     Graph 0
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
2801666702618846 - Time: 0.9280490875244141
None
     Graph 1
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
9910337078295726 - Time: 0.45592212677001953
None
     Graph 2
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
7896917547366726 - Time: 0.3740072250366211
None
     Graph 3
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
32406091265609405 - Time: 1.0517799854278564
None
     Graph 4
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
7434000061760955 - Time: 0.39301109313964844
None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.6293034223394756 - Time: 0.6918020248413086

None

Graph 13

Running 3_split_GCSQ_exactly_qbsolv_parallel...

```
File - unknown
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 0358230118990974 - Time: 0.42357611656188965
None
     Graph 14
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 0806199836372201 - Time: 0.7648577690124512
None
     Graph 15
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6937347837068302 - Time: 0.38463783264160156
None
     Graph 16
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
8614475795839951 - Time: 0.7863671779632568
None
     Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 9888065387748739 - Time: 0.7184722423553467
None
     Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 8831225677352705 - Time: 0.6560821533203125
None
     Graph 19
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 7870756382366793 - Time: 0.7418959140777588
None
Test for graphsize 16
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.822906633005644 - Time: 4.902310848236084

None

```
File - unknown
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
02240091914733 - Time: 4.898755073547363
None
     Graph 2
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
8919407950075495 - Time: 10.096177101135254
None
     Graph 3
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
8449224007561682 - Time: 10.61259388923645
None
     Graph 4
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 6262725262860229 - Time: 5.690782308578491
 None
     Graph 5
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 3.
 2643274461642093 - Time: 4.155875205993652
None
     Graph 6
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 3304850667358323 - Time: 5.667686939239502
None
     Graph 7
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 0160665942924254 - Time: 5.131172180175781
None
     Graph 8
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 9121356510589749 - Time: 4.896256923675537
None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

9543621161819686 - Time: 5.427924871444702

```
Graph 10
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

8229066330056085 - Time: 5.013062953948975

None

Graph 11

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
0224009191474863 - Time: 4.8603010177612305

None

Graph 12

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

8919407950071729 - Time: 9.815747022628784

None

Graph 13

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.8449224007551734 - Time: 8.671676874160767

None

Graph 14

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
6262725262863498 - Time: 5.68941330909729

None

Graph 15

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

5325696747462771 - Time: 5.100877046585083

None

Graph 16

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.9404045759696231 - Time: 5.08292818069458

None

Graph 17

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

0815657970830443 - Time: 5.067622900009155

None

```
File - unknown
      Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 333519919451696
                 - Time: 5.661849737167358
None
      Graph 19
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 3821471550545326 - Time: 5.020901918411255
 None
Test for graphsize 18
      Graph 0
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 22958232134755 - Time: 11.168662786483765
 None
      Graph 1
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 9642698128749885 - Time: 10.22338080406189
None
      Graph 2
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 7324635199480483 - Time: 12.063910007476807
None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0. 9489845542806634 - Time: 11.266410112380981 None

Graph 4

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0. 5284612501546704 - Time: 10.320139169692993 None

Graph 5

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0. 5069596362593671 - Time: 9.653048992156982 None

```
Graph 6
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

4521889657959477 - Time: 10.424911975860596

None

Graph 7

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

0738307702452161 - Time: 9.620366096496582

None

Graph 8

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

9280845774882422 - Time: 9.325509786605835

None

Graph 9

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

2154281540707146 - Time: 13.884698867797852

None

Graph 10

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

4225599222920451 - Time: 4.664292097091675

None

Graph 11

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

2671337334371202 - Time: 3.7831578254699707

None

Graph 12

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.

550146932461665 - Time: 4.621631145477295

None

Graph 13

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
23850950742086496 - Time: 8.734430074691772

None

```
File - unknown
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
5123579767928774 - Time: 8.949486017227173
None
      Graph 15
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 7876205949141379 - Time: 9.567796230316162
None
      Graph 16
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 0064599804971195 - Time: 10.065051078796387
None
      Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 9666033216792229 - Time: 10.266270875930786
 None
      Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
 939148613571426 - Time: 11.35774278640747
None
      Graph 19
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3\_split\_GCSQ\_exactly\_qbsolv\_parallel: 0.
 8620304898268571 - Time: 10.76946210861206
None
Test for graphsize 20
      Graph 0
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 2286198003634965 - Time: 10.163995742797852
None
      Graph 1
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

146804753056955 - Time: 12.534483194351196

None

```
Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
1055289628951073 - Time: 15.63130807876587
None
     Graph 3
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
9308740224380188 - Time: 9.928409099578857
None
     Graph 4
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
759847876834371 - Time: 9.926666975021362
None
     Graph 5
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
8329240585346938 - Time: 16.248581171035767
None
     Graph 6
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
2720059272304098 - Time: 9.69497299194336
None
     Graph 7
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
010634009675634 - Time: 11.113312721252441
None
     Graph 8
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
9555164697122933 - Time: 10.012114763259888
None
     Graph 9
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
1140725334617159 - Time: 9.656522035598755
None
     Graph 10
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
```

```
File - unknown
 1086714555953918 - Time: 16.30727505683899
None
     Graph 11
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 3901409670808889 - Time: 9.278239011764526
None
     Graph 12
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 8273616108029387 - Time: 10.374986410140991
None
     Graph 13
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 5096587190417594 - Time: 9.954377889633179
 None
     Graph 14
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 142733334196528 - Time: 10.196773767471313
None
     Graph 15
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 338581728684872 - Time: 9.289149045944214
None
     Graph 16
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 4018693972730745 - Time: 9.5119469165802
None
     Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 516596878262611 - Time: 10.044028043746948
None
     Graph 18
```

Page 245 of 395

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Time: 11.24915885925293

0512632971854572 -

None

None

```
Graph 19
```

```
Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
7348132032658938 - Time: 10.234926223754883
None
Test for graphsize 22
     Graph 0
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3789109416829959 - Time: 10.96510910987854
None
     Graph 1
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
1445445552090874 - Time: 10.719852685928345
None
     Graph 2
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
1527341057839138 - Time: 15.832120895385742
None
     Graph 3
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 0.
8386235254101209 - Time: 10.348377227783203
None
     Graph 4
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
4141131952076123 - Time: 11.266753911972046
None
     Graph 5
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
2311338513693997 - Time: 9.533604860305786
None
     Graph 6
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
9295166795682377 - Time: 9.318532228469849
```

```
Graph 7
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
4769895353490199 - Time: 14.664693117141724
None
     Graph 8
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
221000462496292
                - Time: 10.009528875350952
None
     Graph 9
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3166678866445665 - Time: 10.868135929107666
None
     Graph 10
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
4844338943951811 - Time: 15.156609058380127
None
     Graph 11
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
2221165947339898 - Time: 11.430685043334961
None
     Graph 12
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
67675443249464 - Time: 9.652751684188843
None
     Graph 13
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
778020549731309 - Time: 14.713864088058472
None
     Graph 14
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3645584596682312 - Time: 10.382367849349976
None
```

```
Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
2948763920489057 - Time: 10.87291431427002
None
     Graph 16
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3757912013005225 - Time: 10.018385171890259
None
     Graph 17
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
108844836437882 - Time: 9.583721160888672
None
     Graph 18
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3414015011873701 - Time: 10.73356580734253
None
     Graph 19
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
7448801101228497 - Time: 9.538940906524658
None
Test for graphsize 24
     Graph 0
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
7010052388675874 - Time: 10.647256135940552
None
     Graph 1
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3886139829530038 - Time: 12.39905595779419
None
     Graph 2
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
5862663420935306 - Time: 10.670444965362549
None
```

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1. 3721065249381823 - Time: 10.03727102279663 None

Graph 11

Running 3_split_GCSQ_exactly_qbsolv_parallel...

```
File - unknown
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
5708787552799706 - Time: 10.0487060546875
None
     Graph 12
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3241178248075869 - Time: 14.931987047195435
None
     Graph 13
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
811060936422372 - Time: 11.296833038330078
None
     Graph 14
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 816278325728014 - Time: 9.93480896949768
None
     Graph 15
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 4883841820783488 - Time: 12.947091817855835
None
     Graph 16
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
3263648141889561 - Time: 10.963076114654541
None
     Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 6946591168662763 - Time: 14.43642520904541
None
     Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 447440198799562 - Time: 10.345933198928833
None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1. 9196240992240305 - Time: 10.57538628578186 None

```
Test for graphsize 26
     Graph 0
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
9275312464485168 - Time: 15.047157049179077
None
     Graph 1
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
9082577259881361 - Time: 10.398616790771484
None
     Graph 2
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
5729638131652308 - Time: 16.85770297050476
None
     Graph 3
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
9552111194626889 - Time: 9.980901956558228
None
     Graph 4
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
4980253640183747 - Time: 11.137129783630371
None
     Graph 5
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
4744191862071574 - Time: 10.996872186660767
None
     Graph 6
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
1619977227798017 - Time: 10.215379238128662
None
     Graph 7
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
6961258350955077 - Time: 14.902358055114746
```

```
Graph 8

Running 3_split_GCSQ_exactly_qbsolv_parallel...
Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
7862359408452448 - Time: 15.600430011749268
None
```

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.

0715227296308143 - Time: 11.149635076522827

None

Graph 10

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

837086002332633 - Time: 17.60067105293274

None

Graph 11

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

2409073975555813 - Time: 10.595189094543457

None

Graph 12

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

6794175267784794 - Time: 12.437637329101562

None

Graph 13

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

9878145093575128 - Time: 11.811339139938354

None

Graph 14

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
6557715426500152 - Time: 11.0353422164917

None

Graph 15

Running 3_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
9392763337633028 - Time: 14.58757495880127

None

Graph 16 Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1. 679067250405403 - Time: 11.466176986694336 None Graph 17

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1. 7729039084590497 - Time: 10.630923986434937 None

Graph 18

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2. 0167658061418194 - Time: 10.751429796218872 None

Graph 19

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2. 2023526251088157 - Time: 10.369362115859985 None

Test for graphsize 28

Graph 0

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2. 102415248660037 - Time: 11.552536010742188 None

Graph 1

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1. 7564689501037805 - Time: 14.553530216217041 None

Graph 2

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1. 9487780294415487 - Time: 10.437405109405518 None

Graph 3

Running 3_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1. 7278676435872669 -Time: 15.1617751121521 None

```
Graph 4
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
9519000169963547 - Time: 9.644936084747314
None
     Graph 5
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
844443706537085 - Time: 10.976883172988892
None
     Graph 6
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
751562178646921 - Time: 10.614296197891235
None
     Graph 7
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
147540277130666 - Time: 10.471853017807007
None
     Graph 8
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
450492598571003 - Time: 14.777676820755005
None
     Graph 9
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
618419717509653 - Time: 14.35238790512085
None
     Graph 10
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
0368985620604505 - Time: 11.911963701248169
None
     Graph 11
          Running 3_split_GCSQ_exactly_qbsolv_parallel...
```

None

824350813344246 - Time: 10.802765130996704

Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.

