```
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=25750
 3
     import sys; print('Python %s on %s' % (sys.version, sys.platform))
     sys.path.extend(['E:\\1 ] _ _ \\3 | 0 _ _ | \\1 | 0 | 0 | 0 | \\1 | 0 | 0 | 0 | \\1 | 0 | 0 | 0 | \\1 | 0 | 0 | 0 | \\1 | 0 | 0 | 0 | \\1 | 0 | 0 | 0 | \\1 | 0 | 0 | \\1 | 0 | 0 | \\1 | 0 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\1 | 0 | \\\  | 0 | \\1 | 0 | \\\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | \\  | 0 | 
      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
     >>> runfile('E:/1 = 1 = 3 = 0 = 0/1 = 0 = 0 = 0/1 = 0 = 0 = 0/1 = 0 = 0/1 = 0 = 0/1 = 0 = 0/1 = 0 = 0/1 = 0 = 0/1 = 0 = 0/1 = 0/1 = 0 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/1 = 0/
      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.....
13 Optimize the ./R 18 3.xlsx instance by CCG
14
             Master protblem status = 2, is Optimal and MP obj = 878.0
15
16
     The initial lb = -inf
                                       ub = inf
17
18
     The current iteration cnt = 0
             The SP model was solved Optimal 2 and SPObj = 868.0
19
             Deterministic Sub problem Status= 2, is Optimal
20
            1b = 1603.0
                                                  ub = 1603.0
21
22
             MPObj = 1603.0
                                            MP_delete_Hua_Obj = 904.0
                                                                                             Hua = 699.0
                                                                                                                     SPObj = 868.0
                                                                                                                                                Deter_SP_Obj = 699.0
24
     ub - 1b = 0.0
25
26
     Iteration cycle stopped by termination criterion 1: Because ub - 1b \le eps, the iteration stop, and ext{cnt} = 0
        i: 0.0 l_i: 5.0 p_i: 18.0 al_i: 49.0 sol_a_i: 49.0 sol_g_i: 0.0 d_i: 58.0 sol_taoi: 49.0 sol_deltai: 61.0 sol_deltai - sol_taoi: 12.0 sol_taoP 49.0 sol_deltaP - sol_taoP: 2946985.0 sol_c_i: 2946985.0 sol_gp_i: 0.0 total work: 3163728.0 wasted work: 0.
27
      8221048079986649
                                                                       sol_a_i: 36.0 sol_g_i: 0.0 d_i: 48.0 sol_taoi: 36.0 sol_deltai: 51.0 sol_deltai - sol_taoi: 15.0 sol_taoP
         i: 1.0 1_i: 6.0 p_i: 24.0 aI_i: 36.0
        36.0 sol_deltaP: 39.0 sol_deltaP - sol_taoP: 3.0 cl_i: 3940260.0 sol_i: 3940260.0 sol_gp_i: 0.0 total work: 5272880.0 wasted work: 5.
      05461910758447
          i: 2.0 1 i: 4.0 p i: 10.0 aI i: 65.0
                                                                        sol_a_i: 65.0 sol_g_i: 0.0 d_i: 72.0 sol_taoi: 65.0 sol_deltai: 74.0 sol_deltai - sol_taoi: 9.0 sol_taoP
        65.0 sol deltaP: 67.0 sol deltaP - sol taoP: 2.0 cl i: 2366995.0 sol c i: 2366995.0 sol gp i: 0.0 total work: 2636440.0 wasted work: 1.
      0220031557706604
30
         i: 3.0 1_i: 7.0 p_i: 23.0 aI_i: 54.0
                                                                        sol_a_i: 54.0 sol_g_i: 0.0 d_i: 72.0 sol_taoi: 54.0 sol_deltai: 77.0 sol_deltai - sol_taoi: 23.0 sol_taoP
       54.0 sol_deltaP: 57.0 sol_deltaP - sol_taoP: 3.0 cI_i: 5844994.0 sol_c_i: 5844994.0 sol_gp_i: 0.0 total work: 6063812.0 wasted work: 0.
