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\$ python -m hw4.hw4

```
rank , name , med , iqr

1 , 'zines , 64 , 44 ( * ),28.00,32.00,64.00,64.00,76.00

2 , TPBs , 176 , 80 ( * ---- | ),128.00,128.00,176.00,208.00,321.00

3 , comp , 361 , 82 ( - *-- ),312.00,316.00,361.00,398.00,436.00

3 , phil , 524 , 342 ( --- | *----- ),290.00,346.00,524.00,524.00,688.00
```

```
"csc710sbse: hw4: Witschey"
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                                                       Page 1/13
 2014-10-06 20:02:44.540058
 Schaffer
 SimulatedAnnealer
 era length: 50, initialized: 2014-10-06 20:02:44.540153, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
 earcher: SimulatedAnnealer, terminate early: False
  2.2
 Best: 2.1666
 total time: 0.012s
             mean time: 0.012s
             *, 2.17, 2.17, 2.17, 2.17
 MaxWalkSat
 era_length: 50, initialized: 2014-10-06 20:02:44.552281, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
 earcher: MaxWalkSat, terminate_early: False
  2.1e+02 .....++....
 2.0 ......
  2.0
30 Best: 2.0079
 total time: 0.005s
            mean time: 0.005s
               *, 2.01, 2.01, 2.01, 2.01, 2.01
 ______
 ______
 Fonseca
40 SimulatedAnnealer
 era length: 50, initialized: 2014-10-06 20:02:44.556945, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
 earcher: SimulatedAnnealer, terminate early: False
  2.0 ?.!+.?.?.+..!+.?..?..+...+..?..?..+..?..?..+..?..?..+..?..
  1.0 +.?....+..?..+..?..+..?..+..?..+......
  1.0
```

```
"csc710sbse: hw4: Witschey"
                                                                                                                                                                                                                                                                     Page 2/13
Oct 06, 14 20:03
        Best: 1.0313
        total time: 0.019s
                                                               mean time: 0.019s
                                                                    *, 1.03, 1.03, 1.03, 1.03, 1.03
        MaxWalkSat
        era_length: 50, initialized: 2014-10-06 20:02:44.576150, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
        earcher: MaxWalkSat, terminate early: False
           2.0 +.....
          1.9
 65 Best: 1.8788
        total time: 0.006s
                                                               mean time: 0.006s
                                                                  *, 1.88, 1.88, 1.88, 1.88, 1.88
       ______
        ______
        Kursawe
 75 SimulatedAnnealer
        era length: 50, initialized: 2014-10-06 20:02:44.582077, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
        earcher: SimulatedAnnealer, terminate early: False
          2.3 ?.!+.!+...!+.!+.?...?.+.?..+..+...?.!+.!+.?.!+..?.!+..?..+.?..+.?..+.?..+.?...?.
        -1.1e+01 +...? .?.+...? .?.+...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? ...+..? 
 80 -1.3e+01 ..+..?..+...?..+....?..+...+....?.?..+...+....
        -1.3e+01 + ... ?. +... ?... +... ?... +... ?... +... ?... ?.. +... ?.. +... ?... ?.. +... ?... ?.. +... ?... ?... +... ?... ?... ?... +... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?.. ?.. ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?... ?.
        -1.4e+01 ....?..+..?...+..+.+.+.+..+...?...?.
        -1.4e+01 .+.?...+.....?.?.?..?.+.+....?...
        -1.4e+01 ....+...?.+...?.+...?.+...+..?.?..+...+..?.?..+...?.
        -1.4e+01
        Best: -13.5806
        total time: 0.034s
                                                               mean time: 0.034s
                                                                             , -13.58, -13.58, -13.58, -13.58
 95
        MaxWalkSat
        era_length: 50, initialized: 2014-10-06 20:02:44.657892, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
        earcher: MaxWalkSat, terminate early: False
```

```
"csc710sbse: hw4: Witschey"
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                                                         Page 3/13
  2.3 +.....
-2.7 .....
 -2..7
105 Best: -2.6944
 total time: 0.006s
           mean time: 0.006s
                , -2.69, -2.69, -2.69, -2.69
______
 ZDT1
115 SimulatedAnnealer
 era length: 50, initialized: 2014-10-06 20:02:44.663673, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
 earcher: SimulatedAnnealer, terminate early: False
  9.6 !+.?.?.?.!+.!+.!+.?.?.?.?.+.?.+.?.+.?..+.?.?.+...?.+.?..+.?..+.?..+.?..+..?..+..?..+...?..+...
  7.6 +.+.?.+.+..?.?.+...?.+...?.+...?.+...?.+..?.+...?.+...!+..?.....+.!+..?.....+.
  6.6 .?...+....?..+.+.?..+.?..+.?..+..+.?...+.?....
  6.6 .?.....+..+..+...?..+...+....+...?..+...?..+...?..+..?..+..?..+..?..+..?..+..
  6.6
130 Best: 6.6039
             mean time: 0.049s
 total time: 0.049s
              *, 6.60, 6.60, 6.60, 6.60,
135 MaxWalkSat
 era_length: 50, initialized: 2014-10-06 20:02:44.713266, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
 earcher: MaxWalkSat, terminate early: False
  9.6 +.....++....
  8.7 ..............
