```
D:\Python\Python\setroute\python.exe "D:\Python\Pycharm\setroute\PyCharm Community Edition 2021.2.3\plugins\python-ce\helpers\pydev\pydevconsole.py" --
      mode=client --port=35362
  2
 3
      import sys; print('Python %s on %s' % (sys.version, sys.platform))
      sys.path.extend(['E:\\1\ ]==-\\3\ python\_code\) Code for this
      6
      PyDev console: starting.
 8 Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.1929 64 bit (AMD64)] on win32
      main RO CCG.py', wdir='E:/1 0000/3 00000/1 000000/1 0000000/1 000000/1 LW 00001/4 0000/3 python_code/9 Code for
10 Backend TkAgg is interactive backend. Turning interactive mode on.
11
      Waiting 5s.....
     Optimize the ./R 13 4.xlsx instance by CCG
13
14
15
              Master protblem status = 2, is Optimal and MP obj = 726.0
16
      The initial lb = -inf
                                            ub = inf
17
18
      The current iteration cnt = 0
19
               The SP model was solved Optimal 2 and SPObj = 726.0
20
              Master protblem status = 2, is Optimal
21
              Deterministic Sub problem Status= 2, is Optimal
22
              1b = 1344.0
                                                        ub = 1344.0
               MPObj = 1344.0
                                                  MP delete Hua Obj = 748.0
23
                                                                                                         Hua = 596.0
                                                                                                                                    SPObj = 726.0
                                                                                                                                                                   Deter SP Obj = 596.0
24
25
      ub - 1b = 0.0
26
27 Iteration cycle stopped by termination criterion 1: Because ub - lb \leq eps, the iteration stop, and cnt = 0
           i: \ 0.0 \ 1\_i: \ 6.0 \ p\_i: \ 14.0 \quad aI\_i: \ 16.0 \quad sol\_a\_i: \ 16.0 \quad sol\_g\_i: \ 0.0 \quad d\_i: \ 26.0 \quad sol\_taoi: \ 16.0 \quad sol\_deltai: \ 26.0 \quad sol\_deltai: 
28
       : 16.0 sol_deltaP: 19.0 sol_deltaP - sol_taoP: 3.0 cl_i: 2434965.0 sol_c_i: 2434965.0 sol_gp_i: 0.0 total work: 2768262.0 wasted work: 1.
      2641933819847977
           i: 1.0 1_i: 6.0 p_i: 23.0 aI i: 11.0
29
                                                                                 sol a i: 11.0 sol g i: 0.0 d i: 32.0 sol taoi: 11.0 sol deltai: 32.0 sol deltai - sol taoi: 21.0 sol taoP
        11.0 sol_deltaP: 14.0 sol_deltaP - sol_taoP: 3.0 cI_i: 5411594.0
                                                                                                                          sol_c_i: 5411594.0 sol_gp_i: 0.0 total work: 5536524.0 wasted work: 0.
      4738586882310995
           i: 2.0 1 i: 6.0 p i: 28.0 aI i: 57.0
                                                                                 sol a i: 57.0 sol g i: 0.0 d i: 68.0 sol taoi: 57.0 sol deltai: 68.0 sol deltai - sol taoi: 11.0 sol taoP
       : 57.0 sol_deltaP: 60.0 sol_deltaP - sol_taoP: 3.0 cl_i: 2791768.0 sol_c_i: 2791768.0 sol_gp_i: 0.0 total work: 3163728.0 wasted work: 1.
       4108418928555173
          i: 3.0 1_i: 4.0 p_i: 30.0 aI_i: 26.0
                                                                                 sol_a_i: 26.0 sol_g_i: 0.0 d_i: 43.0 sol_taoi: 26.0 sol_deltai: 43.0 sol_deltai - sol_taoi: 17.0 sol_taoP
31
         26.0 sol deltaP: 31.0 sol deltaP - sol taoP: 5.0 cI i: 4453356.0
                                                                                                                           sol c i: 4453356.0 sol gp i: 0.0 total work: 4613770.0 wasted work: 0.
      608449272503831
           i: 4.0 1_i: 7.0 p_i: 7.0 aI_i: 18.0
                                                                              sol_a_i: 18.0 sol_g_i: 0.0 d_i: 41.0 sol_taoi: 18.0 sol_deltai: 41.0 sol_deltai - sol_taoi: 23.0 sol_taoP:
                  sol_deltaP: 21.0 sol_deltaP - sol_taoP: 3.0 cl_i: 6025886.0 sol_c_i: 6025886.0 sol_gp_i: 0.0 total work: 6195634.0 wasted work: 0.