```
File - unknown
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
928146562659343 - Time: 10.14271593093872
None
     Graph 13
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
 6328182331980727 - Time: 9.628286123275757
None
     Graph 14
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
 640450401947703
                 - Time: 10.668285131454468
None
     Graph 15
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
 2890933628745316 - Time: 10.099027872085571
None
     Graph 16
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
 569843289461332 - Time: 9.876960039138794
None
     Graph 17
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 1.
8604912623196768 - Time: 13.333489894866943
None
     Graph 18
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
 259898913320299 - Time: 14.262619018554688
None
     Graph 19
           Running 3_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_exactly_qbsolv_parallel: 2.
 2211219918747673 - Time: 10.697147846221924
 None
```

Test for graphsize 4

```
Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
028954843277226416 - Time: 0.788651704788208
None
     Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5708825220945002 - Time: 0.8557920455932617
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
00712843874983804 - Time: 0.7859640121459961
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
06152625301075432 - Time: 0.3881669044494629
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
06396917936914548 - Time: 0.3950650691986084
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
10380144569396066 - Time: 0.3959469795227051
None
     Graph 6
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
05554082850606079 - Time: 0.3853609561920166
None
     Graph 7
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
038931269477402 - Time: 0.8012189865112305
None
     Graph 8
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
```

```
File - unknown
 042007430425400116 - Time: 0.42716217041015625
None
     Graph 9
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 0010690439865044254 - Time: 0.8046891689300537
None
     Graph 10
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 2197142340515299 - Time: 0.7970929145812988
None
     Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 2770576453315883 - Time: 0.8457391262054443
 None
     Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 06753117632182892 - Time: 0.38829588890075684
None
     Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
01673789206527232 - Time: 0.3856661319732666
None
     Graph 14
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 03599345154763256 - Time: 0.3878941535949707
None
     Graph 15
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 10695262062797894 - Time: 0.7888257503509521
None
     Graph 16
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
```

Time: 0.40079188346862793

06090302529973002

None

```
File - unknown
      Graph 17
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 37306828772501177 - Time: 0.8447279930114746
None
      Graph 18
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 06615960564805334 - Time: 0.39144015312194824
None
      Graph 19
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 24253747559571082 - Time: 0.38555908203125
None
Test for graphsize 6
      Graph 0
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 4037548984604129 - Time: 0.652493953704834
None
      Graph 1
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 14602401068624005 - Time: 0.5708751678466797
None
      Graph 2
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 12639840396634128 - Time: 0.6198160648345947
None
      Graph 3
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 1447468748308225 - Time: 0.6560089588165283
None
```

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0. 2074140190053555 - Time: 0.6565721035003662 None

```
Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
21629539194693592 - Time: 0.6211268901824951
None
     Graph 6
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
1032573088773745 - Time: 0.6503880023956299
None
     Graph 7
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
08555938986791745 - Time: 0.5571672916412354
None
     Graph 8
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
13737909873700005
                  - Time: 0.6201820373535156
None
     Graph 9
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
23536312556377226 - Time: 0.6126258373260498
None
     Graph 10
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
2985191363911497 - Time: 0.6590089797973633
None
     Graph 11
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
1310541476422742 - Time: 0.5749480724334717
None
     Graph 12
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
20825406819544412 - Time: 0.8803629875183105
None
```

```
Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
2924666692276716 - Time: 0.6911282539367676
None
     Graph 14
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
8758237641815896 - Time: 0.768214225769043
None
     Graph 15
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
29878868277545223 - Time: 0.9332029819488525
None
     Graph 16
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5885124948454461 - Time: 0.8195397853851318
None
     Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
19838467424926165 - Time: 0.6508471965789795
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
11297024288754187 - Time: 0.66168212890625
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9194011936254896 - Time: 0.5972437858581543
None
Test for graphsize 8
     Graph 0
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
4037548984604129 - Time: 0.5741989612579346
None
```

```
Graph 1
```

```
Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
14602401068624005 - Time: 0.5810339450836182
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
12639840396634128 - Time: 0.5957608222961426
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
1447468748308225 - Time: 0.5393588542938232
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
2074140190053555 - Time: 0.6272072792053223
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
21629539194693592 - Time: 0.7930810451507568
None
     Graph 6
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
1032573088773745 - Time: 0.5954077243804932
None
     Graph 7
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
08555938986791745 - Time: 0.5738122463226318
None
     Graph 8
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
13737909873700005 - Time: 0.6334841251373291
None
     Graph 9
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
```

Page 261 of 395

```
File - unknown
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 23536312556377226 - Time: 0.5285420417785645
None
     Graph 10
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 2985191363911497 - Time: 0.5728139877319336
None
     Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
1310541476422742 - Time: 0.5836317539215088
None
     Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 20825406819544412 - Time: 0.787376880645752
None
     Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 2924666692276716 - Time: 0.5642199516296387
None
     Graph 14
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
8758237641815896 - Time: 0.638037919998169
None
     Graph 15
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 29878868277545223 - Time: 0.7276651859283447
None
     Graph 16
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5885124948454461 - Time: 0.7208430767059326
 None
```

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.

19838467424926165 - Time: 0.6621639728546143

None

```
Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
11297024288754187 - Time: 0.6590070724487305
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9194011936254896 - Time: 0.6649830341339111
None
Test for graphsize 10
     Graph 0
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
850779136467672 - Time: 0.9737520217895508
None
     Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
113205218829208 - Time: 0.6654729843139648
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
33784569217207405 - Time: 0.6328167915344238
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
4612950977452286 - Time: 0.6694622039794922
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
11687777057419169 - Time: 0.660653829574585
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
044044789115567 - Time: 0.5851871967315674
```

```
Graph 6
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
12039452902203607 - Time: 0.6122190952301025
None
     Graph 7
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
726339025546757 - Time: 0.6604058742523193
None
     Graph 8
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6527388888772592 - Time: 0.6238179206848145
None
     Graph 9
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
3547436014939933 - Time: 0.9469749927520752
None
     Graph 10
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6063086754511247 - Time: 1.0619268417358398
None
     Graph 11
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6441125032737318 - Time: 0.5779697895050049
None
     Graph 12
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
2794641277100922 - Time: 0.6815779209136963
None
     Graph 13
```

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.

Running 3_split_GCSQ_at_most_qbsolv_parallel...

2492454155493249 - Time: 0.5672850608825684

None

```
Graph 14
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
39705675702467147 - Time: 0.5882718563079834
None
     Graph 15
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
1076973646763904 - Time: 0.9095501899719238
None
     Graph 16
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5195958328469317 - Time: 0.6832489967346191
None
     Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5224072535037649 - Time: 0.5544488430023193
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
4516002911853718 - Time: 0.5794200897216797
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
8013746780583304 - Time: 0.6140270233154297
None
Test for graphsize 12
     Graph 0
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6150486301365916 - Time: 0.8891129493713379
None
     Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
082427022828277
                    Time: 0.627662181854248
None
```

```
Graph 2

Running 3_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
38475651674715294 - Time: 0.6209378242492676
None

Graph 3

Running 3_split_GCSQ_at_most_qbsolv_parallel...
Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
560367844286219 - Time: 0.6855490207672119
None
```

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.44488729516555026 - Time: 0.7777562141418457

None

Graph 5

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.8431061084135649 - Time: 0.8230199813842773

None

Graph 6

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.7639394580685206 - Time: 0.6321101188659668

None

Graph 7

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.7792806079405281 - Time: 0.7060089111328125

None

Graph 8

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.

2591533310888252 - Time: 0.6630380153656006

None

Graph 9

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.

5954578349497766 - Time: 0.7010087966918945

None

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File - unknown
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6059122564815951 - Time: 0.6981189250946045
None
     Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 702289163217074 - Time: 0.6373488903045654
None
     Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
8736191784041978 - Time: 0.7413349151611328
None
     Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 6561829802817627 - Time: 0.6320481300354004
 None
     Graph 14
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 4616685125603937 - Time: 0.7297520637512207
None
     Graph 15
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5777465750025783 - Time: 0.6899070739746094
None
     Graph 16
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 1582704298219042 - Time: 0.7521860599517822
None
     Graph 17
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 6098161453602629 - Time: 0.6533021926879883
 None
```

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
2399354793810673 - Time: 0.6344010829925537

```
Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
201714058246395 - Time: 0.8258681297302246
None
Test for graphsize 14
     Graph 0
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
2801666702618846 - Time: 0.764136791229248
None
     Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9910337078295726 - Time: 0.3991222381591797
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
7896917547366726 - Time: 0.3937959671020508
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
32406091265609405 - Time: 0.7219052314758301
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
7434000061760955 - Time: 0.39889001846313477
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
5577618317755935 - Time: 0.7338850498199463
None
```

Page 268 of 395

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.

Running 3_split_GCSQ_at_most_qbsolv_parallel...

```
File - unknown
 8226613726159684 - Time: 0.7659869194030762
None
      Graph 7
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 072236044635126 - Time: 0.4039459228515625
None
      Graph 8
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 8416300286743024 - Time: 0.7024891376495361
None
      Graph 9
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
 4431815381742013 - Time: 0.7604598999023438
 None
      Graph 10
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6521493604439357 - Time: 0.7667660713195801
None
      Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
1170498230417039 - Time: 0.4169309139251709
None
      Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 6293034223394756 - Time: 0.6896839141845703
None
      Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 0358230118990974 - Time: 0.5027420520782471
None
      Graph 14
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
```

Page 269 of 395

Time: 0.7015130519866943

0806199836372201 -

None

```
File - unknown
      Graph 15
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 6937347837068302 - Time: 0.3903181552886963
None
      Graph 16
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 8614475795839951 - Time: 0.7235589027404785
None
      Graph 17
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 9888065387748739 - Time: 0.6505708694458008
None
      Graph 18
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 8831225677352705 - Time: 0.7862222194671631
None
      Graph 19
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 7870756382366793 - Time: 0.6884210109710693
 None
Test for graphsize 16
      Graph 0
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
822906633005644 - Time: 4.64362096786499
None
      Graph 1
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
```

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1. 02240091914733 - Time: 4.732058048248291 None

Graph 2

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0. 8919407950075495 - Time: 9.752254962921143 None

```
Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5612410766959286 - Time: 4.614471912384033
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6262725262860229 - Time: 4.6024980545043945
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 3.
2643274461642093 - Time: 4.8848631381988525
None
     Graph 6
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
3304850667358323 - Time: 4.952294111251831
None
     Graph 7
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
0160665942924254 - Time: 4.9503419399261475
None
     Graph 8
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9121356510589749 - Time: 5.225811958312988
None
     Graph 9
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9543621161819686 - Time: 4.918852090835571
None
     Graph 10
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
8229066330056085 - Time: 4.7435290813446045
None
```

```
Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
0224009191474863 - Time: 4.757586240768433
None
     Graph 12
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
8919407950071729 - Time: 9.922032117843628
None
     Graph 13
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5612410766953246 - Time: 4.73760724067688
None
     Graph 14
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
6262725262863498 - Time: 4.667302846908569
None
     Graph 15
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5325696747462771 - Time: 4.754432916641235
None
     Graph 16
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9404045759696231 - Time: 4.470170974731445
None
     Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
0815657970830443 - Time: 4.755949020385742
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
333519919451696 - Time: 4.967814922332764
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
```

```
File - unknown
 3821471550545326 - Time: 4.982539892196655
None
Test for graphsize 18
     Graph 0
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 22958232134755 - Time: 12.094517946243286
None
     Graph 1
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 9642698128749885 - Time: 10.3799889087677
None
     Graph 2
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 7324635199480483 - Time: 13.28125786781311
None
     Graph 3
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 9489845542806634 - Time: 13.174311876296997
None
     Graph 4
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5284612501546704 - Time: 11.428079843521118
None
     Graph 5
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 4472017538578399 - Time: 9.742527961730957
None
     Graph 6
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 4521889657959477 - Time: 10.654681205749512
None
```

Running 3_split_GCSQ_at_most_qbsolv_parallel...

```
File - unknown
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 0738307702452161 - Time: 9.73653507232666
None
     Graph 8
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 9280845774882422 - Time: 10.978816032409668
None
     Graph 9
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 2154281540707146 - Time: 15.834808826446533
None
     Graph 10
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 4225599222920451 - Time: 5.103327989578247
None
     Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 2671337334371202 - Time: 4.863378047943115
None
     Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
550146932461665 - Time: 3.534331798553467
None
     Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 23850950742086496 - Time: 9.426979064941406
None
     Graph 14
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
5123579767928774 - Time: 8.999035835266113
None
```

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0. 7876205949141379 - Time: 9.830340147018433 None

```
Graph 16
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
0064599804971195 - Time: 10.402461767196655
None
     Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9666033216792229 - Time: 7.955561876296997
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
939148613571426
                - Time: 12.733343362808228
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
8367335977549857 - Time: 9.551445007324219
None
Test for graphsize 20
     Graph 0
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
2286198003634965 - Time: 10.369373083114624
None
     Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
                - Time: 14.271159172058105
146804753056955
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
1055289628951073 - Time: 15.35088300704956
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9308740224380188 - Time: 10.68504810333252
```

```
Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
759847876834371 - Time: 10.248503923416138
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
8329240585346938 - Time: 14.606091976165771
None
     Graph 6
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
1225920299782786 - Time: 10.404608011245728
None
     Graph 7
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
010634009675634 - Time: 10.709844827651978
None
     Graph 8
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
9555164697122933 - Time: 9.385733842849731
None
     Graph 9
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
1140725334617159 - Time: 10.229687690734863
None
     Graph 10
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
637644989065663
                - Time: 5.598075866699219
None
     Graph 11
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
3901409670808889 - Time: 9.58387565612793
None
```

```
Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
8273616108029387 - Time: 12.400837182998657
None
     Graph 13
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
5096587190417594 - Time: 9.357279062271118
None
     Graph 14
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
142733334196528 - Time: 10.479205131530762
None
     Graph 15
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
338581728684872 - Time: 10.554009914398193
None
     Graph 16
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
4018693972730745 - Time: 10.852640867233276
None
     Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
516596878262611 - Time: 11.172772884368896
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
0512632971854572 - Time: 10.942554235458374
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
7348132032658938 - Time: 10.297753095626831
None
```

Test for graphsize 22

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File - unknown
      Graph 0
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 1460945154662525 - Time: 9.295436143875122
None
      Graph 1
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 1445445552090874 - Time: 11.874965190887451
None
      Graph 2
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 1527341057839138 - Time: 16.98348593711853
None
      Graph 3
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 8216137144361468 - Time: 9.714524030685425
None
      Graph 4
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 4141131952076123 - Time: 12.501470804214478
None
      Graph 5
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
 2311338513693997 - Time: 12.315395832061768
None
```

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.

Graph 6

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1. 8993361125891326 - Time: 10.63399863243103 None

Graph 7

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1. 4769895353490199 - Time: 9.568011999130249 None

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File - unknown
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 221000462496292 - Time: 10.210038185119629
None
     Graph 9
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 1680404260433903 - Time: 10.86192798614502
None
     Graph 10
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 0045028770231923 - Time: 5.432386875152588
None
     Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 2221165947339898 - Time: 11.146428108215332
None
     Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 67675443249464 - Time: 10.164560079574585
None
     Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 778020549731309 - Time: 14.752838850021362
None
     Graph 14
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 3645584596682312 - Time: 11.098480701446533
None
     Graph 15
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 2948763920489057 - Time: 10.953116178512573
 None
     Graph 16
```

3112265951911724 - Time: 10.088162899017334

Running 3_split_GCSQ_at_most_qbsolv_parallel...