  8.7
 Best: 8.7068
145 total time: 0.005s
             mean time: 0.005s
                *, 8.71, 8.71, 8.71, 8.71, 8.71
```

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"csc710sbse: hw4: Witschey"
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                                                         Page 4/13
  ______
ZDT3
 SimulatedAnnealer
155 era length: 50, initialized: 2014-10-06 20:02:44.718164, iterations: 1000, log eras: True, p mutation: 0.3333333333333, s
  earcher: SimulatedAnnealer, terminate early: False
  1.1 .?.+.+..+..?.?.+..?.+..?.+..+..+..+...+...+....+....+....+....
  1.1
 Best: 1.1469
              mean time: 0.036s
  total time: 0.036s
                *, 1.15, 1.15, 1.15, 1.15
170
 MaxWalkSat
 era_length: 50, initialized: 2014-10-06 20:02:44.754609, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
 earcher: MaxWalkSat, terminate early: False
  1.6 +....+...++...
  1.5
180 Best: 1.5060
  total time: 0.006s
              mean time: 0.006s
                *, 1.51, 1.51, 1.51, 1.51
 ______
 Viennet3
190 SimulatedAnnealer
 era_length: 50, initialized: 2014-10-06 20:02:44.806509, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
 earcher: SimulatedAnnealer, terminate_early: False
  1.6e+01 ....?.+.+.+.+..+..?.+..?.+..?..+..?..+..?..+...?..+...?..+...?..+...?..+...
  1.6e+01 ..?....+...?.+....+.?..+...+...+.?.?..+...+.?..+.....
  1.6e+01 .+...+...?...+...+...+....+...?.+....
  1.6e+01 ?...+....+...?...+...+...?..+...+...
```

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"csc710sbse: hw4: Witschey"
                                                            Page 5/13
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  1.6e+01 .....?..+....?..+..+..+..+...+.?..+..?..+..
  1.6e+01 .+....?.+..+...?...+..+...?....+..+...?.....+...
 1.6e+01
 Best: 16.0571
  total time: 0.028s
              mean time: 0.028s
                 *, 16.06, 16.06, 16.06, 16.06
205
 MaxWalkSat
 era_length: 50, initialized: 2014-10-06 20:02:44.836958, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
  earcher: MaxWalkSat, terminate_early: False
  2.8e+01 +....
  1.7e+01 .....
  1.7e+01 .....
  1.7e + 01
  Best: 17.4286
  total time: 0.004s
              mean time: 0.004s
                 *, 17.43, 17.43, 17.43, 17.43
220
  ______
  _____
  ########### Part 5 #############
  2014-10-06 20:02:44.841486
  Schaffer
  SimulatedAnnealer
  era_length: 50, initialized: 2014-10-06 20:02:45.359971, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
  earcher: SimulatedAnnealer, terminate_early: True
  2.3e+01 ?....?.+....?.+......+.?...+.?...+.?...+.?...?.+...?....?.+...
  2.0
 Best: 2.0504
  total time: 0.533s
              mean time: 0.018s
               *- , 2.00, 2.00, 2.01, 2.04, 2.17
245
 MaxWalkSat
```

```
"csc710sbse: hw4: Witschey"
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                                                             Page 6/13
  era length: 50, initialized: 2014-10-06 20:02:45.490455, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
  earcher: MaxWalkSat, terminate early: True
  2.8e+01 .....++...+..
  2.1
 Best: 9.3754
  total time: 0.112s
              mean time: 0.004s
                  , 2.01, 2.22, 4.32, 10.55, 23.34
  ______
  ______
  Fonseca
  SimulatedAnnealer
  era_length: 50, initialized: 2014-10-06 20:02:46.314736, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
  earcher: SimulatedAnnealer, terminate_early: True
  2.0 !+...!+.?.!+.?.....+...+...!+.!+.?..?..+...?..+..!+.?..+..?..+..!+.?..+..?..+..!+.?..+..?..+..
 1.2 !+.?.?.+.?...+..+.+.+.+..?.+..?....?..+.+.?.+.?....
  1.1
 Best: 1.0431
  total time: 0.828s
               mean time: 0.028s
              * , 1.00, 1.02, 1.03, 1.05, 1.10
280
 MaxWalkSat
  era_length: 50, initialized: 2014-10-06 20:02:46.538240, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
  earcher: MaxWalkSat, terminate early: True
  Best: 1.4332
              mean time: 0.006s
  total time: 0.168s
              ----, 1.08, 1.21, 1.33, 1.62, 1.95
  ______
```

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"csc710sbse: hw4: Witschey"
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                                                                                                                                                               Page 7/13
     ______
     Kursawe
     SimulatedAnnealer
     era length: 50, initialized: 2014-10-06 20:02:47.297577, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
     earcher: SimulatedAnnealer, terminate early: True
      0.64 ?.!+.!+..?..+....?.?.?...?.+.!+.?.?....?..+...?..+..?.+.....+..?.+...?..+..?.
305 -8.5 +.?.+...?..+...?..+....+....+.....+.....+.....+....
     -1.2e+01.+.?..?.+...+.+.+...?.+...?.+...?.+...?.+...?.+...?.
     -1.2e+01
     Best: -12.6202
                                   mean time: 0.026s
315 total time: 0.774s
                                               , -13.58, -13.31, -12.55, -12.26, -11.27
     MaxWalkSat
320 era_length: 50, initialized: 2014-10-06 20:02:47.475659, iterations: 1000, log_eras: True, p_mutation: 0.3333333333333, s
     earcher: MaxWalkSat, terminate early: True
      0.74 ......