      8299752696818437
         i: 4.0 l_i: 4.0 p_i: 0.0 al_i: 8.0
                                                                    sol_a_i: 8.0 sol_g_i: 0.0 d_i: 19.0 sol_taoi: 8.0 sol_deltai: 22.0 sol_deltai - sol_taoi: 14.0 sol_taoP: 8.0
31
          sol deltaP: 14.0
                                    sol deltaP - sol taoP: 6.0 cl i: 3491336.0 sol c i: 3491336.0 sol gp i: 0.0 total work: 3691016.0 wasted work: 0.
      7573849585046503
                                                                   sol a i: 71.0 sol g i: 0.0 d i: 77.0 sol taoi: 71.0 sol deltai: 79.0 sol deltai - sol taoi: 8.0 sol taoP:
32
        i: 5.0 1_i: 6.0 p_i: 0.0 aI_i: 71.0
               sol_deltaP: 73.0 sol_deltaP - sol_taoP: 2.0 cI_i: 2108764.0 sol_c_i: 2108764.0 sol_gp_i: 0.0 total work: 2109152.0 wasted work: 0.
      71.0
      0014716815099148851
         i: 6.0 1_i: 6.0 p_i: 12.0 aI_i: 8.0
                                                                        sol a i: 8.0 sol g i: 0.0 d i: 16.0 sol taoi: 8.0 sol deltai: 18.0 sol deltai - sol taoi: 10.0 sol taoP: 8
            sol_deltaP: 11.0 sol_deltaP - sol_taoP: 3.0 cl_i: 2493986.0 sol_c_i: 2493986.0 sol_gp_i: 0.0 total work: 2504618.0 wasted work: 0.
      04032710776653366
                                                                        sol_a_i: 42.0 sol_g_i: 0.0 d_i: 49.0 sol_taoi: 42.0 sol_deltai: 51.0 sol_deltai - sol_taoi: 9.0 sol_taoP
34
         i: 7.0 1_i: 4.0 p_i: 30.0 aI_i: 42.0
        42.0 sol_deltaP: 44.0 sol_deltaP - sol_taoP: 2.0 cl_i: 2172125.0 sol_c_i: 2172125.0 sol_gp_i: 0.0 total work: 2240974.0 wasted work: 0.
      2611438151446648
          i: 8.0 1_i: 7.0 p_i: 12.0 aI_i: 18.0
                                                                        sol_a_i: 18.0 sol_g_i: 0.0 d_i: 33.0 sol_taoi: 19.0 sol_deltai: 38.0 sol_deltai - sol_taoi: 19.0 sol_taoP
        19.0 sol deltaP: 22.0 sol deltaP - sol taoP: 3.0 cl i: 4861745.0 sol c i: 4861745.0 sol gp i: 0.0 total work: 5009236.0 wasted work: 0.
      5594324164403514
36
          i: 9.0 1_i: 7.0 p_i: 5.0 al_i: 14.0 sol_a_i: 14.0 sol_g_i: 0.0 d_i: 30.0 sol_taoi: 14.0 sol_deltai: 34.0 sol_deltai: 34.0 sol_deltai: 34.0 sol_deltai: 34.0 sol_deltai: 34.0 sol_deltai
               sol_deltaP: 18.0 sol_deltaP - sol_taoP: 4.0 cI_i: 5222829.0
                                                                                                             sol_c_i: 5222829.0 sol_gp_i: 0.0 total work: 5404702.0 wasted work: 0.
