**Change the price parameter of supplier 6**

**O6=3000**

Node Left Iinf Objective Best Relaxatn Best Incumbent

------ ------ ------ -------------- -------------- --------------

1 0 11 -7.821400e+002 -7.821400e+002 6.101388e+004

10 9 9 -7.808104e+002 -7.817634e+002 -2.066170e+002

20 17 INFEASIBLE pr -7.812843e+002 -2.696689e+002

30 25 7 -7.797135e+002 -7.805411e+002 -2.743973e+002

40 31 8 -7.038968e+002 -7.799773e+002 -3.081156e+002

50 37 6 -6.736222e+002 -7.265029e+002 -3.081156e+002

60 47 8 -6.218669e+002 -7.039587e+002 -3.081156e+002

70 55 INFEASIBLE pr -6.736222e+002 -5.432748e+002

80 57 5 -6.707323e+002 -6.708333e+002 -5.432748e+002

90 57 INFEASIBLE pr -6.631690e+002 -5.432748e+002

100 61 5 -6.340646e+002 -6.408902e+002 -5.432748e+002

110 61 5 -6.242261e+002 -6.340646e+002 -5.432748e+002

120 71 4 -6.225329e+002 -6.325508e+002 -5.432748e+002

130 69 INFEASIBLE pr -6.275336e+002 -5.432748e+002

140 61 INFEASIBLE pr -6.238608e+002 -5.432748e+002

150 61 7 -6.179466e+002 -6.218669e+002 -5.432748e+002

160 55 INFEASIBLE pr -6.121333e+002 -5.432748e+002

170 45 8 -5.777739e+002 -6.091276e+002 -5.432748e+002

180 47 10 -5.616361e+002 -6.079442e+002 -5.432748e+002

190 49 4 -5.623376e+002 -5.636060e+002 -5.432748e+002

200 45 INFEASIBLE pr -5.628936e+002 -5.432748e+002

210 37 -4.971739e+002 pr -5.616041e+002 -5.432748e+002

220 31 INFEASIBLE pr -5.542015e+002 -5.432748e+002

230 21 -4.945093e+002 pr -5.514507e+002 -5.432748e+002

240 15 -4.342767e+002 pr -5.473449e+002 -5.432748e+002

250 13 -5.414842e+002 pr -5.441594e+002 -5.432748e+002

260 9 -5.432576e+002 pr -5.433436e+002 -5.432748e+002

EXIT: Optimal solution found.

Final Statistics for MIP

------------------------

Final objective value = -5.43274828013742e+002

Final integrality gap (abs / rel) =-3.74e-007 / -6.88e-010 (-0.00)

# of nodes processed = 263

# of subproblems processed = 263

Total program time (secs) = 1077.594 ( 1078.669 CPU time)

Time spent in evaluations (secs) = 1079.408

===========================================================================

>> x

x =

6 0 0 10 0 0 1 0 0 1 0 0 2 101 -5

**O6=2500**

Node Left Iinf Objective Best Relaxatn Best Incumbent

------ ------ ------ -------------- -------------- --------------

1 0 11 -8.013688e+002 -8.013688e+002 6.051388e+004

10 9 8 -8.000602e+002 -8.007434e+002 -2.691358e+002

20 19 8 -7.994968e+002 -8.001103e+002 -3.082158e+002

30 29 6 -7.039587e+002 -7.985360e+002 -3.120210e+002

40 39 9 -6.292756e+002 -7.085572e+002 -3.140100e+002

50 49 INFEASIBLE pr -7.039587e+002 -3.140100e+002

60 55 7 -5.445782e+002 -7.029920e+002 -3.140100e+002

70 63 INFEASIBLE pr -6.736222e+002 -5.432748e+002

80 63 5 -5.636060e+002 -6.706809e+002 -5.432748e+002

90 61 7 -6.545982e+002 -6.553669e+002 -5.432748e+002

100 67 INFEASIBLE pr -6.550269e+002 -5.432748e+002

110 69 7 -5.646698e+002 -6.515241e+002 -5.432748e+002

120 73 9 -6.061080e+002 -6.496504e+002 -5.432748e+002

130 77 7 -5.995978e+002 -6.473508e+002 -5.432748e+002

140 77 5 -6.343146e+002 -6.414198e+002 -5.432748e+002

150 83 INFEASIBLE pr -6.289332e+002 -5.432748e+002

160 75 INFEASIBLE pr -6.250004e+002 -5.432748e+002

170 75 INFEASIBLE pr -6.207800e+002 -5.432748e+002

180 67 INFEASIBLE pr -6.124388e+002 -5.432748e+002

190 63 INFEASIBLE pr -5.999400e+002 -5.432748e+002

200 53 8 -5.501859e+002 -5.933267e+002 -5.432748e+002

210 47 -5.392820e+002 pr -5.652262e+002 -5.432748e+002

220 37 INFEASIBLE pr -5.621778e+002 -5.432748e+002

230 27 -4.014635e+002 pr -5.544289e+002 -5.432748e+002

240 25 6 -5.460509e+002 -5.486879e+002 -5.432748e+002

250 17 INFEASIBLE pr -5.460509e+002 -5.432748e+002

260 13 6 -5.441563e+002 -5.445782e+002 -5.432748e+002

270 7 INFEASIBLE pr -5.441388e+002 -5.432748e+002

280 1 -5.431301e+002 pr -5.433910e+002 -5.432748e+002

EXIT: Optimal solution found.