      0.74 ..............
     325 -1.2e+01 .....
     -1.2e+01
     Best: -8.1993
     total time: 0.156s mean time: 0.005s
                          | ----- , -11.94, -10.25, -8.49, -5.72, -3.07
     ______
335
     ZDT1
     SimulatedAnnealer
     era_length: 50, initialized: 2014-10-06 20:02:49.258319, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
     earcher: SimulatedAnnealer, terminate_early: True
      9.3 + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... 
      7.5 +..+.+.?.+.?.+.?.+.?.+.?.+.?.+.+.?.+.+..?.+.?..+..?.+..?.+..?.+..?.+..?.+..?.+..?..+..?..
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"csc710sbse: hw4: Witschey"
                                                                                                                                                                  Page 8/13
Oct 06, 14 20:03
      7.5
     Best: 6.9392
350 total time: 1.784s
                                       mean time: 0.059s
                                        - *- , 6.56, 6.73, 6.90, 7.15, 7.46
     MaxWalkSat
355 era_length: 50, initialized: 2014-10-06 20:02:49.490820, iterations: 1000, log_eras: True, p_mutation: 0.3333333333333, s
     earcher: MaxWalkSat, terminate_early: True
      8.6
     Best: 9.0866
     total time: 0.197s
                                       mean time: 0.007s
                                        * - , 8.43, 8.66, 9.11, 9.53, 10.03
     ______
     ______
370
     ZDT3
     SimulatedAnnealer
     era length: 50, initialized: 2014-10-06 20:02:51.139423, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
     earcher: SimulatedAnnealer, terminate early: True
375
      5.8 ?.!+.?.?.?.?.?.?.!+.?..?..+.+.?.?...+...?.?.+..!+.?..+...?..?..+...!+.?..+....
      2.1 + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... + ... 
      1.1 ...?..+...?.+.?..+..?..+...?..?..?..?..+....?..+.....
    1.1 ..?...+...+.?..+.+.....?.+....+..?..+...+...
      1.1
     Best: 1.1790
     total time: 1.623s
                                       mean time: 0.054s
                                      -*-- , 1.10, 1.13, 1.16, 1.21, 1.29
     MaxWalkSat
     era length: 50, initialized: 2014-10-06 20:02:51.399857, iterations: 1000, log eras: True, p mutation: 0.333333333333, s
     earcher: MaxWalkSat, terminate early: True
```

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"csc710sbse: hw4: Witschey"
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                                                     Page 9/13
395
  5.7
 Best: 5.1809
 total time: 0.206s
            mean time: 0.007s
         ----- , 2.28, 3.98,
                         5.01, 6.50,
                                 8.65
 ______
 ______
410 Viennet3
 SimulatedAnnealer
 era_length: 50, initialized: 2014-10-06 20:02:52.368551, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
 earcher: SimulatedAnnealer, terminate_early: True
 1.6e+01 ?..?.?..+..+..?....+..?.?..+...+..?...+..?...+..?...+...?...+...?...+...
  1.6e+01 .....?..+.?....?..+.+....?..?..+...
  1.6e + 01
425 Best: 16.0871
 total time: 0.967s
            mean time: 0.032s
               * , 15.98, 16.00, 16.03, 16.07, 16.47
430 MaxWalkSat
 era_length: 50, initialized: 2014-10-06 20:02:52.543769, iterations: 1000, log_eras: True, p_mutation: 0.333333333333, s
 earcher: MaxWalkSat, terminate early: True
  2.2e+01 .....
  2.2e+01 .....+....
 1.9e+01 .....+....
  1.7e + 01
 Best: 17.7627
440 total time: 0.151s
             mean time: 0.005s
           -*--- , 16.38, 16.89, 17.30, 17.86, 20.49
 ______
```

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|----|--------------|--|-----------------|-----|-----------------------------|--|------------|
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|    | ##########   | ## Part 6 ###                          |                 | Ħ   |                             |  |            |
|    | rank ,       | name ,                                 | med ,           | iqr |                             |  |            |
| 50 | 1 .          | <br>SA ,                               | 3 ,             | 0 ( | * ).3.62.                   | 3.62, 3.71, 3.71, 3.89                           |            |
|    | 2 ,          | SA ,                                   | 3 ,             | 0 ( | * ), 3.83,                  | 3.83, 3.83, 3.83, 3.83                           |            |
|    | 3 ,          | SA ,                                   | 3 ,             |     |                             | 3.97, 3.97, 3.97, 3.97                           |            |
|    | 4 .          | SA ,                                   | 4 ,             | 0 ( |                             | 4.20, 4.20, 4.20, 4.29                           |            |
|    | 4 .          | SA ,                                   | $\frac{1}{4}$ , | 0 ( |                             | 4.21, 4.21, 4.21, 4.21                           |            |
| 55 | 5,           | SA ,                                   | 4 ,             | 0 ( |                             | 4.26, 4.26, 4.26, 4.26                           |            |
|    | 6.           | SA ,                                   | 4 ,             | 0 ( |                             | 4.31, 4.31, 4.31, 4.31                           |            |
|    | 6.           | SA ,                                   | 4 ,             | 0 ( |                             | 4.31, 4.31, 4.31, 4.31                           |            |