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.

```
Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
108844836437882 - Time: 9.248745203018188
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
3414015011873701 - Time: 11.663076162338257
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
7448801101228497 - Time: 10.92930006980896
None
Test for graphsize 24
     Graph 0
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
7010052388675874 - Time: 10.523011207580566
None
     Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
3886139829530038 - Time: 10.516162872314453
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
198788351719685
                - Time: 16.196906089782715
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
5920712457888229 - Time: 17.193650007247925
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
```

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File - unknown
 57079474839486
                - Time: 10.151786804199219
None
     Graph 5
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 3426834078204877 - Time: 11.950744152069092
None
     Graph 6
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 4906366941049853 - Time: 10.408207178115845
None
     Graph 7
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 3171557162028549 - Time: 11.484580993652344
 None
     Graph 8
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
62116363968439 - Time: 10.15761923789978
None
     Graph 9
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
1344824494506014 - Time: 11.064787864685059
None
     Graph 10
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 3721065249381823 - Time: 10.76632308959961
None
     Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 5708787552799706 - Time: 10.524724006652832
None
     Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
```

Page 281 of 395

Time: 12.399797201156616

3241178248075869 -

None

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.

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File - unknown
      Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 811060936422372
                 - Time: 10.661548137664795
None
      Graph 14
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 816278325728014
                 - Time: 11.013927936553955
None
      Graph 15
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 4883841820783488 - Time: 9.948639154434204
None
      Graph 16
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 0.
 9083523985759143 - Time: 10.358082056045532
None
      Graph 17
```

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1. 6946591168662763 - Time: 14.544017314910889 None

Graph 18

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1. 447440198799562 - Time: 10.601725816726685 None

Graph 19

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1. 8848175083666376 - Time: 10.740279197692871 None

Test for graphsize 26

Graph 0

Running 3_split_GCSQ_at_most_qbsolv_parallel... Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1. 8949445828401963 - Time: 10.364005327224731 None

```
Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
9082577259881361 - Time: 10.979859113693237
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
5729638131652308 - Time: 16.116190910339355
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
9552111194626889 - Time: 12.230656147003174
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
4980253640183747 - Time: 11.039534091949463
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
4744191862071574 - Time: 10.816641092300415
None
     Graph 6
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
1619977227798017 - Time: 9.630460023880005
None
     Graph 7
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
6961258350955077 - Time: 15.669541835784912
None
     Graph 8
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
7862359408452448 - Time: 15.767019987106323
None
```

```
Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
074759205108485
                - Time: 10.273101091384888
None
     Graph 10
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
837086002332633 - Time: 15.099608898162842
None
     Graph 11
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
2409073975555813 - Time: 10.072504997253418
None
     Graph 12
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
6794175267784794 - Time: 10.517157077789307
None
     Graph 13
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
9713741990044937 - Time: 9.965505123138428
None
     Graph 14
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
6557715426500152 - Time: 11.927140951156616
None
     Graph 15
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
9392763337633028 - Time: 10.43090009689331
None
     Graph 16
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
679067250405403 - Time: 10.151430130004883
None
     Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
```

```
7729039084590497 - Time: 11.297553062438965
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
94071205229843 - Time: 10.704533815383911
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
2023526251088157 - Time: 10.314029932022095
None
Test for graphsize 28
     Graph 0
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
102415248660037 - Time: 10.326542854309082
None
     Graph 1
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
7564689501037805 - Time: 12.042030096054077
None
     Graph 2
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
9487780294415487 - Time: 10.250694036483765
None
     Graph 3
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
7278676435872669 - Time: 10.522086143493652
None
     Graph 4
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
9519000169963547 - Time: 9.784076929092407
None
     Graph 5
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
                                      Page 285 of 395
```

File - unknown

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File - unknown
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 844443706537085
                 - Time: 10.234019994735718
None
     Graph 6
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
 751562178646921 - Time: 10.695777893066406
None
     Graph 7
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
                 - Time: 10.1092689037323
147540277130666
None
     Graph 8
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
 450492598571003 - Time: 16.111193895339966
None
     Graph 9
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
 618419717509653 - Time: 15.598424911499023
None
     Graph 10
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
 0368985620604505 - Time: 10.780839920043945
None
     Graph 11
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
                 - Time: 10.1790189743042
824350813344246
None
     Graph 12
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
           Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
8465934888184563 - Time: 11.173201084136963
None
     Graph 13
           Running 3_split_GCSQ_at_most_qbsolv_parallel...
```

443438495511323 - Time: 9.871394872665405

None

Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.

```
Graph 14
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
5605449668856437 - Time: 10.25775694847107
None
     Graph 15
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
2382389356448016 - Time: 11.685017108917236
None
     Graph 16
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
569843289461332 - Time: 12.589885950088501
None
     Graph 17
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 1.
8604912623196768 - Time: 15.683747053146362
None
     Graph 18
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
259898913320299
                - Time: 15.13576602935791
None
     Graph 19
          Running 3_split_GCSQ_at_most_qbsolv_parallel...
          Coalition structure value for 3_split_GCSQ_at_most_qbsolv_parallel: 2.
13806478317035 - Time: 11.557106018066406
None
Test for graphsize 4
     Graph 0
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
028954843277226416 - Time: 0.9633278846740723
None
     Graph 1
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
5708825220945002 - Time: 1.0029489994049072
```

```
None
     Graph 2
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
00712843874983804 - Time: 0.964728832244873
None
     Graph 3
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
06152625301075432 - Time: 0.4833648204803467
None
     Graph 4
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
06396917936914548 - Time: 0.5269389152526855
None
     Graph 5
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
10380144569396066 - Time: 0.48824405670166016
None
     Graph 6
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
05554082850606079 - Time: 0.5161280632019043
None
     Graph 7
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
038931269477402 - Time: 0.9794087409973145
None
     Graph 8
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
042007430425400116 - Time: 0.48691511154174805
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

0010690439865044254 - Time: 0.9958279132843018

None

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

37306828772501177 - Time: 1.0206809043884277

None

Graph 18

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

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File - unknown
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 06615960564805334
                   - Time: 0.4761791229248047
None
     Graph 19
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 24253747559571082 - Time: 0.500525712966919
None
Test for graphsize 6
     Graph 0
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 4037548984604129 - Time: 0.7937180995941162
None
     Graph 1
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 14602401068624005 - Time: 0.8665437698364258
None
     Graph 2
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 12639840396634128 - Time: 0.8777799606323242
None
     Graph 3
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
1447468748308225 - Time: 0.8963789939880371
None
     Graph 4
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
 2074140190053555 - Time: 0.8863828182220459
None
```

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

Graph 5

Running 3_split_R_QUBO-iterative_qbsolv_parallel... Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0. 21629539194693592 - Time: 0.8918023109436035 None

```
File - unknown
           Running 3_split_R_QUBO-iterative_gbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
1032573088773745 - Time: 0.7829761505126953
None
     Graph 7
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 08555938986791745 - Time: 0.8079471588134766
 None
     Graph 8
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 13737909873700005 - Time: 0.80088210105896
None
     Graph 9
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 23536312556377226 - Time: 0.804110050201416
 None
     Graph 10
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 2985191363911497 - Time: 0.9257009029388428
None
     Graph 11
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 1310541476422742 - Time: 0.8796529769897461
None
     Graph 12
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 20825406819544412 - Time: 0.8254263401031494
None
     Graph 13
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 2924666692276716 - Time: 0.893280029296875
 None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.8758237641815896 - Time: 0.8812680244445801

```
Graph 15
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

29878868277545223 - Time: 0.8955459594726562

None

Graph 16

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.

5885124948454461 - Time: 0.8297290802001953

None

Graph 17

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

19838467424926165 - Time: 0.8785374164581299

None

Graph 18

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.

11297024288754187 - Time: 0.8984189033508301

None

Graph 19

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
9194011936254896 - Time: 0.784498929977417
None

Test for graphsize 8

Graph 0

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

4037548984604129 - Time: 0.6209521293640137

None

Graph 1

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

14602401068624005 - Time: 0.5977122783660889

None

Graph 2

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

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File - unknown
 12639840396634128 - Time: 0.7205419540405273
None
     Graph 3
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
1447468748308225 - Time: 0.5982811450958252
None
     Graph 4
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 2074140190053555 - Time: 0.5860540866851807
None
     Graph 5
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 21629539194693592 - Time: 0.6719889640808105
 None
     Graph 6
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 1032573088773745 - Time: 0.5651311874389648
None
     Graph 7
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 08555938986791745 - Time: 0.6803112030029297
None
     Graph 8
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 13737909873700005
                   - Time: 0.5585148334503174
None
     Graph 9
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 23536312556377226 - Time: 0.6877429485321045
 None
     Graph 10
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

2985191363911497 - Time: 0.5177710056304932

None

```
File - unknown
      Graph 11
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 1310541476422742 - Time: 0.6062910556793213
None
      Graph 12
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 20825406819544412 - Time: 0.5945241451263428
None
      Graph 13
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 2924666692276716 - Time: 0.6118259429931641
None
      Graph 14
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 8758237641815896 - Time: 0.6901040077209473
None
      Graph 15
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 29878868277545223 - Time: 0.8338160514831543
None
      Graph 16
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
```

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0. 5885124948454461 - Time: 0.5881941318511963 None

Graph 17

Running 3_split_R_QUBO-iterative_qbsolv_parallel... Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0. 19838467424926165 - Time: 0.6067240238189697 None

Graph 18

Running 3_split_R_QUBO-iterative_qbsolv_parallel... Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0. 11297024288754187 - Time: 0.667290210723877 None

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File - unknown
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
9194011936254896 - Time: 0.6096808910369873
None
Test for graphsize 10
      Graph 0
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 850779136467672
                 - Time: 0.7585060596466064
None
      Graph 1
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 113205218829208 - Time: 0.49034690856933594
None
      Graph 2
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 33784569217207405
                   - Time: 0.6318819522857666
None
      Graph 3
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 4612950977452286 - Time: 0.775048017501831
None
      Graph 4
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 16780273947890834 - Time: 0.6109211444854736
None
      Graph 5
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 044044789115567 - Time: 0.5494179725646973
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

12039452902203607 - Time: 0.8854930400848389

None

```
Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
726339025546757 - Time: 0.5162341594696045
None
     Graph 8
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6527388888772592 - Time: 0.495136022567749
None
     Graph 9
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
3547436014939933 - Time: 0.6078441143035889
None
     Graph 10
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6588998527449874 - Time: 0.518186092376709
None
     Graph 11
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6441125032737318 - Time: 0.4843440055847168
None
     Graph 12
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6905379099888833 - Time: 1.0916779041290283
None
     Graph 13
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
2492454155493249 - Time: 0.6047179698944092
None
     Graph 14
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
39705675702467147 - Time: 0.5296492576599121
None
     Graph 15
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
```