Final Statistics for MIP

------------------------

Final objective value = -5.43274828013742e+002

Final integrality gap (abs / rel) =-1.64e-007 / -3.01e-010 (-0.00)

# of nodes processed = 285

# of subproblems processed = 285

Total program time (secs) = 1138.296 ( 1142.395 CPU time)

Time spent in evaluations (secs) = 1138.204

===========================================================================

>> x

x =

6 0 0 10 0 0 1 0 0 1 0 0 2 101 -5

**O6 = 2000**

Node Left Iinf Objective Best Relaxatn Best Incumbent

------ ------ ------ -------------- -------------- --------------

1 0 11 -8.217028e+002 -8.217028e+002 6.001388e+004

10 9 9 -8.202174e+002 -8.210013e+002 -3.155082e+002

20 19 8 -7.036518e+002 -8.199954e+002 -3.155082e+002

30 27 7 -7.031895e+002 -8.192846e+002 -3.292374e+002

40 33 8 -8.181611e+002 -8.187941e+002 -3.601211e+002

50 39 INFEASIBLE pr -7.083994e+002 -3.601211e+002

60 47 8 -6.687565e+002 -7.031643e+002 -4.223598e+002

\* 60 47 r -4.269177e+002

70 53 8 -7.010058e+002 -7.013514e+002 -4.269177e+002

80 63 7 -6.978084e+002 -6.991924e+002 -4.269177e+002

90 65 INFEASIBLE pr -6.967638e+002 -4.269177e+002

100 73 8 -6.218669e+002 -6.915120e+002 -4.269177e+002

110 83 6 -5.968561e+002 -6.774292e+002 -4.269177e+002

120 93 4 -5.889521e+002 -6.733988e+002 -5.432576e+002

130 97 INFEASIBLE pr -6.687565e+002 -5.432576e+002

140 97 6 -5.549399e+002 -6.457216e+002 -5.432576e+002

150 91 8 -5.715851e+002 -6.442297e+002 -5.432576e+002

160 91 8 -6.029383e+002 -6.416119e+002 -5.432576e+002

170 87 9 -6.358995e+002 -6.360229e+002 -5.432576e+002

180 93 5 -6.243780e+002 -6.343146e+002 -5.432576e+002

190 91 6 -5.820154e+002 -6.295296e+002 -5.432576e+002

200 91 INFEASIBLE pr -6.289332e+002 -5.432576e+002

210 89 INFEASIBLE pr -6.282613e+002 -5.432576e+002

220 85 8 -5.617952e+002 -6.254768e+002 -5.432576e+002

230 85 7 -5.926778e+002 -6.223305e+002 -5.432576e+002

240 79 8 -5.488552e+002 -6.136019e+002 -5.432576e+002

250 71 6 -5.713214e+002 -6.071654e+002 -5.432576e+002

260 71 -5.034399e+002 pr -5.991217e+002 -5.432576e+002

270 63 5 -5.854431e+002 -5.947554e+002 -5.432576e+002

\* 270 63 r -5.769580e+002

280 57 -4.726900e+002 pr -5.856425e+002 -5.769580e+002

290 61 -5.687366e+002 pr -5.830502e+002 -5.823251e+002

EXIT: Optimal solution found.

Final Statistics for MIP

------------------------

Final objective value = -5.82541167229168e+002

Final integrality gap (abs / rel) = 3.13e-004 / 5.38e-007 ( 0.00)

# of nodes processed = 293

# of subproblems processed = 293

Total program time (secs) = 1228.807 ( 1233.281 CPU time)