|    | 7 .          | SA ,                                   | 4 ,             | 0 ( |                             | 4.36, 4.36, 4.36, 4.36                           |            |
|    | 8            | SA ,                                   | 4 ,             | 0 ( |                             | 4.55, 4.55, 4.55, 4.55                           |            |
| 60 | 9,           | SA ,                                   | 4 ,             | 0 ( | ,,,                         | 4.58, 4.58, 4.58, 4.58                           |            |
| 50 | 9,           | SA ,                                   | 4 ,             | 0 ( |                             | 4.58, 4.58, 4.58, 4.58                           |            |
|    | 10 ,         | SA ,                                   | 4 ,             | 0 ( | // 1.33/                    | 4.69, 4.69, 4.69, 4.69                           |            |
|    | 10 ,         | SA ,                                   | 4 ,             | 0 ( |                             | 4.69, 4.69, 4.69, 4.69                           |            |
|    | 11 ,         | SA ,                                   | 4 ,             | 0 ( |                             | 4.74, 4.74, 4.74, 4.74                           |            |
| 65 | 11 ,         | SA ,                                   | 4 ,             | 0 ( | // = - / = /                | 4.75, 4.75, 4.75, 4.75                           |            |
| 55 | 12 ,         | SA ,                                   | 4 ,             | 0 ( | /, 1.75,                    | 4.79, 4.79, 4.85, 4.92                           |            |
|    | 12 ,         | SA ,                                   | 4 ,             | 0 ( |                             | 4.97, 4.97, 4.97, 4.97                           |            |
|    | 13 ,         | SA ,<br>SA ,                           | Ŧ ,             | 0 ( | // 1.21/                    | 5.06, 5.06, 5.06, 5.06                           |            |
|    | 14 ,         | SA ,<br>SA ,                           | 5,              | 0 ( |                             | 5.09, 5.09, 5.09, 5.09                           |            |
| 70 | 15 ,         | SA ,<br>SA ,                           |                 | 0 ( |                             | 5.21, 5.21, 5.21, 5.21                           |            |
| 70 | 15 ,         | SA ,<br>SA ,                           | 5,              | 0 ( |                             | 5.21, 5.21, 5.21, 5.21<br>5.37, 5.37, 5.37, 5.37 |            |
|    | 15 ,         |  | 5 ,<br>5 ,      |     |                             |  |            |
|    | 16 ,         | SA ,<br>SA ,                           |                 | 0 ( | // 3.10/                    |  |            |
|    | 16 ,         |  | 5,              | 0 ( | /, 5.02,                    |  |            |
|    | 16 ,         | SA ,                                   | 5 ,<br>5 ,      | 0 ( |                             | 5.70, 5.70, 5.70, 5.70<br>5.94, 5.94, 5.94, 5.94 |            |
| 75 | 16 ,         | SA ,<br>SA ,                           |                 | 0 ( |                             |  |            |
|    |              |  | 5 ,             |     |                             |  |            |
|    | 17 ,         | SA ,                                   | ο,              | 0 ( |                             | 6.38, 6.38, 6.38, 6.38                           |            |
|    | 17 ,         | MWS ,                                  | 6,              |     |                             | 6.39, 6.39, 6.39, 6.39                           |            |
|    | 18 ,         | SA ,                                   | ο,              | 0 ( |                             | 6.42, 6.42, 6.42, 6.42                           |            |
| 80 | 18 ,         | SA ,                                   | 6,              | 0 ( |                             | 6.44, 6.44, 6.44, 6.44                           |            |
|    | 18 ,         | SA ,                                   | 6,              | 0 ( |                             | 6.45, 6.45, 6.45, 6.45                           |            |
|    | 18 ,         | SA ,                                   | 6,              |     |                             | 6.52, 6.52, 6.52, 6.52                           |            |
|    | 19 ,         | SA ,                                   | 6,              | 0 ( |                             | 6.62, 6.62, 6.62, 6.62                           |            |
|    | 19 ,         | SA ,                                   | 6 ,             | 0 ( |                             | 6.66, 6.66, 6.66                                 |            |
| 85 | 19 ,         | SA ,                                   | 6,              | 0 ( |                             | 6.66, 6.66, 6.66                                 |            |
|    | 19 ,         | SA ,                                   | ο,              | 0 ( |                             | 6.67, 6.67, 6.67, 6.67                           |            |
|    | 19 ,         | SA ,                                   | o ,             | 0 ( | ), 0.07,                    |  |            |
|    | 20 ,         | SA ,                                   | 6,              | 0 ( |                             | 6.69, 6.69, 6.69, 6.69                           |            |
|    | 20 ,         | SA ,                                   | 6,              | 0 ( |                             | 6.71, 6.71, 6.71, 6.71                           |            |