```
1076973646763904 - Time: 0.8160970211029053
None
     Graph 16
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
5195958328469317 - Time: 0.5098049640655518
None
     Graph 17
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
5224072535037649 - Time: 0.4805440902709961
None
     Graph 18
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
4516002911853718 - Time: 0.5559098720550537
None
     Graph 19
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
8013746780583304 - Time: 0.5082559585571289
None
Test for graphsize 12
     Graph 0
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6150486301365916 - Time: 0.5635850429534912
None
     Graph 1
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
082427022828277 - Time: 0.513667106628418
None
     Graph 2
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
38475651674715294 - Time: 0.5668392181396484
None
     Graph 3
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
                                      Page 297 of 395
```

File - unknown

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File - unknown
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 560367844286219
                 - Time: 0.5061969757080078
None
     Graph 4
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 44488729516555026 - Time: 0.642380952835083
None
     Graph 5
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 8431061084135649 - Time: 0.531909704208374
None
     Graph 6
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 7639394580685206 - Time: 0.624906063079834
None
     Graph 7
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 7792806079405281 - Time: 0.5494780540466309
None
     Graph 8
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 2591533310888252 - Time: 0.5666770935058594
None
     Graph 9
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 5954578349497766 - Time: 0.570504903793335
None
     Graph 10
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 6059122564815951 - Time: 0.5032691955566406
 None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.702289163217074 - Time: 0.49629998207092285

None

```
Graph 12
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
8736191784041978 - Time: 0.5306010246276855
None
     Graph 13
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6561829802817627 - Time: 0.5842397212982178
None
     Graph 14
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
4616685125603937 - Time: 0.5866260528564453
None
     Graph 15
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
5777465750025783 - Time: 0.5585217475891113
None
     Graph 16
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
1582704298219042 - Time: 0.5422079563140869
None
     Graph 17
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6098161453602629 - Time: 0.5450098514556885
None
     Graph 18
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
2399354793810673 - Time: 0.6033170223236084
None
     Graph 19
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
201714058246395 - Time: 0.5045680999755859
None
```

```
Test for graphsize 14
```

```
Graph 0
```

```
Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 1.
2801666702618846 - Time: 0.5176901817321777

None
```

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.
9910337078295726 - Time: 0.33548879623413086
None

Graph 2

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.7896917547366726 - Time: 0.2538580894470215

None

Graph 3

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.

32406091265609405 - Time: 0.6594748497009277

None

Graph 4

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.7434000061760955 - Time: 0.3253030776977539

None

Graph 5

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.

5577618317755935 - Time: 0.5507907867431641

None

Graph 6

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.8226613726159684 - Time: 0.5583858489990234

None

Graph 7

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.

072236044635126 - Time: 0.2512078285217285

None

None

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

6937347837068302 - Time: 0.3068220615386963

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

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File - unknown
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 8614475795839951 - Time: 0.538494348526001
None
     Graph 17
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 9888065387748739 - Time: 0.5008971691131592
None
     Graph 18
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
8831225677352705 - Time: 0.5235986709594727
None
     Graph 19
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 7870756382366793 - Time: 0.5377039909362793
None
Test for graphsize 16
     Graph 0
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 822906633005644 - Time: 0.5786788463592529
None
     Graph 1
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
02240091914733 - Time: 0.60561203956604
None
     Graph 2
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
8919407950075495 - Time: 0.567558765411377
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.8449224007561682 - Time: 0.5531017780303955

None

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File - unknown
           Running 3_split_R_QUBO-iterative_gbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
6262725262860229 - Time: 0.6717150211334229
None
     Graph 5
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 3.
 2643274461642093 - Time: 0.619574785232544
 None
     Graph 6
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 3304850667358323 - Time: 0.5977013111114502
None
     Graph 7
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 0160665942924254 - Time: 0.5901010036468506
 None
     Graph 8
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 9121356510589749 - Time: 0.5915677547454834
None
     Graph 9
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 9543621161819686 - Time: 0.638098955154419
None
     Graph 10
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 8229066330056085 - Time: 0.5725481510162354
None
     Graph 11
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 0224009191474863 - Time: 0.5821037292480469
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.8919407950071729 - Time: 0.5589320659637451

```
Graph 13
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.8449224007551734 - Time: 0.5694642066955566

None

Graph 14

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.6262725262863498 - Time: 0.6834087371826172

None

Graph 15

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.
5325696747462771 - Time: 0.6149601936340332

None

Graph 16

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.9404045759696231 - Time: 0.5586850643157959

None

Graph 17

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 1.

0815657970830443 - Time: 0.5910229682922363

None

Graph 18

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.

333519919451696 - Time: 0.5822350978851318

None

Graph 19

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 1.

3821471550545326 - Time: 0.5831058025360107

None

Test for graphsize 18

Graph 0

Running 3_split_R_QUBO-iterative_qbsolv_parallel...
Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.

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File - unknown
 22958232134755 - Time: 0.7511332035064697
None
     Graph 1
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 9642698128749885 - Time: 0.6559309959411621
None
     Graph 2
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 7324635199480483 - Time: 0.6607649326324463
None
     Graph 3
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 9489845542806634 - Time: 0.8032791614532471
 None
     Graph 4
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
5284612501546704 - Time: 0.722477912902832
None
     Graph 5
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
5069596362593671 - Time: 0.7180149555206299
None
     Graph 6
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 4521889657959477 - Time: 0.8305070400238037
None
     Graph 7
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 0738307702452161 - Time: 0.7947089672088623
None
     Graph 8
```

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 0.

9280845774882422 - Time: 0.6515598297119141

None

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File - unknown
      Graph 9
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 204437433946751
                 - Time: 0.9611189365386963
None
      Graph 10
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 4225599222920451 - Time: 0.3141019344329834
None
      Graph 11
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 2671337334371202 - Time: 0.2995951175689697
None
      Graph 12
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 550146932461665 - Time: 0.3009459972381592
None
      Graph 13
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 23850950742086496 - Time: 0.6799111366271973
 None
      Graph 14
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
5123579767928774 - Time: 0.6256930828094482
None
      Graph 15
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 7876205949141379 - Time: 0.6216340065002441
 None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel... Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1. 0064599804971195 - Time: 0.6081640720367432 None

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File - unknown
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 9666033216792229 - Time: 0.604607343673706
None
      Graph 18
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 939148613571426 - Time: 0.6884961128234863
None
      Graph 19
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 8620304898268571 - Time: 0.8895838260650635
None
Test for graphsize 20
      Graph 0
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 2286198003634965 - Time: 0.7287859916687012
None
      Graph 1
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 146804753056955
                 - Time: 0.9020240306854248
None
      Graph 2
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 1055289628951073 - Time: 1.0435972213745117
 None
      Graph 3
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 9308740224380188 - Time: 0.7608709335327148
None
      Graph 4
```

Running 3_split_R_QUB0-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUB0-iterative_qbsolv_parallel: 1.
759847876834371 - Time: 0.7204158306121826
None

```
Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
8329240585346938 - Time: 1.4065852165222168
None
     Graph 6
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
2720059272304098 - Time: 1.1510887145996094
None
     Graph 7
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
010634009675634 - Time: 1.0180070400238037
None
     Graph 8
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
9555164697122933 - Time: 1.283545732498169
None
     Graph 9
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
1140725334617159 - Time: 1.5297491550445557
None
     Graph 10
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
1086714555953918 - Time: 1.8584399223327637
None
     Graph 11
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3901409670808889 - Time: 0.7644000053405762
None
     Graph 12
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
8273616108029387 - Time: 0.6233639717102051
None
     Graph 13
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
```

```
5096587190417594 - Time: 0.6342778205871582
None
     Graph 14
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
142733334196528 - Time: 0.6722681522369385
None
     Graph 15
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
338581728684872 - Time: 0.6067690849304199
None
     Graph 16
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
4018693972730745 - Time: 0.7400228977203369
None
     Graph 17
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
516596878262611 - Time: 0.5897829532623291
None
     Graph 18
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
0512632971854572 - Time: 0.7854752540588379
None
     Graph 19
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
7348132032658938 - Time: 0.7348291873931885
None
Test for graphsize 22
     Graph 0
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3789109416829959 - Time: 0.6738131046295166
None
     Graph 1
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
                                      Page 309 of 395
```

File - unknown

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File - unknown
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 1445445552090874 - Time: 0.719506025314331
None
     Graph 2
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 1527341057839138 - Time: 1.1645190715789795
None
     Graph 3
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 0.
 8386235254101209 - Time: 0.7943501472473145
None
     Graph 4
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 4141131952076123 - Time: 0.7937028408050537
None
     Graph 5
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 2311338513693997 - Time: 0.626521110534668
None
     Graph 6
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 9295166795682377 - Time: 0.6091060638427734
None
     Graph 7
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 4769895353490199 - Time: 0.6252949237823486
None
     Graph 8
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 221000462496292 - Time: 0.6152899265289307
 None
     Graph 9
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.

3166678866445665 - Time: 0.6375150680541992

None

```
Graph 10
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
4844338943951811 - Time: 1.1161727905273438
None
     Graph 11
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
2221165947339898 - Time: 0.6386640071868896
None
     Graph 12
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
67675443249464
               - Time: 0.6621150970458984
None
     Graph 13
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
778020549731309
                - Time: 1.001974105834961
None
     Graph 14
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3645584596682312 - Time: 0.6942400932312012
None
     Graph 15
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
2948763920489057 - Time: 0.7064318656921387
None
     Graph 16
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3757912013005225 - Time: 0.6702232360839844
None
     Graph 17
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
108844836437882 - Time: 0.7063822746276855
None
```

```
Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3414015011873701 - Time: 0.790503978729248
None
     Graph 19
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
7448801101228497 - Time: 0.6364071369171143
None
Test for graphsize 24
     Graph 0
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
7010052388675874 - Time: 8.557661294937134
None
     Graph 1
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3886139829530038 - Time: 9.496580839157104
None
     Graph 2
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
5862663420935306 - Time: 9.198179721832275
None
     Graph 3
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
5920712457888229 - Time: 13.4495849609375
None
     Graph 4
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
57079474839486
               - Time: 9.803617000579834
None
     Graph 5
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3426834078204877 - Time: 10.407317876815796
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.

811060936422372 - Time: 8.719087839126587

None

Graph 14

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

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File - unknown
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
816278325728014 - Time: 8.422584056854248
None
     Graph 15
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 4883841820783488 - Time: 4.793612957000732
None
     Graph 16
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
3263648141889561 - Time: 9.392573356628418
None
     Graph 17
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 6946591168662763 - Time: 13.56199336051941
None
     Graph 18
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 447440198799562 - Time: 9.080328941345215
None
     Graph 19
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 9196240992240305 - Time: 8.027729272842407
 None
Test for graphsize 26
     Graph 0
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 9275312464485168 - Time: 9.147616863250732
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.

9082577259881361 - Time: 8.935690879821777

None

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File - unknown
           Running 3_split_R_QUBO-iterative_gbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
5729638131652308 - Time: 12.903112888336182
None
     Graph 3
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 9552111194626889 - Time: 8.343210935592651
None
     Graph 4
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 4980253640183747 - Time: 9.27654504776001
None
     Graph 5
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 4744191862071574 - Time: 8.274041652679443
 None
     Graph 6
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 1619977227798017 - Time: 8.03444504737854
None
     Graph 7
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 6961258350955077 - Time: 13.19324779510498
None
     Graph 8
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 7862359408452448 - Time: 12.246781826019287
None
     Graph 9
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 074759205108485 - Time: 8.562870025634766
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
837086002332633 - Time: 13.86366319656372

```
None
     Graph 11
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
2409073975555813 - Time: 9.624151945114136
None
     Graph 12
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
6794175267784794 - Time: 8.946094989776611
None
     Graph 13
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
9878145093575128 - Time: 8.738919019699097
None
     Graph 14
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
6557715426500152 - Time: 9.875735998153687
None
     Graph 15
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
9392763337633028 - Time: 8.768011093139648
None
     Graph 16
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
679067250405403
                - Time: 8.73218297958374
None
     Graph 17
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
7729039084590497 - Time: 8.827218055725098
None
```

Running 3_split_R_QUBO-iterative_qbsolv_parallel...

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
0167658061418194 - Time: 9.241808891296387
None