      643853074\overline{6}005978
                                                                                 sol_a_i: 30.0 sol_g_i: 0.0 d_i: 51.0 sol_taoi: 30.0 sol_deltai: 51.0 sol_deltai - sol_taoi: 21.0 sol_taoP
           i: 5.0 \ l\_i: 5.0 \ p\_i: 18.0 \ aI\_i: 30.0
33
         30.0 sol_deltaP: 34.0 sol_deltaP - sol_taoP: 4.0 cl_i: 5468313.0 sol_c_i: 5468313.0 sol_gp_i: 0.0 total work: 5536524.0 wasted work: 0.
      25872388523918616
         i: 6.0 <u>l</u>i: 4.0 <u>p</u>i: 14.0 <u>al</u>i: 48.0 <u>sol_a_i</u>: 48.0 <u>sol_a_i</u>: 48.0 <u>sol_a_i</u>: 60.0 <u>sol_taoi</u>: 48.0 <u>sol_deltai</u>: 60.0 <u>sol_deltai</u>: 60.0 <u>sol_deltai</u>: 60.0 <u>sol_deltai</u>: 60.0 <u>sol_deltai</u>: 60.0 <u>sol_deltai</u>: 2954712.0 <u>sol_c_i</u>: 2954712.0 <u>sol_gp_i</u>: 0.0 total work: 3163728.0 <u>wasted work: 0.</u>
                                                                                 sol a i: 48.0 sol g i: 0.0 d i: 60.0 sol taoi: 48.0 sol deltai: 60.0 sol deltai - sol taoi: 12.0 sol taoP
34
      i: 7.0 l_i: 5.0 p_i: 14.0 al_i: 63.0 sol_a_i: 67.0 sol_g_i: 0.8 d_i: 83.0 sol_taoi: 67.0 sol_deltai: 85.0 sol_deltai sol_taoi: 18.0 sol_taoi:
                                                                               sol a i: 67.0 sol g i: 0.8 d i: 83.0 sol taoi: 67.0 sol deltai: 85.0 sol deltai - sol taoi: 18.0 sol taoP
35
       wasted work: 0.5
                                                                                  i: 8.0 1 i: 4.0 p i: 10.0 aI i: 56.0
      sol taoi: 8.0 sol taoP: 59.0 sol deltaP: 62.0 sol deltaP - sol taoP: 3.0 cI i: 1993440.0 sol c i: 1993440.0 sol gp i: 0.0 total work: 2109152.0
           wasted work: 0.4388948733898742
37
           i: 9.0 1_i: 6.0 p_i: 23.0 aI_i: 38.0
                                                                                  sol_a_i: 38.20238095238095 sol_g_i: 0.02023809523809561 d_i: 55.0 sol_taoi: 39.0 sol_deltai: 50.0
           sol deltai - sol taoi: 11.0 sol taoP: 39.0
                                                                                sol deltaP: 43.0 sol deltaP - sol taoP: 4.0 cI i: 2713249.0 sol c i: 3118497.3428571424 sol gp i: 0.
      3842760909191396 total work: 3163728.0 wasted work: 0.1715595922640286
38
          sol_a_i: 54.0 sol_g_i: 0.5714285714285714 d_i: 74.0 sol_taoi: 54.0 sol_deltai: 72.0 sol_deltai
      sol taoi: 18.0 sol taoP: 54.0 sol deltaP: 58.0 sol deltaP - sol taoP: 4.0 cl i: 4684317.0 sol c i: 6063812.0 sol gp i: 0.7474879545360952
      total work: 6063812.0 wasted work: 0.0
           i \colon \ 11.0 \quad \  \  \, l\_i \colon \ 7.0 \quad \  \  \, p\_i \colon \ -0.0 \qquad aI\_i \colon \ 47.0
                                                                                      sol_a_i: 54.0 sol_g_i: 1.0 d_i: 69.0 sol_taoi: 54.0 sol_deltai: 72.0 sol_deltai - sol_taoi: 18.0
      sol_taoP: 54.0 sol_deltaP: 61.0 sol_deltaP - sol_taoP: 7.0 cl_i: 4573652.0 sol_c_i: 5100940.0 sol_gp_i: 1.0 total work: 5272880.0 wasted work
       : 0.6521673165329004
          sol_a_i: 68.0 sol_g_i: 0.8333333333333334 d_i: 79.0 sol_taoi: 68.0 sol_deltai: 81.0 sol_deltai -
       sol taoi: 13.0 sol taoP: 68.0 sol deltaP: 72.0 sol deltaP - sol taoP: 4.0 cl i: 3424938.0 sol c i: 4350126.0 sol gp i: 0.7018464292758416
      total work: 4481948.0 wasted work: 0.5
     Time: 153.000000
42
43
44
45
```