| 90 | 20 ,         | SA ,                                   | б,              | 0 ( |                             | 6.72, 6.72, 6.72, 6.72                           |            |
|    | 21 ,         | SA ,                                   | б,              | 0 ( | /, 0.70,                    | 6.76, 6.76, 6.76, 6.76                           |            |
|    | 21 ,         | SA ,                                   | 6,              | 0 ( |                             |  |            |
|    | 22 ,         | SA ,                                   | 6,              | 0 ( | /, 0.00,                    | 6.86, 6.86, 6.86, 6.86                           |            |
|    | 22 ,         | SA ,                                   | 6,              | 0 ( |                             | 6.90, 6.90, 6.90, 6.90                           |            |
| 95 | 23 ,<br>23 , | SA ,<br>SA ,                           | 6 ,<br>6 ,      | 0 ( |                             | 6.92, 6.92, 6.92, 6.92<br>6.93, 6.93, 6.93, 6.93 |            |

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|     |              |              |      |     | Hood 740 char hard 1474               | lII   |       |       | <u> </u> | TITLEU L     | by Jim Witschey |
|-----|--------------|--------------|------|-----|---------------------------------------|-------|-------|-------|----------|--------------|-----------------|
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|     | 24 ,         | SA ,         | 6,   | 0 ( |                                       | 6.96, | 6.96, | 6.96, | 6.96,    | 6.96         |                 |
|     | 24 ,         | SA ,         | 6,   | 0 ( |                                       | 6.96, | 6.96, | 6.96, | 6.96,    | 6.96         |                 |
|     | 25 ,         | SA ,         | 7,   | 0 ( |                                       | 7.04, | 7.04, | 7.04, | 7.04,    | 7.04         |                 |
| 500 | 25 ,         | SA ,         | 7,   | 0 ( |                                       | 7.06, | 7.06, | 7.06, | 7.06,    | 7.06         |                 |
|     | 25 ,         | SA ,         | 7,   | 0 ( | * ),                                  | 7.06, | 7.06, | 7.06, | 7.06,    | 7.06         |                 |
|     | 25 ,         | SA ,         | 7,   | 0 ( | * ),                                  | 7.06, | 7.06, | 7.06, | 7.06,    | 7.06         |                 |
|     | 25 ,         | SA ,         | 7,   | 0 ( | * ),                                  | 7.06, | 7.06, | 7.06, | 7.06,    | 7.06         |                 |
|     | 25 ,         | SA ,         | 7,   | 0 ( | *   ),                                | 7.07, | 7.07, | 7.07, | 7.07,    | 7.07         |                 |
| 505 | 26 ,         | SA ,         | 7,   | 0 ( |                                       | 7.09, | 7.09, | 7.09, | 7.09,    | 7.09         |                 |
|     | 26 ,         | SA ,         | 7,   | 0 ( |                                       | 7.10, | 7.10, | 7.10, | 7.10,    | 7.10         |                 |
|     | 26 ,         | SA ,         | 7,   | 0 ( |                                       | 7.10, | 7.10, | 7.10, | 7.10,    | 7.10         |                 |
|     | 26 ,         | SA ,         | 7 .  | 0 ( |                                       | 7.10, | 7.10, | 7.10, | 7.10,    | 7.10         |                 |
|     | 26 ,         | SA ,         | 7 ,  | 0 ( |                                       | 7.11, | 7.11, | 7.11, | 7.11,    | 7.11         |                 |
| 510 | 26 ,         | SA ,         | 7 .  | 0 ( |                                       | 7.11, | 7.11, | 7.11, | 7.11,    | 7.11         |                 |
| 010 | 27 ,         | SA ,         | 7 ,  | 0 ( |                                       | 7.12, | 7.12, | 7.12, | 7.12,    | 7.12         |                 |
|     | 27 ,         | SA ,         | 7 ,  | 0 ( |                                       | 7.13, | 7.13, | 7.12, | 7.13,    | 7.13         |                 |
|     | 27 ,         | SA ,         | 7 ,  | 0 ( |                                       | 7.13, | 7.13, | 7.13, | 7.13,    | 7.13         |                 |
|     | 27 ,         | SA ,         | 7 ,  | 0 ( |                                       | 7.13, |       |       | 7.13,    |              |                 |
|     |              |              | 7 ,  |     | , , , , , , , , , , , , , , , , , , , |       | 7.14, | 7.14, | -        | 7.14<br>7.16 |                 |
| 515 | 28 ,         | SA ,         | , ,  | 0 ( |                                       | 7.16, | 7.16, | 7.16, | 7.16,    |              |                 |
|     | 28 ,         | SA ,         | / ,  | 0 ( |                                       | 7.18, | 7.18, | 7.18, | 7.18,    | 7.18         |                 |
|     | 28 ,         | SA ,         | / ,  | 0 ( |                                       | 7.18, | 7.18, | 7.18, | 7.18,    | 7.18         |                 |
|     | 28 ,         | SA ,         | ./ , | 0 ( |                                       | 7.19, | 7.19, | 7.19, | 7.19,    | 7.19         |                 |
|     | 28 ,         | SA ,         | ·/ , | 0 ( |                                       | 7.20, | 7.20, | 7.20, | 7.20,    | 7.20         |                 |
| 520 | 29 ,         | SA ,         | 7,   | 0 ( |                                       | 7.24, | 7.24, | 7.24, | 7.24,    | 7.24         |                 |