```
Graph 19
```

```
Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
2023526251088157 - Time: 8.003198862075806
None
Test for graphsize 28
     Graph 0
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
102415248660037 - Time: 8.467703104019165
None
     Graph 1
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
7564689501037805 - Time: 9.153073787689209
None
     Graph 2
          Running 3_split_R_QUB0-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
9487780294415487 - Time: 8.632069826126099
None
     Graph 3
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
7278676435872669 - Time: 9.59626293182373
None
     Graph 4
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
9519000169963547 - Time: 9.171608209609985
None
     Graph 5
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
844443706537085 - Time: 9.023661613464355
None
     Graph 6
          Running 3_split_R_QUBO-iterative_qbsolv_parallel...
          Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
751562178646921
                    Time: 9.292941093444824
None
```

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File - unknown
      Graph 7
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 147540277130666
                 - Time: 8.294443845748901
None
      Graph 8
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 450492598571003 - Time: 13.64344596862793
None
      Graph 9
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 618419717509653
                 - Time: 12.720525026321411
None
      Graph 10
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 0368985620604505 - Time: 8.81895899772644
None
      Graph 11
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 824350813344246 - Time: 9.343707084655762
None
      Graph 12
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
928146562659343 - Time: 8.980396032333374
None
      Graph 13
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
```

Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2. 6328182331980727 - Time: 8.85466480255127 None

Graph 14

Running 3_split_R_QUBO-iterative_qbsolv_parallel... Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1. 640450401947703 - Time: 9.765754222869873 None

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File - unknown
           Running 3_split_R_QUBO-iterative_gbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 2890933628745316 - Time: 9.325715065002441
None
      Graph 16
           Running 3_split_R_QUB0-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 569843289461332 - Time: 8.735008001327515
None
      Graph 17
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 1.
 8604912623196768 - Time: 12.816154956817627
None
      Graph 18
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 259898913320299 - Time: 12.877822160720825
 None
      Graph 19
           Running 3_split_R_QUBO-iterative_qbsolv_parallel...
           Coalition structure value for 3_split_R_QUBO-iterative_qbsolv_parallel: 2.
 2211219918747673 - Time: 9.36596393585205
None
 Done running tests for k-split algorithms with qbsolv in True mode for k=3.
 Created directory: results/eon_data/quantum/qbsolv/parallel/k=4
Test for graphsize 4
      Graph 0
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.028954843277226416 - Time: 0.49846696853637695
None
      Graph 1
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.5708825220945002 - Time: 0.6547417640686035
None
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.00712843874983804 - Time: 0.5392959117889404
None

```
Graph 3
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.06152625301075432 - Time: 0.25192999839782715
None

Graph 4

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.06396917936914548 - Time: 0.24674415588378906
None

Graph 5

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.10380144569396066 - Time: 0.2436227798461914

None

Graph 6

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.05554082850606079 - Time: 0.22789406776428223
None

Graph 7

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.038931269477402 - Time: 0.504511833190918

None

Graph 8

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.042007430425400116 - Time: 0.22764205932617188

None

Graph 9

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.0010690439865044254 - Time: 0.680211067199707
None

Graph 10

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.2197142340515299 - Time: 0.5549499988555908
None

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File - unknown
           Running 4_split_ours_iterative_exactly_gbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.2770576453315883
                        Time: 0.563148021697998
None
      Graph 12
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.06753117632182892 - Time: 0.23880720138549805
 None
      Graph 13
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.01673789206527232
                     - Time: 0.2323911190032959
None
      Graph 14
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.03599345154763256 - Time: 0.24389386177062988
 None
      Graph 15
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.10695262062797894 - Time: 0.507483959197998
None
      Graph 16
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.06090302529973002 - Time: 0.2462918758392334
None
      Graph 17
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.37306828772501177 - Time: 0.6812338829040527
None
      Graph 18
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.06615960564805334 - Time: 0.23831391334533691
 None
      Graph 19
```

0.24253747559571082 - Time: 0.2408277988433838

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

```
Test for graphsize 6
     Graph 0
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.4037548984604129 - Time: 0.5188701152801514
None
     Graph 1
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.14602401068624005 - Time: 0.49370694160461426
None
     Graph 2
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.12639840396634128 - Time: 0.4782438278198242
None
     Graph 3
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.1447468748308225 - Time: 0.4903299808502197
None
     Graph 4
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.2074140190053555 - Time: 0.5683379173278809
None
     Graph 5
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.21629539194693592
                        Time: 0.5470402240753174
None
     Graph 6
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.1032573088773745 - Time: 0.6113090515136719
None
     Graph 7
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
```

```
File - unknown
 0.08555938986791745 - Time: 0.6374998092651367
None
     Graph 8
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.13737909873700005 - Time: 0.5314779281616211
None
     Graph 9
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.23536312556377226 - Time: 0.5929598808288574
None
     Graph 10
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.2985191363911497 - Time: 0.5811939239501953
 None
     Graph 11
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.1310541476422742 - Time: 0.49579501152038574
None
     Graph 12
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.20825406819544412 - Time: 0.6447858810424805
None
     Graph 13
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.2924666692276716
                    - Time: 0.7040691375732422
None
     Graph 14
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8758237641815896 - Time: 0.5139307975769043

None

Graph 15

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.29878868277545223 - Time: 0.46813416481018066
None

```
Graph 16
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5885124948454461 - Time: 0.5473051071166992
None

Graph 17

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.19838467424926165 - Time: 0.5999932289123535

None

Graph 18

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.11297024288754187 - Time: 0.6477036476135254
None

Graph 19

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9194011936254896 - Time: 0.46908998489379883
None

Test for graphsize 8

Graph 0

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.4037548984604129 - Time: 0.5759670734405518

None

Graph 1

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.14602401068624005 - Time: 0.5292479991912842
None

Graph 2

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.12639840396634128 - Time: 0.5247189998626709
None

Graph 3

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.1447468748308225 - Time: 0.5285928249359131

None

```
Graph 4
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.2074140190053555 - Time: 0.529609203338623
None
     Graph 5
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.21629539194693592
                        Time: 0.5653808116912842
None
     Graph 6
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.1032573088773745 - Time: 0.5605709552764893
None
     Graph 7
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.08555938986791745 - Time: 0.6575000286102295
None
     Graph 8
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.13737909873700005
                    - Time: 0.5942690372467041
None
     Graph 9
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.23536312556377226 - Time: 0.662693977355957
None
     Graph 10
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.2985191363911497 - Time: 0.5930931568145752
None
     Graph 11
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.1310541476422742 - Time: 0.5797569751739502
None
```

```
Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.20825406819544412 - Time: 0.5186398029327393
None
     Graph 13
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.2924666692276716 - Time: 0.7867107391357422
None
     Graph 14
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8758237641815896 - Time: 0.5640389919281006
None
     Graph 15
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.29878868277545223 - Time: 0.4973170757293701
None
     Graph 16
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5885124948454461 - Time: 0.5313940048217773
None
     Graph 17
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.19838467424926165 - Time: 0.5996618270874023
None
     Graph 18
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.11297024288754187
                        Time: 0.6342329978942871
None
     Graph 19
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9194011936254896 - Time: 0.52254319190979
None
```

Test for graphsize 10

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.726339025546757 - Time: 0.5737009048461914

None

Graph 8

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

```
File - unknown
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.6527388888772592
                    - Time: 0.679854154586792
None
     Graph 9
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.3547436014939933 - Time: 0.588007926940918
None
     Graph 10
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.6588998527449874 - Time: 0.6004390716552734
None
     Graph 11
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.6441125032737318 - Time: 0.6062319278717041
None
     Graph 12
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.6905379099888833 - Time: 0.6370987892150879
None
     Graph 13
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.2492454155493249 - Time: 0.6243710517883301
None
     Graph 14
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.39705675702467147 - Time: 0.7283618450164795
 None
     Graph 15
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.1076973646763904 - Time: 0.703005313873291
None
     Graph 16
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
```

Page 328 of 395

- Time: 0.6639909744262695

0.5195958328469317

None

```
Graph 17
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5224072535037649 - Time: 0.6033861637115479
None
     Graph 18
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.4516002911853718
                   - Time: 0.6861181259155273
None
     Graph 19
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.8013746780583304 - Time: 0.67966628074646
None
Test for graphsize 12
     Graph 0
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.6150486301365916 - Time: 5.880168914794922
None
     Graph 1
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.082427022828277 - Time: 5.865712881088257
None
     Graph 2
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.38475651674715294 - Time: 4.77478289604187
None
     Graph 3
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.560367844286219 - Time: 4.8300700187683105
None
     Graph 4
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.44488729516555026 - Time: 9.406704902648926
```

```
Graph 5
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8431061084135649 - Time: 5.132965803146362
None

Graph 6

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.7639394580685206 - Time: 4.376288652420044

None

Graph 7

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.7792806079405281 - Time: 5.516051292419434

None

Graph 8

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.2591533310888252 - Time: 3.3600869178771973
None

Graph 9

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5954578349497766 - Time: 4.386938810348511

None

Graph 10

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.6059122564815951 - Time: 5.232849836349487

None

Graph 11

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.702289163217074 - Time: 4.606752634048462

None

Graph 12

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8736191784041978 - Time: 5.229712724685669
None

1.2801666702618846

None

```
Graph 13
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.6561829802817627
                   - Time: 4.623126983642578
None
     Graph 14
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.4616685125603937 - Time: 4.889604091644287
None
     Graph 15
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5777465750025783 - Time: 4.380589008331299
None
     Graph 16
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.1582704298219042 - Time: 4.599987030029297
None
     Graph 17
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.6098161453602629 - Time: 4.340981960296631
None
     Graph 18
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.2399354793810673 - Time: 6.280915021896362
None
     Graph 19
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.201714058246395 - Time: 3.5001440048217773
None
Test for graphsize 14
     Graph 0
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
```

- Time: 8.22863221168518

```
Graph 1
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9910337078295726 - Time: 4.183081865310669
None

Graph 2

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.7896917547366726 - Time: 4.200438022613525
None

Graph 3

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.32406091265609405 - Time: 8.61353874206543
None

Graph 4

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.7434000061760955 - Time: 4.18838095664978
None

Graph 5

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.5577618317755935 - Time: 7.856869697570801

None

Graph 6

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8226613726159684 - Time: 8.94696307182312
None

Graph 7

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.072236044635126 - Time: 4.097456932067871

None

Graph 8

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8416300286743024 - Time: 8.99916696548462
None

File - unknown Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 2.4431815381742013 - Time: 8.484308004379272 None Graph 10 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 0.6521493604439357 - Time: 9.14444613456726 None Graph 11 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.1170498230417039 - Time: 4.159130811691284 None Graph 12 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 0.6293034223394756 - Time: 8.803353786468506 None Graph 13 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.0358230118990974 - Time: 4.181842088699341 None Graph 14 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.0806199836372201 - Time: 9.139159679412842 None Graph 15 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 0.6937347837068302 - Time: 4.244656801223755 None Graph 16 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 0.8614475795839951 - Time: 8.631485939025879

None

Graph 17

Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: - Time: 8.70908808708191 0.9888065387748739

```
Graph 18
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8831225677352705 - Time: 8.847984790802002
None
     Graph 19
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.7870756382366793 - Time: 8.845378160476685
None
Test for graphsize 16
     Graph 0
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.822906633005644 - Time: 8.969835996627808
None
     Graph 1
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.02240091914733 - Time: 9.059720039367676
None
     Graph 2
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8919407950075495 - Time: 8.956995010375977
None
     Graph 3
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8449224007561682
                       Time: 9.04547381401062
None
     Graph 4
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.6262725262860229 - Time: 8.65745210647583
```

None

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8919407950071729 - Time: 10.051660060882568

None

Graph 13

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8449224007551734 - Time: 9.759483814239502
None

```
Graph 14
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.6262725262863498 - Time: 9.887712001800537
None

Graph 15

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5325696747462771 - Time: 8.998052835464478
None

Graph 16

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9404045759696231 - Time: 10.52176809310913

None

Graph 17

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.11076397406012 - Time: 9.883817911148071
None

Graph 18

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.333519919451696 - Time: 10.451732158660889
None

Graph 19

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3821471550545326 - Time: 9.863811016082764
None

Test for graphsize 18

Graph 0

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.22958232134755 - Time: 9.973846197128296
None

Graph 1

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9642698128749885 - Time: 12.4581618309021
None