      6898431217854379
37
          sol\_a\_i: 11.0 \quad sol\_g\_i: 0.0 \quad d\_i: 18.0 \quad sol\_taoi: 11.0 \quad sol\_deltai: 20.0 \quad sol\_deltai - sol\_taoi: 9.0
      sol taoP: 11.0
                             sol_deltaP: 14.0 sol_deltaP - sol_taoP: 3.0 cl_i: 2336548.0 sol_c_i: 2336548.0 sol_gp_i: 0.0 total work: 2372796.0 wasted work
      : 0.13748843136957412
                                                                           sol_a_i: 73.0 sol_g_i: 0.8 d_i: 83.0 sol_taoi: 73.0 sol_deltai: 95.0 sol_deltai - sol taoi: 22.0
38
         i: 11.0    1_i: 4.0    p_i: 14.0    aI_i: 69.0
      sol_taoP: 73.0 sol_deltaP: 77.0 sol_deltaP - sol_taoP: 4.0 cl_i: 5574150.0 sol_c_i: 6063812.0 sol_gp_i: 0.46432120586851955 total work:
      6063812.0 wasted work: 0.0
                      1 i: 5.0 p i: 19.0 aI i: 24.0
                                                                           sol a i: 25.0 sol g i: 0.125000000000000035 d i: 47.0 sol taoi: 25.0 sol deltai: 48.0 sol deltai -
         i: 12.0
      sol taoi: 23.0 sol taoP: 25.0 sol deltaP: 29.0 sol deltaP - sol taoP: 4.0 cl i: 5938420.0 sol c i: 6063812.0 sol gp i: 0.06794443589515708
      total work: 6195634.0 wasted work: 0.5
                                                                            sol_a_i: 7.0 sol_g_i: 0.0 d_i: 21.0 sol_taoi: 7.0 sol_deltai: 23.0 sol_deltai - sol_taoi: 16.0 sol_taoP
40
         : 7.0 sol_deltaP: 13.0 sol_deltaP - sol_taoP: 6.0 cl_i: 4175268.0 sol_e_i: 4702556.0 sol_gp_i: 1.0 total work: 4877414.0 wasted work: 0.
      6632352718059201
                                                                           sol_a_i: 11.0 sol_g_i: 0.5714285714285714 d_i: 25.0 sol_taoi: 11.0 sol_deltai: 25.0 sol_deltai
          sol taoi: 14.0 sol taoP: 11.0 sol deltaP: 17.0 sol deltaP - sol taoP: 6.0 cI i: 3506955.0 sol c i: 4420487.660714312 sol gp i: 0.
      6930047038539189 total work: 4481948.0 wasted work: 0.23311867247381904
          sol_a_i: 23.0 sol_g_i: 0.5714285714285714 d_i: 37.0 sol_taoi: 23.0 sol_deltai: 38.0 sol_deltai -
      sol_taoi: 15.0 sol_taoP: 23.0 sol_deltaP: 28.0 sol_deltaP - sol_taoP: 5.0 cl_i: 3940586.0 sol_c_i: 4481948.0 sol_gp_i: 0.2566728239595819
      total work: 4481948.0 wasted work: 0.0
          i: 16.0 \quad l_i: 6.0 \quad p_i: 7.0 \quad aI_i: 35.0 \quad
                                                                        sol a i: 41.0 sol g i: 1.0 d i: 49.0 sol taoi: 41.0 sol deltai: 54.0 sol deltai - sol taoi: 13.0 sol taoP
      : 41.0 sol_deltaP: 44.0 sol_deltaP - sol_taoP: 3.0 cl_i: 3255779.0 sol_c_i: 3954660.0 sol_gp_i: 0.5301702295519717 total work: 4086482.0
      wasted work: 0.5
          i: \ 17.0 \quad \ 1\_i: \ 4.0 \quad \ p\_i: \ 10.0 \quad \  \  aI\_i: \ 67.0
                                                                            sol a i: 75.38928571428559 sol g i: 0.9321428571428427 d i: 83.0 sol taoi: 76.0 sol deltai: 96.0
          sol_deltai - sol_taoi: 20.0 sol_taoP: 76.0
                                                                        sol_deltaP: 81.0 sol_deltaP - sol_taoP: 5.0 cl_i: 5034785.0 sol_c_i: 7118388.0 sol_gp_i: 0.
      9878866008708713 total work: 7250210.0 wasted work: 0.5
```

unknown

45 Time: 1554.000	000
46	
46 47 48 49	
48	
49	