|     | 29 ,         | SA ,         | 7,   | 0 ( |                                       | 7.25, | 7.25, | 7.25, | 7.25,    | 7.25         |                 |
|     | 29 ,         | SA ,         | 7,   | 0 ( |                                       | 7.26, | 7.26, | 7.26, | 7.26,    | 7.26         |                 |
|     | 29 ,         | SA ,         | 7,   | 0 ( |                                       | 7.26, | 7.26, | 7.26, | 7.26,    | 7.26         |                 |
|     | 30 ,         | SA ,         | 7,   | 0 ( | * ),                                  | 7.28, | 7.28, | 7.28, | 7.28,    | 7.28         |                 |
| 525 | 30 ,         | SA ,         | 7,   | 0 ( | *                                     | 7.28, | 7.28, | 7.28, | 7.28,    | 7.28         |                 |
|     | 31 ,         | SA ,         | 7,   | 0 ( | *   ),                                | 7.31, | 7.31, | 7.31, | 7.31,    | 7.31         |                 |
|     | 31 ,         | SA ,         | 7,   | 0 ( |                                       | 7.31, | 7.31, | 7.31, | 7.31,    | 7.31         |                 |
|     | 31 ,         | SA ,         | 7,   | 0 ( |                                       | 7.31, | 7.31, | 7.31, | 7.31,    | 7.31         |                 |
|     | 31 ,         | SA ,         | 7.   | 0 ( |                                       | 7.34, | 7.34, | 7.34, | 7.34,    | 7.34         |                 |
| 530 | 32 ,         | SA ,         | 7 .  | 0 ( |                                       | 7.37, | 7.37, | 7.37, | 7.37,    | 7.37         |                 |
| 000 | 32 ,         | SA ,         | 7    | 0 ( |                                       | 7.38, | 7.38, | 7.38, | 7.38,    | 7.38         |                 |
|     | 33 ,         | SA ,         | 7 ,  | 0 ( |                                       | 7.44, | 7.44, | 7.44, | 7.44,    | 7.44         |                 |
|     | 33 ,         | SA ,         | 7 ,  | 0 ( | *   ' '                               | 7.45, | 7.45, | 7.45, | 7.45,    | 7.45         |                 |
|     | 34 ,         | SA ,         | 7 ,  | 0 ( |                                       | 7.51, | 7.51, | 7.51, | 7.51,    | 7.51         |                 |
| 505 | 34 ,         | SA ,         | 7    | 0 ( |                                       | 7.56, | 7.56, | 7.51, | 7.56,    | 7.56         |                 |
| 535 | 34 ,         | SA ,<br>SA , | 7 ,  | 0 ( |                                       | 7.50, | 7.50, | 7.50, | 7.50,    | 7.50         |                 |
|     | •            |              | 7 ,  |     |                                       |       |       |       |          |              |                 |
|     | 35 ,         | SA ,         | / ,  | 0 ( |                                       | 7.76, | 7.76, | 7.76, | 7.76,    | 7.76         |                 |
|     | 35 ,         | SA ,         | / ,  | 0 ( | / /                                   | 7.77, | 7.77, | 7.77, | 7.77,    | 7.77         |                 |
|     | 35 ,         | MWS ,        | ,    | 0 ( |                                       | 7.92, | 7.92, |       | 7.92,    | 7.92         |                 |
| 540 | 36 ,         | MWS ,        | 8 ,  | 0 ( |                                       |       |       |       | 8.15,    | 8.15         |                 |
|     | 36 ,         | MWS ,        | 8,   | 0 ( |                                       | 8.16, |       |       | 8.16,    | 8.16         |                 |
|     | 36 ,         | MWS ,        | 8,   | 0 ( | , ,                                   |       |       | 8.19, |          |              |                 |
|     | 36 ,         | MWS ,        | 8 ,  | 0 ( |                                       | 8.20, | 8.20, |       | 8.20,    | 8.20         |                 |
|     | 36 ,         | MWS ,        | 8,   | 0 ( |                                       | 8.21, |       | 8.21, |          | 8.21         |                 |
| 545 | 36 ,         | MWS ,        | 8,   | 0 ( |                                       | 8.31, |       |       | 8.31,    |              |                 |
|     | 37 ,         | MWS ,        | 8,   | 0 ( | * ),                                  | 8.41, | 8.41, |       |          | 8.41         |                 |
|     | 37 ,         | MWS ,        | 8,   | 0 ( | * ),                                  | 8.42, | 8.42, | 8.42, | 8.42,    | 8.42         |                 |
|     | 37 ,         | SA ,         | 8,   | 0 ( |                                       |       |       |       | 8.43,    | 8.43         |                 |
|     |              |              |      |     | •                                     |       |       |       |          |              |                 |

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|-----|--------------|----------|------|-----|---------------------------------------|---------------|--------|--------|---------|------------|-----------------|
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|     | 37 ,         | MWS ,    | 8 ,  | 0 ( | * )                                   | , 8.45,       | 8.45,  | 8.45,  | 8.45,   | 8.45       |                 |
| 550 | 38 ,         | SA ,     | 8 ,  | 0 ( | *                                     | , 8.47,       | 8.47,  | 8.47,  | 8.47,   | 8.47       |                 |
|     | 38 ,         | MWS ,    | 8,   | 0 ( | *                                     | , 8.48,       | 8.48,  | 8.48,  | 8.48,   | 8.48       |                 |