```
Graph 2
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.7324635199480483 - Time: 10.188328981399536
None
     Graph 3
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9489845542806634
                   - Time: 10.642005920410156
None
     Graph 4
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5284612501546704 - Time: 9.889065980911255
None
     Graph 5
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5069596362593671
                   - Time: 9.697012186050415
None
     Graph 6
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.4521889657959477 - Time: 10.404390096664429
None
     Graph 7
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.0738307702452161 - Time: 9.688441276550293
None
     Graph 8
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9280845774882422 - Time: 11.09180212020874
None
     Graph 9
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.2154281540707146 - Time: 14.431735038757324
None
```

```
Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.4225599222920451 - Time: 4.8008129596710205
None
     Graph 11
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.2671337334371202 - Time: 4.671100854873657
None
     Graph 12
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.550146932461665 - Time: 4.987245082855225
None
     Graph 13
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.23850950742086496 - Time: 10.837281703948975
None
     Graph 14
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.5123579767928774 - Time: 10.487637996673584
None
     Graph 15
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.7876205949141379 - Time: 9.413660287857056
None
     Graph 16
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.0064599804971195
                       Time: 9.94411587715149
None
     Graph 17
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9666033216792229 - Time: 10.009853839874268
None
     Graph 18
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
```

```
File - unknown
 0.939148613571426 - Time: 9.900454998016357
None
     Graph 19
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.8620304898268571 - Time: 9.91012191772461
None
Test for graphsize 20
     Graph 0
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.2286198003634965 - Time: 9.160508871078491
None
     Graph 1
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.146804753056955 - Time: 9.879574060440063
None
     Graph 2
           Running 4_split_ours_iterative_exactly_gbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.1055289628951073 - Time: 9.544988870620728
None
     Graph 3
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.9308740224380188 - Time: 9.282633066177368
None
     Graph 4
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.759847876834371 - Time: 10.047767162322998
None
     Graph 5
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 0.8329240585346938 - Time: 9.84339714050293
None
     Graph 6
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

None

```
File - unknown
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.2720059272304098
                    - Time: 9.81307601928711
None
     Graph 7
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.010634009675634 - Time: 10.610812902450562
None
     Graph 8
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
                    - Time: 10.157051086425781
 0.9555164697122933
None
     Graph 9
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.1140725334617159 - Time: 10.15333604812622
None
     Graph 10
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.1086714555953918 - Time: 9.667764902114868
None
     Graph 11
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.3901409670808889 - Time: 9.304779052734375
None
     Graph 12
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
                    - Time: 10.297826051712036
 1.8273616108029387
None
     Graph 13
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.5096587190417594 - Time: 10.389451026916504
None
     Graph 14
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 1.142733334196528 - Time: 10.502830982208252
```

```
Graph 15
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.338581728684872 - Time: 10.426240921020508
None
     Graph 16
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.4018693972730745
                       Time: 10.459473133087158
None
     Graph 17
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.516596878262611 - Time: 9.784121036529541
None
     Graph 18
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.0512632971854572
                   - Time: 10.03888201713562
None
     Graph 19
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.7348132032658938
                   - Time: 9.880741119384766
None
Test for graphsize 22
     Graph 0
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3789109416829959
                   - Time: 9.514158010482788
None
     Graph 1
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.1445445552090874 - Time: 9.366290807723999
None
     Graph 2
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
                   - Time: 10.06401515007019
1.1527341057839138
```

```
Graph 3
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
0.8386235254101209 - Time: 9.591686725616455
None

Graph 4

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.4141131952076123 - Time: 10.233595132827759

None

Graph 5

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.2311338513693997 - Time: 9.800897121429443
None

Graph 6

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9295166795682377 - Time: 10.068259954452515
None

Graph 7

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.4769895353490199 - Time: 9.938362121582031

None

Graph 8

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.221000462496292 - Time: 9.116466999053955

None

Graph 9

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3166678866445665 - Time: 9.590804100036621
None

Graph 10

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.4844338943951811 - Time: 10.14300274848938
None

Graph 11 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.2221165947339898 - Time: 10.016934871673584 None Graph 12 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.67675443249464 - Time: 9.532997131347656 None Graph 13 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.7808146272583585 - Time: 10.404771089553833 None Graph 14 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.3645584596682312 - Time: 9.33712100982666 None Graph 15 Running 4_split_ours_iterative_exactly_gbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.2948763920489057 - Time: 10.108852863311768 None Graph 16 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.3757912013005225 - Time: 9.700376033782959 None Graph 17 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.108844836437882 - Time: 9.62236499786377 None Graph 18 Running 4_split_ours_iterative_exactly_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel: 1.3414015011873701 - Time: 9.620666027069092 None

Graph 19

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

```
File - unknown
```

```
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.7448801101228497 - Time: 9.572885036468506
None
Test for graphsize 24
     Graph 0
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.7010052388675874 - Time: 18.173951387405396
None
     Graph 1
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3886139829530038 - Time: 17.757226943969727
None
     Graph 2
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.5862663420935306 - Time: 22.623528003692627
None
     Graph 3
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.5924746022500145 - Time: 14.415313243865967
None
     Graph 4
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.57079474839486 - Time: 17.011054039001465
None
     Graph 5
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3426834078204877 - Time: 18.35451889038086
None
     Graph 6
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.4906366941049853 - Time: 14.081584930419922
None
```

```
File-unknown

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

1.3171557162028549 - Time: 14.991737842559814

None

Graph 8
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

1.62116363968439 - Time: 15.501243829727173
...

None

Graph 9

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.1355862586534258 - Time: 14.2311851978302

None

Graph 10

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3721065249381823 - Time: 17.430007934570312

None

Graph 11

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.5708787552799706 - Time: 22.224324226379395

None

Graph 12

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3241178248075869 - Time: 18.837892770767212
None

Graph 13

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

1.811060936422372 - Time: 17.2833251953125

None

Graph 14

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.816278325728014 - Time: 21.044859170913696
None

Graph 15

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.4883841820783488 - Time: 14.396827220916748

```
Graph 16
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.3263648141889561 - Time: 18.735472917556763
None

Graph 17

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.7055631245185978 - Time: 14.804092168807983

None

Graph 18

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

1.447440198799562 - Time: 18.57198715209961

None

Graph 19

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9196240992240305 - Time: 20.384276151657104
None

Test for graphsize 26

Graph 0

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9275312464485168 - Time: 26.245602130889893
None

Graph 1

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9082577259881361 - Time: 18.660677194595337

None

Graph 2

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.5729638131652308 - Time: 39.354700803756714

None

Graph 3

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.2409073975555813 - Time: 20.520071029663086
None

```
Graph 12
```

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.6795941655149207 - Time: 18.857100009918213
None

Graph 13

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9878145093575128 - Time: 26.37918210029602
None

Graph 14

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:

1.6557715426500152 - Time: 20.426099061965942

None

Graph 15

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9392763337633028 - Time: 20.697118043899536
None

Graph 16

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.679067250405403 - Time: 17.910839080810547
None

Graph 17

Running 4_split_ours_iterative_exactly_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.7729039084590497 - Time: 18.98337197303772
None

Graph 18

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.0167658061418194 - Time: 17.694907903671265

None

Graph 19

Running 4_split_ours_iterative_exactly_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.2023526251088157 - Time: 19.187297105789185

None

Test for graphsize 28

```
Graph 0
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.102415248660037 - Time: 20.55209493637085
None
     Graph 1
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
                       Time: 23.755726099014282
1.7564689501037805
None
     Graph 2
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9487780294415487 - Time: 30.603044748306274
None
     Graph 3
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.7179668452536632
                   - Time: 20.155557870864868
None
     Graph 4
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.9519000169963547
                   - Time: 18.770966053009033
None
     Graph 5
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.8286629976481734 - Time: 27.366190195083618
None
     Graph 6
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.751562178646921 - Time: 19.116274118423462
None
     Graph 7
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.147540277130666 - Time: 19.98988103866577
None
```

```
Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.450492598571003 - Time: 26.102679014205933
None
     Graph 9
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.632817062897253 - Time: 18.166551113128662
None
     Graph 10
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.0368985620604505 - Time: 17.95209789276123
None
     Graph 11
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.824350813344246 - Time: 18.494535207748413
None
     Graph 12
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.928146562659343 - Time: 19.485294818878174
None
     Graph 13
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.6328182331980727 - Time: 19.860737085342407
None
     Graph 14
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.640450401947703 - Time: 21.2444589138031
None
     Graph 15
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
2.2890933628745316 - Time: 18.90127730369568
None
     Graph 16
          Running 4_split_ours_iterative_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
```

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File - unknown
 2.569843289461332 - Time: 18.617695093154907
None
     Graph 17
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
1.8604912623196768 - Time: 19.979815006256104
None
     Graph 18
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 2.2661988687358203
                    - Time: 19.91293692588806
None
     Graph 19
           Running 4_split_ours_iterative_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_exactly_qbsolv_parallel:
 2.2211219918747673 - Time: 19.705480813980103
 None
Test for graphsize 4
     Graph 0
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.028954843277226416 - Time: 0.5906679630279541
None
     Graph 1
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5708825220945002 - Time: 0.7905771732330322
None
     Graph 2
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.00712843874983804 - Time: 0.8505082130432129
None
     Graph 3
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.06152625301075432 - Time: 0.24518895149230957
None
     Graph 4
```

Page 351 of 395

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

```
File - unknown
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.06396917936914548 - Time: 0.24693608283996582
None
     Graph 5
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.10380144569396066 - Time: 0.25298500061035156
None
     Graph 6
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.05554082850606079
                     - Time: 0.27866601943969727
None
     Graph 7
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.038931269477402 - Time: 0.757744312286377
None
     Graph 8
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.042007430425400116 - Time: 0.304502010345459
None
     Graph 9
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.0010690439865044254 - Time: 0.787869930267334
None
     Graph 10
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.2197142340515299
                    - Time: 0.7344000339508057
None
     Graph 11
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.2770576453315883 - Time: 0.6504671573638916
None
     Graph 12
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.06753117632182892 - Time: 0.2558779716491699
None
```

0.4037548984604129

```
Graph 13
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.01673789206527232 - Time: 0.287308931350708
None
     Graph 14
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.03599345154763256
                        Time: 0.29982614517211914
None
     Graph 15
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.10695262062797894 - Time: 0.716515064239502
None
     Graph 16
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.06090302529973002 - Time: 0.2686769962310791
None
     Graph 17
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.37306828772501177
                    - Time: 0.8814780712127686
None
     Graph 18
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.06615960564805334 - Time: 0.2532467842102051
None
     Graph 19
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.24253747559571082 - Time: 0.26515722274780273
None
Test for graphsize 6
     Graph 0
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 0.7937390804290771
```

```
Graph 1
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.14602401068624005 - Time: 0.6875126361846924
None

Graph 2

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.12639840396634128 - Time: 0.6086897850036621

None

Graph 3

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.1447468748308225 - Time: 0.7600769996643066

None

Graph 4

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.2074140190053555 - Time: 0.7756040096282959

None

Graph 5

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.21629539194693592 - Time: 0.6817672252655029

None

Graph 6

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.1032573088773745 - Time: 0.6050951480865479
None

Graph 7

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.08555938986791745 - Time: 0.7505853176116943
None

Graph 8

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.13737909873700005 - Time: 0.6302099227905273
None

```
Graph 9
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.23536312556377226 - Time: 0.7036221027374268

None

Graph 10

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.2985191363911497 - Time: 0.730158805847168
None

Graph 11

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.1310541476422742 - Time: 0.5870683193206787

None

Graph 12

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.20825406819544412 - Time: 0.7145490646362305

None

Graph 13

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.2924666692276716 - Time: 0.8399338722229004
None

Graph 14

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8758237641815896 - Time: 0.7247927188873291

None

Graph 15

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.29878868277545223 - Time: 0.6500790119171143
None

Graph 16

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5885124948454461 - Time: 0.7782092094421387
None