|     | 39 ,         | MWS ,    | 8,   | 0 ( | *                                     | , 8.49,       | 8.49,  | 8.49,  | 8.49,   | 8.49       |                 |
|     | 39 ,         | MWS ,    | 8,   | 0 ( | *                                     | , 8.50,       | 8.50,  | 8.50,  | 8.50,   | 8.50       |                 |
|     | 40 ,         | MWS ,    | 8,   | 0 ( | *                                     | , 8.51,       | 8.51,  | 8.51,  | 8.51,   | 8.51       |                 |
| 555 | 40 ,         | MWS ,    | 8,   | 0 ( | *                                     | , 8.53,       | 8.53,  | 8.53,  | 8.53,   | 8.53       |                 |
|     | 41 ,         | MWS ,    | 8 ,  | 0 ( | * )                                   | , 8.58,       | 8.58,  | 8.58,  | 8.58,   | 8.58       |                 |
|     | 41 ,         | MWS ,    | 8 ,  | 0 ( | *                                     | , 8.58,       | 8.58,  | 8.58,  | 8.58,   | 8.58       |                 |
|     | 41 ,         | MWS ,    | 8 ,  | 0 ( | *                                     | , 8.59,       | 8.59,  | 8.59,  | 8.59,   | 8.59       |                 |
|     | 41 ,         | MWS ,    | 8 ,  | 0 ( | *                                     | , 8.59,       | 8.59,  | 8.59,  | 8.59,   | 8.59       |                 |
| 560 | 41 ,         | MWS ,    | 8 ,  | 0 ( | <b>*</b>                              | , 8.60,       | 8.60,  | 8.60,  | 8.60,   | 8.60       |                 |
|     | 41 ,         | MWS ,    | 8 ,  | 0 ( | *                                     | , 8.62,       | 8.62,  | 8.62,  | 8.62,   | 8.62       |                 |
|     | 42 ,         | MWS ,    | 8 .  | 0 ( | , * )                                 | , 8.67,       | 8.67,  | 8.67,  | 8.67,   | 8.67       |                 |
|     | 42 ,         | MWS ,    | 8 .  | 0 ( | / *                                   | , 8.68,       | 8.68,  | 8.68,  | 8.68,   | 8.68       |                 |
|     | 43 ,         | MWS ,    | 8 .  | 0 ( | * '                                   | , 8.73,       | 8.73,  | 8.73,  | 8.73,   | 8.73       |                 |
| 565 | 43 ,         | MWS ,    | 8    | 0 ( | * )                                   | , 8.74,       | 8.74,  | 8.74,  | 8.74,   | 8.74       |                 |
| 303 | 43 ,         | MWS ,    | 8    | 0 ( | *                                     | , 8.81,       | 8.81,  | 8.81,  | 8.81,   | 8.81       |                 |
|     | 44 ,         | MWS ,    | 8    | 0 ( | *                                     | , 8.91,       | 8.91,  | 8.91,  | 8.91,   | 8.91       |                 |
|     | 44 ,         | MWS ,    | ο,   | 0 ( | *                                     | , 8.92,       | 8.92,  | 8.92,  | 8.92,   | 8.92       |                 |
|     | 45 ,         | MWS ,    | ο,   | 0 ( | , , , , , , , , , , , , , , , , , , , | , 8.94,       | 8.94,  | 8.94,  | 8.94,   | 8.94       |                 |
|     |              | •        | 0 ,  | 0 ( | , , , , , , , , , , , , , , , , , , , |               |        |        | •       |            |                 |
| 570 | 45 ,         | MWS ,    | 0 ,  | •   | , ,                                   | , 8.95,       | 8.95,  | 8.95,  | 8.95,   | 8.95       |                 |
|     | 46 ,         | MWS ,    | 9,   | 0 ( | *                                     | , 9.04,       | 9.04,  | 9.04,  | 9.04,   | 9.04       |                 |
|     | 46 ,         | MWS ,    | 9,   | 0 ( | )                                     | , 9.05,       | 9.05,  | 9.05,  | 9.05,   | 9.05       |                 |
|     | 46 ,         | MWS ,    | 9 ,  | 0 ( | ) ,                                   | , 9.07,       | 9.07,  | 9.07,  | 9.07,   | 9.07       |                 |
|     | 47 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.10,       | 9.10,  | 9.10,  | 9.10,   | 9.10       |                 |
| 575 | 47 ,         | MWS ,    | 9,   | 0 ( | <b>*</b>                              | , 9.12,       | 9.12,  | 9.12,  | 9.12,   | 9.12       |                 |
|     | 48 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.20,       | 9.20,  | 9.20,  | 9.20,   | 9.20       |                 |
|     | 48 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.21,       | 9.21,  | 9.21,  | 9.21,   | 9.21       |                 |
|     | 48 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.21,       | 9.21,  | 9.21,  | 9.21,   | 9.21       |                 |
|     | 49 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.25,       | 9.25,  | 9.25,  | 9.25,   | 9.25       |                 |
| 580 | 49 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.26,       | 9.26,  | 9.26,  | 9.26,   | 9.26       |                 |
|     | 49 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.29,       | 9.29,  | 9.29,  | 9.29,   | 9.29       |                 |
|     | 50 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.37,       | 9.37,  | 9.37,  | 9.37,   | 9.37       |                 |
|     | 50 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.37,       | 9.37,  | 9.37,  | 9.37,   | 9.37       |                 |
|     | 51 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.38,       | 9.38,  | 9.38,  | 9.38,   | 9.38       |                 |
| 585 | 51 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.39,       | 9.39,  | 9.39,  | 9.39,   | 9.39       |                 |
|     | 52 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.42,       | 9.42,  | 9.42,  | 9.42,   | 9.42       |                 |
|     | 52 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.43,       | 9.43,  | 9.43,  | 9.43,   | 9.43       |                 |
|     | 52 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.43,       | 9.43,  | 9.43,  | 9.43,   | 9.43       |                 |
|     | 52 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.45,       | 9.45,  | 9.45,  | 9.45,   | 9.45       |                 |
| 590 | 53 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.48,       | 9.48,  | 9.48,  | 9.48,   | 9.48       |                 |
|     | 53 ,         | MWS ,    | 9 ,  | 0 ( | * )                                   | , 9.51,       |        |        | 9.51,   |            |                 |
|     | 53 ,         | MWS ,    | 9,   | 0 ( | * )                                   | , 9.54,       |        |        |         | 9.54       |                 |
|     | 54 ,         | MWS ,    | 9 ,  | 0 ( | * )                                   |               |        | 9.67,  |         | 9.67       |                 |
|     | 54 ,         | MWS ,    | 9 ,  | 0 ( | * )                                   |               |        | 9.72,  |         | 9.72       |                 |
| 595 | 54 ,         | MWS ,    | 9.   | 0 ( |                                       | , 9.83,       |        | 9.83,  |         | 9.83       |                 |
|     | 55 ,         | MWS ,    | 9 .  | 0 ( | * )                                   |               |        | 9.89,  |         | 9.89       |                 |
|     | 55 ,         | MWS ,    | 9 .  | 0 ( |                                       | , 9.91,       |        | 9.91,  |         |            |                 |
|     | 55 ,         | MWS ,    | 9 .  | 0 ( | * )                                   | , 9.94,       | 9.94,  |        |         | 9.94       |                 |
|     | 56 ,         | MWS ,    | 9    | 0 ( | * )                                   |               |        |        | 9.97,   |            |                 |
| 600 | 56 ,         | MWS ,    | 10 , | 0 ( | ,                                     | ,10.00,       |        |        |         |            |                 |
| 300 | J 0 ,        | 1.1110 / | ±0 , | J ( | 1                                     | , _ 0 . 0 0 , | _0.00, | _0.00, | 10.00,  | _0.00      |                 |

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|-----|--------------|-------|------|-----|---------------------------------------|------------|
|     | 57 ,         | MWS , | 10 , | 0 ( | * ),10.02, 10.02, 10.02, 10.02, 10.02 |            |
|     | 57 ,         | MWS , | 10 , | 0 ( | * ),10.05, 10.05, 10.05, 10.05        |            |
|     | 58 ,         | MWS , | 10 , | 0 ( | * ),10.10, 10.10, 10.10, 10.10, 10.10 |            |
|     | 58 ,         | MWS , | 10 , | 0 ( | * ),10.16, 10.16, 10.16, 10.16        |            |
| 605 | 58 ,         | MWS , | 10 , | 0 ( | * ),10.17, 10.17, 10.17, 10.17        |            |
|     | 59 ,         | MWS , | 10 , | 0 ( | * ),10.23, 10.23, 10.23, 10.23        |            |
|     | 59 ,         | MWS , | 10 , | 0 ( | * ),10.25, 10.25, 10.25, 10.25        |            |
|     | 59 ,         | MWS , | 10 , | 0 ( | * ),10.25, 10.25, 10.25, 10.25        |            |
|     | 60 ,         | MWS , | 10 , | 0 ( | * ),10.33, 10.33, 10.33, 10.33        |            |
| 610 | 60 ,         | MWS , | 10 , | 0 ( | * ),10.35, 10.35, 10.35, 10.35        |            |
|     | 60 ,         | MWS , | 10 , | 0 ( | * ),10.35, 10.35, 10.35, 10.35        |            |
|     | 60 ,         | MWS , | 10 , | 0 ( | * ),10.36, 10.36, 10.36, 10.36        |            |
|     | 60 ,         | MWS , | 10 , | 0 ( | * ),10.42, 10.42, 10.42, 10.42        |            |
|     | 61 ,         | MWS , | 10 , | 0 ( | * ),10.54, 10.54, 10.54, 10.54        |            |
| 615 | 61 ,         | MWS , | 10 , | 0 ( | * ),10.55, 10.55, 10.55, 10.55        |            |
|     | 62 ,         | MWS , | 10 , | 0 ( | * ),10.58, 10.58, 10.58, 10.58        |            |
|     | 62 ,         | MWS , | 10 , | 0 ( | * ),10.59, 10.59, 10.59, 10.59        |            |
|     | 62 ,         | MWS , | 10 , | 0 ( | * ),10.60, 10.60, 10.60, 10.60        |            |
|     | 63 ,         | MWS , | 10 , | 0 ( | * ),10.67, 10.67, 10.67, 10.67        |            |
| 620 | 63 ,         | MWS , | 10 , | 0 ( | * ),10.69, 10.69, 10.69, 10.69        |            |
|     | 64 ,         | MWS , | 10 , | 0 ( | * ),10.77, 10.77, 10.77, 10.77        |            |
|     | 64 ,         | MWS , | 10 , | 0 ( | * ),10.77, 10.77, 10.77, 10.77        |            |
|     | 64 ,         | MWS , | 10 , | 0 ( | * ),10.78, 10.78, 10.78, 10.78        |            |
|     | 64 ,         | MWS , | 10 , | 0 ( | * ),10.89, 10.89, 10.89, 10.89        |            |
| 625 | 64 ,         | MWS , | 10 , | 0 ( | * ),10.99, 10.99, 10.99, 10.99        |            |
|     | 65 ,         | MWS , | 11 , | 0 ( | * ),11.15, 11.15, 11.15, 11.15        |            |
|     | 65 ,         | MWS , | 11 , | 0 ( | * ),11.30, 11.30, 11.30, 11.30        |            |
|     | 65 ,         | MWS , | 11 , | 0 ( | * ),11.36, 11.36, 11.36, 11.36        |            |
|     | 65 ,         | MWS , | 11 , | 0 ( | *),11.96, 11.96, 11.96, 11.96         |            |
| 630 | None         |       |      |     |                                       |            |