Graph 17

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

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File - unknown
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Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.19838467424926165 - Time: 0.6962430477142334
None
     Graph 18
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.11297024288754187 - Time: 0.9286887645721436
None
     Graph 19
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 0.8213379383087158
0.9194011936254896
None
Test for graphsize 8
     Graph 0
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.4037548984604129 - Time: 0.69097900390625
None
     Graph 1
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.14602401068624005 - Time: 0.7056059837341309
None
     Graph 2
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.12639840396634128 - Time: 0.6577649116516113
None
     Graph 3
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.1447468748308225 - Time: 0.759070873260498
None
     Graph 4
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.2074140190053555 - Time: 0.7730939388275146
None
```

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File - unknown
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.21629539194693592
                     - Time: 0.6748819351196289
None
     Graph 6
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.1032573088773745 - Time: 0.7893319129943848
None
     Graph 7
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.08555938986791745
                     - Time: 0.6677529811859131
None
     Graph 8
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.13737909873700005 - Time: 0.6783008575439453
None
     Graph 9
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.23536312556377226 - Time: 0.6116697788238525
None
     Graph 10
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.2985191363911497 - Time: 0.7590157985687256
None
     Graph 11
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.1310541476422742 - Time: 0.8508069515228271
None
     Graph 12
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.20825406819544412 - Time: 0.7180638313293457

None

Graph 13

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.2924666692276716 - Time: 0.773996114730835

```
Graph 14
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8758237641815896 - Time: 0.805131196975708

None

Graph 15

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.29878868277545223 - Time: 0.7976500988006592

None

Graph 16

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5885124948454461 - Time: 0.6671640872955322

None

Graph 17

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.19838467424926165 - Time: 0.7571556568145752

None

Graph 18

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.11297024288754187 - Time: 0.7522408962249756

None

Graph 19

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9194011936254896 - Time: 0.7587728500366211

None

Test for graphsize 10

Graph 0

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.850779136467672 - Time: 0.6514499187469482

None

Graph 1

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.3547436014939933 - Time: 0.7849199771881104
None

```
Graph 10
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6588998527449874 - Time: 0.632378101348877
None

Graph 11

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6441125032737318 - Time: 0.8433117866516113

None

Graph 12

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6905379099888833 - Time: 0.6446270942687988

None

Graph 13

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.2492454155493249 - Time: 0.8963890075683594
None

Graph 14

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.39705675702467147 - Time: 0.8317708969116211

None

Graph 15

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.1076973646763904 - Time: 0.6713201999664307
None

Graph 16

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5195958328469317 - Time: 0.7298681735992432

None

Graph 17

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5224072535037649 - Time: 0.6966478824615479
None

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File - unknown
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.4516002911853718 - Time: 0.7748339176177979
None
      Graph 19
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.8013746780583304 - Time: 0.6898560523986816
None
Test for graphsize 12
      Graph 0
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.6150486301365916 - Time: 5.13885498046875
None
      Graph 1
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.082427022828277
                       Time: 5.6966493129730225
None
      Graph 2
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.38475651674715294 - Time: 7.099650859832764
None
      Graph 3
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.560367844286219 - Time: 4.699713945388794
None
      Graph 4
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.44488729516555026 - Time: 9.350045919418335
None
      Graph 5
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.8431061084135649 - Time: 4.94599986076355
 None
```

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Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.7639394580685206 - Time: 7.961661100387573
None
     Graph 7
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.7792806079405281 - Time: 4.749245882034302
None
     Graph 8
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.2591533310888252 - Time: 5.059478998184204
None
     Graph 9
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5954578349497766 - Time: 4.574815988540649
None
     Graph 10
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6059122564815951 - Time: 4.71480917930603
None
     Graph 11
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.702289163217074 - Time: 5.500695705413818
None
     Graph 12
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8736191784041978
                       Time: 5.175499200820923
None
     Graph 13
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6561829802817627 - Time: 4.84066104888916
None
     Graph 14
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
```

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File - unknown
 1.4616685125603937 - Time: 4.688093900680542
None
     Graph 15
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5777465750025783 - Time: 6.018703937530518
None
     Graph 16
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.1582704298219042 - Time: 4.854898929595947
None
     Graph 17
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.6098161453602629 - Time: 4.9198079109191895
 None
     Graph 18
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.2399354793810673 - Time: 4.864099025726318
None
     Graph 19
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 2.201714058246395 - Time: 4.5657126903533936
None
Test for graphsize 14
     Graph 0
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.2801666702618846 - Time: 8.939882040023804
None
     Graph 1
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.9910337078295726 - Time: 4.801637172698975
None
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

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File - unknown
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None

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Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.7896917547366726
                   - Time: 4.401094913482666
None
     Graph 3
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.32406091265609405 - Time: 9.309263229370117
None
     Graph 4
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.7434000061760955
                   - Time: 4.474151372909546
None
     Graph 5
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.5577618317755935 - Time: 9.06033205986023
None
     Graph 6
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8226613726159684 - Time: 9.91609501838684
None
     Graph 7
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.072236044635126 - Time: 4.8500800132751465
None
     Graph 8
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8416300286743024 - Time: 8.688061952590942
None
     Graph 9
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.4431815381742013 - Time: 9.199119806289673
None
     Graph 10
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6521493604439357 - Time: 9.028318881988525
```

```
Graph 11
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.1170498230417039 - Time: 4.611820936203003
None
     Graph 12
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 8.937710046768188
0.6293034223394756
None
     Graph 13
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.0358230118990974 - Time: 4.694100856781006
None
     Graph 14
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.0806199836372201
                   - Time: 8.925031900405884
None
     Graph 15
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6937347837068302 - Time: 4.556859970092773
None
     Graph 16
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8614475795839951 - Time: 8.898847103118896
None
     Graph 17
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9888065387748739 - Time: 8.669579029083252
None
     Graph 18
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8831225677352705 - Time: 8.5940420627594
```

None

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Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.7870756382366793 - Time: 9.039024829864502
None
Test for graphsize 16
     Graph 0
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.822906633005644 - Time: 8.87603497505188
None
     Graph 1
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.02240091914733 - Time: 8.858113050460815
None
     Graph 2
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8919407950075495 - Time: 9.253097295761108
None
     Graph 3
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8449224007561682 - Time: 8.506741285324097
None
     Graph 4
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6262725262860229
                   - Time: 8.758916854858398
None
     Graph 5
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
3.2643274461642093 - Time: 9.294989109039307
None
     Graph 6
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.3304850667358323 - Time: 8.787842035293579
None
```

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Graph 7
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.0160665942924254 - Time: 9.352260112762451
None
     Graph 8
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9121356510589749 - Time: 9.203119277954102
None
     Graph 9
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9543621161819686 - Time: 8.991829872131348
None
     Graph 10
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8229066330056085 - Time: 9.092981815338135
None
     Graph 11
          Running 4_split_ours_iterative_at_most_gbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.0224009191474863 - Time: 8.830744743347168
None
     Graph 12
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8919407950071729 - Time: 9.08840012550354
None
     Graph 13
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8449224007551734 - Time: 8.726022958755493
None
     Graph 14
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.6262725262863498 - Time: 9.085237979888916
None
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

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File - unknown
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Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5325696747462771 - Time: 9.325807094573975
None
     Graph 16
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9404045759696231 - Time: 9.484206199645996
None
     Graph 17
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.11076397406012 - Time: 9.981905221939087
None
     Graph 18
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.333519919451696 - Time: 9.77725625038147
None
     Graph 19
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.3821471550545326 - Time: 9.41556715965271
None
Test for graphsize 18
     Graph 0
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.22958232134755 - Time: 9.193498134613037
None
     Graph 1
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9642698128749885 - Time: 9.850075960159302
None
     Graph 2
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.7324635199480483 - Time: 11.281370878219604
None
```

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File - unknown
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9489845542806634 - Time: 8.964164018630981
None
      Graph 4
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5284612501546704 - Time: 9.641425132751465
None
      Graph 5
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.5069596362593671 - Time: 9.67546010017395
None
      Graph 6
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.4521889657959477 - Time: 9.468238115310669
 None
      Graph 7
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.0738307702452161 - Time: 9.455452919006348
None
      Graph 8
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9280845774882422 - Time: 9.513120174407959
None

Graph 9

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.2154281540707146 - Time: 9.159919738769531

None

Graph 10

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.4225599222920451 - Time: 4.592555999755859

None

Graph 11

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.2671337334371202 - Time: 4.757670164108276

```
Graph 12
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.550146932461665 - Time: 4.773006916046143
None

Graph 13

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.23850950742086496 - Time: 9.62900185585022

None

Graph 14

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.5123579767928774 - Time: 9.383930921554565
None

Graph 15

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.7876205949141379 - Time: 8.852765321731567

None

Graph 16

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.0064599804971195 - Time: 9.506654977798462
None

Graph 17

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9666033216792229 - Time: 9.24282693862915

None

Graph 18

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.939148613571426 - Time: 9.122681856155396
None

Graph 19

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

0.8620304898268571 - Time: 9.781569004058838

None

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Test for graphsize 20
      Graph 0
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.2286198003634965 - Time: 9.612823247909546
None
      Graph 1
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.146804753056955 - Time: 9.39419412612915
None
      Graph 2
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.1055289628951073 - Time: 9.893245935440063
 None
      Graph 3
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.9308740224380188 - Time: 9.560242891311646
None
      Graph 4
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.759847876834371 - Time: 9.88477635383606
None
      Graph 5
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 0.8329240585346938
                    - Time: 9.192559957504272
None
      Graph 6
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.2720059272304098 - Time: 9.42564606666565
None
      Graph 7
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 1.010634009675634 Time: 9.45714807510376 None

```
Graph 8
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.9555164697122933 - Time: 9.489618062973022

None

Graph 9

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.1140725334617159 - Time: 9.739835023880005

None

Graph 10

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.1086714555953918 - Time: 9.174633264541626
None

Graph 11

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

1.3901409670808889 - Time: 9.058498859405518

None

Graph 12

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.8273616108029387 - Time: 10.035771131515503
None

Graph 13

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.5096587190417594 - Time: 9.817655086517334
None

Graph 14

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

1.142733334196528 - Time: 9.805604934692383

None

Graph 15

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.338581728684872 - Time: 9.178306102752686
None

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Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

1.4018693972730745 - Time: 9.334906101226807

None

Graph 17

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
```

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

Graph 18

None

1.516596878262611 - Time: 9.724164247512817

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.0512632971854572 - Time: 9.682354927062988

None

Graph 19

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.7348132032658938 - Time: 9.349548101425171

None

Test for graphsize 22

Graph 0

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.3789109416829959 - Time: 9.883036136627197
None

Graph 1

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.1445445552090874 - Time: 9.800477981567383
None

Graph 2

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

1.1527341057839138 - Time: 9.504785060882568

None

Graph 3

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
0.8386235254101209 - Time: 9.622864723205566
None

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Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.4141131952076123 - Time: 9.368732213973999
None
     Graph 5
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.2311338513693997 - Time: 10.047477006912231
None
     Graph 6
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.9295166795682377 - Time: 9.316869974136353
None
     Graph 7
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.4769895353490199 - Time: 9.71098017692566
None
     Graph 8
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.221000462496292 - Time: 9.609446048736572
None
     Graph 9
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.3166678866445665 - Time: 10.15717101097107
None
     Graph 10
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.4844338943951811
                       Time: 9.633976936340332
None
     Graph 11
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.2221165947339898 - Time: 9.618018627166748
None
     Graph 12
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
```

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File - unknown
 1.67675443249464 - Time: 9.637502908706665
None
     Graph 13
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.7808146272583585 - Time: 9.30306887626648
None
     Graph 14
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.3645584596682312 - Time: 9.903898000717163
None
     Graph 15
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.2948763920489057 - Time: 9.939110040664673
None
     Graph 16
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.3757912013005225 - Time: 9.53650712966919
None
     Graph 17
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.108844836437882 - Time: 9.562356948852539
None
     Graph 18
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.3414015011873701
                    - Time: 9.593352794647217
None
     Graph 19
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.7448801101228497 - Time: 9.99120306968689
None
Test for graphsize 24
     Graph 0
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
```

Page 375 of 395

None

```
File - unknown
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.7010052388675874 - Time: 17.557003021240234
None
     Graph 1
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.3886139829530038 - Time: 17.637177228927612
None
     Graph 2
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                    - Time: 21.287013292312622
 1.5862663420935306
None
     Graph 3
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.5924746022500145 - Time: 14.13917589187622
None
     Graph 4
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.57079474839486 - Time: 17.884476900100708
None
     Graph 5
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.3426834078204877 - Time: 18.028852939605713
None
     Graph 6
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                    - Time: 13.868996858596802
 1.4906366941049853
None
     Graph 7
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.3171557162028549 - Time: 14.121216058731079
None
     Graph 8
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.62116363968439 - Time: 13.617082118988037
```

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Graph 9
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.1355862586534258 - Time: 13.010859966278076
None
     Graph 10
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 16.82260799407959
1.3721065249381823
None
     Graph 11
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.5708787552799706 - Time: 17.625072956085205
None
     Graph 12
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.3241178248075869
                   - Time: 18.099682092666626
None
     Graph 13
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.811060936422372 - Time: 17.598678827285767
None
     Graph 14
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.816278325728014 - Time: 17.429321765899658
None
     Graph 15
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.4883841820783488 - Time: 13.454503297805786
None
     Graph 16
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.3263648141889561 - Time: 17.760417938232422
None
```

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Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.7055631245185978 - Time: 13.981025218963623
None
     Graph 18
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.447440198799562 - Time: 17.303688287734985
None
     Graph 19
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.9196240992240305 - Time: 18.929780960083008
None
Test for graphsize 26
     Graph 0
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 19.182588815689087
1.9275312464485168
None
     Graph 1
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.9082577259881361 - Time: 18.020527124404907
None
     Graph 2
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.5729638131652308
                   - Time: 17.734216928482056
None
     Graph 3
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.9552111194626889 - Time: 18.110188722610474
None
     Graph 4
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.5029838005635696 - Time: 18.254651308059692
None
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 1.4744191862071574 - Time: 17.729339838027954

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 2.1619977227798017 - Time: 18.0836341381073 None

Graph 7

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 1.6961258350955077 - Time: 17.800737857818604 None

Graph 8

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 1.7862359408452448 - Time: 18.44915509223938 None

Graph 9

Running 4_split_ours_iterative_at_most_gbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 2.074759205108485 - Time: 18.528937101364136 None

Graph 10

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 1.837086002332633 - Time: 18.828768014907837 None

Graph 11

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 1.2409073975555813 - Time: 18.749113082885742 None

Graph 12

Running 4_split_ours_iterative_at_most_qbsolv_parallel... Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel: 1.6795941655149207 - Time: 18.274452924728394 None

Graph 13

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Page 379 of 395

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Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.9878145093575128
                   - Time: 18.389475107192993
None
     Graph 14
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.6557715426500152 - Time: 18.7534019947052
None
     Graph 15
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.9392763337633028
                   - Time: 19.63265895843506
None
     Graph 16
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.679067250405403 - Time: 18.240520000457764
None
     Graph 17
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.7729039084590497 - Time: 18.622321128845215
None
     Graph 18
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.0167658061418194 - Time: 17.81357216835022
None
     Graph 19
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
                   - Time: 18.182013988494873
2.2023526251088157
None
Test for graphsize 28
     Graph 0
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.102415248660037 - Time: 17.848723888397217
None
```

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File - unknown
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.7564689501037805 - Time: 18.321768045425415
None
     Graph 2
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.9487780294415487 - Time: 20.725348949432373
 None
     Graph 3
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.7278676435872669 - Time: 19.248840808868408
None
     Graph 4
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.9519000169963547 - Time: 19.398908853530884
None
     Graph 5
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 1.844443706537085 - Time: 19.14222002029419
None
     Graph 6
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.751562178646921 - Time: 18.373201847076416
None
     Graph 7
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 2.147540277130666
                   - Time: 18.166454076766968
None
     Graph 8
           Running 4_split_ours_iterative_at_most_qbsolv_parallel...
           Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
 2.450492598571003 - Time: 19.44779086112976
 None
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.632817062897253 - Time: 18.256250858306885

```
Graph 10
```

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.0368985620604505 - Time: 18.844537019729614

None

Graph 11

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

1.824350813344246 - Time: 18.41411805152893

None

Graph 12

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.928146562659343 - Time: 18.34483289718628

None

Graph 13

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.6321889486832077 - Time: 18.342433214187622
None

Graph 14

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:

1.634885555046111 - Time: 18.478240966796875

None

Graph 15

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.2890933628745316 - Time: 18.937185049057007

None

Graph 16

Running 4_split_ours_iterative_at_most_qbsolv_parallel...

Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.569843289461332 - Time: 18.62062430381775

None

Graph 17

Running 4_split_ours_iterative_at_most_qbsolv_parallel...
Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
1.8604912623196768 - Time: 22.95172619819641
None

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Graph 18
```

```
Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.2661988687358203 - Time: 17.974148988723755
None
     Graph 19
          Running 4_split_ours_iterative_at_most_qbsolv_parallel...
          Coalition structure value for 4_split_ours_iterative_at_most_qbsolv_parallel:
2.2211219918747673 - Time: 19.61055588722229
Test for graphsize 4
     Graph 0
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
028954843277226416 - Time: 0.5198829174041748
None
     Graph 1
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
5708825220945002 - Time: 0.632390022277832
None
     Graph 2
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
00712843874983804 - Time: 0.531684160232544
None
     Graph 3
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
06152625301075432
                  - Time: 0.24261808395385742
None
     Graph 4
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
06396917936914548 - Time: 0.24515318870544434
None
     Graph 5
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
10380144569396066
                      Time: 0.23868608474731445
None
```

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      Graph 6
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 05554082850606079 - Time: 0.2574939727783203
None
      Graph 7
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 038931269477402 - Time: 0.6163008213043213
None
      Graph 8
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 042007430425400116 - Time: 0.2476508617401123
None
      Graph 9
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 0010690439865044254 - Time: 0.5722830295562744
None
      Graph 10
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 2197142340515299 - Time: 0.5143508911132812
None
      Graph 11
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 2770576453315883 - Time: 0.5145828723907471
None
      Graph 12
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
```

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0. 06753117632182892 - Time: 0.23595714569091797 None

Graph 13

Running 4_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0. 01673789206527232 - Time: 0.25408387184143066 None

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File - unknown
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
03599345154763256 - Time: 0.259519100189209
None
      Graph 15
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 10695262062797894 - Time: 0.5146791934967041
None
      Graph 16
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 06090302529973002 - Time: 0.32628512382507324
None
      Graph 17
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 37306828772501177 - Time: 0.6471748352050781
None
      Graph 18
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 06615960564805334 - Time: 0.23916006088256836
None
      Graph 19
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4\_split\_GCSQ\_exactly\_qbsolv\_parallel: 0.
 24253747559571082 - Time: 0.2541639804840088
None
Test for graphsize 6
      Graph 0
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 4037548984604129 - Time: 0.6644971370697021
None
      Graph 1
```

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

14602401068624005 - Time: 0.6867280006408691

None

```
Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
12639840396634128 - Time: 0.6157858371734619
None
     Graph 3
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
1447468748308225 - Time: 0.5748579502105713
None
     Graph 4
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
2074140190053555 - Time: 0.762235164642334
None
     Graph 5
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
21629539194693592 - Time: 0.90425705909729
None
     Graph 6
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
1032573088773745 - Time: 0.8018050193786621
None
     Graph 7
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
08555938986791745 - Time: 0.8332870006561279
None
     Graph 8
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
13737909873700005 - Time: 0.7023518085479736
None
     Graph 9
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
23536312556377226 - Time: 0.7715351581573486
None
     Graph 10
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
```

Running 4_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0. 11297024288754187 Time: 0.4827260971069336 None

```
Graph 19
```

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.9194011936254896 - Time: 0.5209662914276123

None

Test for graphsize 8

Graph 0

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

4037548984604129 - Time: 0.6456277370452881

None

Graph 1

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

14602401068624005 - Time: 0.6312332153320312

None

Graph 2

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

12639840396634128 - Time: 0.6326591968536377

None

Graph 3

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

1447468748308225 - Time: 0.5584468841552734

None

Graph 4

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

2074140190053555 - Time: 0.6974117755889893

None

Graph 5

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

21629539194693592 - Time: 0.7064788341522217

None

Graph 6

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

1032573088773745 - Time: 0.7157223224639893

None

```
Graph 7
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
08555938986791745 - Time: 0.6421570777893066
None
     Graph 8
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
13737909873700005
                  - Time: 0.6722011566162109
None
     Graph 9
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
23536312556377226 - Time: 0.6034348011016846
None
     Graph 10
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
2985191363911497 - Time: 0.8681290149688721
None
     Graph 11
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
1310541476422742 - Time: 0.6268157958984375
None
     Graph 12
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
20825406819544412 - Time: 0.6262199878692627
None
     Graph 13
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
2924666692276716 - Time: 0.5919420719146729
None
     Graph 14
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
8758237641815896 - Time: 0.5504128932952881
None
```

```
Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
29878868277545223 - Time: 0.7322201728820801
None
     Graph 16
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
5885124948454461 - Time: 0.7211530208587646
None
     Graph 17
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
19838467424926165 - Time: 0.6384861469268799
None
     Graph 18
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
11297024288754187 - Time: 0.6658103466033936
None
     Graph 19
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
9194011936254896 - Time: 0.633342981338501
None
Test for graphsize 10
     Graph 0
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
850779136467672 - Time: 0.7209639549255371
None
     Graph 1
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 2.
113205218829208
                - Time: 0.6259589195251465
None
     Graph 2
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
33784569217207405 - Time: 0.6274049282073975
None
```

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

Graph 10

Running 4_split_GCSQ_exactly_qbsolv_parallel... Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0. 6588998527449874 - Time: 0.8504049777984619 None

Graph 11

Running 4_split_GCSQ_exactly_qbsolv_parallel...

```
File - unknown
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 6441125032737318 - Time: 0.967893123626709
None
     Graph 12
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 6905379099888833 - Time: 0.818911075592041
None
     Graph 13
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 2492454155493249 - Time: 1.1896259784698486
None
     Graph 14
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 39705675702467147 - Time: 0.6954817771911621
None
     Graph 15
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 1.
 1076973646763904 - Time: 0.6668717861175537
None
     Graph 16
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
5195958328469317 - Time: 0.8337578773498535
None
     Graph 17
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 5224072535037649 - Time: 0.8035593032836914
None
     Graph 18
           Running 4_split_GCSQ_exactly_qbsolv_parallel...
           Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
 4516002911853718 - Time: 0.7593040466308594
None
```

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 1.

8013746780583304 - Time: 0.7558579444885254

None

```
Test for graphsize 12
     Graph 0
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
6150486301365916 - Time: 6.331121921539307
None
     Graph 1
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 1.
082427022828277 - Time: 5.2041919231414795
None
     Graph 2
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
38475651674715294 - Time: 4.854654788970947
None
     Graph 3
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
560367844286219 - Time: 5.37251877784729
None
     Graph 4
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
44488729516555026 - Time: 9.536535024642944
None
     Graph 5
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
8431061084135649 - Time: 6.132367134094238
None
     Graph 6
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
7639394580685206 - Time: 5.54541802406311
None
     Graph 7
          Running 4_split_GCSQ_exactly_qbsolv_parallel...
          Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
7792806079405281 - Time: 6.625585079193115
```

```
Graph 8
```

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 1.
2591533310888252 - Time: 5.379065036773682
None

Graph 9

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

5954578349497766 - Time: 5.285310983657837

None

Graph 10

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

6059122564815951 - Time: 4.954988241195679

None

Graph 11

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.702289163217074 - Time: 6.04985785484314

None

Graph 12

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

8736191784041978 - Time: 5.6223390102386475

None

Graph 13

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
6561829802817627 - Time: 5.0537028312683105

None

Graph 14

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 1.

4616685125603937 - Time: 5.824923992156982

None

Graph 15

Running 4_split_GCSQ_exactly_qbsolv_parallel...

Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.

5777465750025783 - Time: 5.939502000808716

None

```
File-unknown
Graph 16

Running 4_split_GCSQ_exactly_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 1.
1582704298219042 - Time: 5.956796884536743

None

Graph 17

Running 4_split_GCSQ_exactly_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
6098161453602629 - Time: 5.075561046600342

None

Graph 18

Running 4_split_GCSQ_exactly_qbsolv_parallel...
Coalition structure value for 4_split_GCSQ_exactly_qbsolv_parallel: 0.
2399354793810673 - Time: 4.818993091583252

None
```

Running 4_split_GCSQ_exactly_qbsolv_parallel...