Time spent in evaluations (secs) = 1228.634

===========================================================================

>> x

x =

0 0 0 9 0 9 0 0 0 1 0 1 6 98 -4

**O6 = 1500**

Node Left Iinf Objective Best Relaxatn Best Incumbent

------ ------ ------ -------------- -------------- --------------

1 0 11 -8.431560e+002 -8.431560e+002 5.951388e+004

10 7 9 -7.088044e+002 -8.424550e+002 -3.673384e+002

20 17 9 -7.506119e+002 -7.523077e+002 -3.987123e+002

30 27 7 -7.504533e+002 -7.517987e+002 -4.004558e+002

40 35 8 -7.048487e+002 -7.511356e+002 -4.709507e+002

50 43 7 -7.080753e+002 -7.502357e+002 -4.709507e+002

60 53 INFEASIBLE pr -7.367283e+002 -4.745368e+002

70 57 9 -6.292756e+002 -7.084799e+002 -4.893497e+002

80 63 9 -6.530158e+002 -7.075723e+002 -4.893497e+002

90 69 5 -6.822787e+002 -6.937138e+002 -5.687471e+002

\* 90 69 r -5.769611e+002

100 71 INFEASIBLE pr -6.920424e+002 -5.769611e+002

110 67 INFEASIBLE pr -6.915823e+002 -5.769611e+002

120 67 INFEASIBLE pr -6.905204e+002 -5.769611e+002

130 65 9 -6.327826e+002 -6.870629e+002 -5.801615e+002

140 63 7 -6.528884e+002 -6.865772e+002 -5.801615e+002

150 63 -5.738470e+002 pr -6.824570e+002 -5.801615e+002

160 65 8 -6.818830e+002 -6.820350e+002 -5.801615e+002

170 69 7 -6.473782e+002 -6.802452e+002 -5.801615e+002

180 75 7 -6.330782e+002 -6.763361e+002 -5.801615e+002

190 75 6 -6.348914e+002 -6.724320e+002 -5.801615e+002

200 75 5 -6.467169e+002 -6.528447e+002 -6.302730e+002

210 71 4 -6.430938e+002 -6.467169e+002 -6.334902e+002

220 73 -6.327328e+002 pr -6.461175e+002 -6.460963e+002

EXIT: Optimal solution found.

Final Statistics for MIP

------------------------

Final objective value = -6.46096264045797e+002

Final integrality gap (abs / rel) =-7.76e-007 / -1.20e-009 (-0.00)

# of nodes processed = 221

# of subproblems processed = 221

Total program time (secs) = 849.265 ( 851.173 CPU time)

Time spent in evaluations (secs) = 849.434

===========================================================================

>> x

x =

0 0 0 8 0 8 0 0 0 1 0 1 7 98 -5

**O6=3500**

Node Left Iinf Objective Best Relaxatn Best Incumbent

------ ------ ------ -------------- -------------- --------------

1 0 11 -7.640603e+002 -7.640603e+002 6.151388e+004

10 9 9 -7.085242e+002 -7.108870e+002 -1.422835e+002

20 19 INFEASIBLE pr -7.099931e+002 -1.422835e+002

30 27 10 -6.462263e+002 -7.092434e+002 -2.396600e+002

40 37 9 -6.474051e+002 -7.085242e+002 -2.522712e+002

50 43 6 -6.737165e+002 -7.080123e+002 -3.209719e+002

60 53 5 -6.721285e+002 -6.743477e+002 -4.801932e+002

\* 60 53 r -4.842562e+002

70 57 5 -6.343146e+002 -6.721285e+002 -5.432576e+002

80 61 5 -5.894965e+002 -6.492732e+002 -5.432576e+002

90 61 6 -6.250004e+002 -6.348914e+002 -5.432576e+002

100 63 9 -5.628936e+002 -6.286809e+002 -5.432576e+002

110 55 INFEASIBLE pr -6.213967e+002 -5.432576e+002

120 53 -5.397285e+002 pr -5.894965e+002 -5.432576e+002

130 47 -3.839419e+002 pr -5.621335e+002 -5.432576e+002

140 39 -5.379823e+002 pr -5.478666e+002 -5.432576e+002

150 29 3 -5.436789e+002 -5.447608e+002 -5.432576e+002

160 25 3 -5.433436e+002 -5.433473e+002 -5.432576e+002

\* 160 25 r -5.432748e+002

EXIT: Optimal solution found.

Final Statistics for MIP

------------------------

Final objective value = -5.43274828013742e+002

Final integrality gap (abs / rel) =-9.15e-008 / -1.68e-010 (-0.00)

# of nodes processed = 165

# of subproblems processed = 165

Total program time (secs) = 621.199 ( 623.614 CPU time)

Time spent in evaluations (secs) = 621.987

===========================================================================

>> x

x =

6 0 0 10 0 0 1 0 0 1 0 0 2 101 -5

**O6=1000**

Node Left Iinf Objective Best Relaxatn Best Incumbent

------ ------ ------ -------------- -------------- --------------

1 0 11 -8.658102e+002 -8.658102e+002 5.901388e+004

10 9 9 -8.048073e+002 -8.050412e+002 -3.647196e+002

20 19 8 -8.041536e+002 -8.044442e+002 -4.244413e+002

30 29 8 -7.647418e+002 -8.037944e+002 -4.478041e+002

\* 30 29 r -5.107497e+002

40 35 8 -7.577297e+002 -8.026606e+002 -5.136734e+002

50 39 INFEASIBLE pr -7.577297e+002 -5.357318e+002

60 47 5 -7.383511e+002 -7.441812e+002 -5.357318e+002

\* 60 47 r -6.018331e+002

70 47 5 -7.369056e+002 -7.432433e+002 -6.119443e+002

\* 70 47 r -6.179451e+002

80 51 5 -7.401681e+002 -7.417380e+002 -6.188447e+002

90 45 INFEASIBLE pr -7.404447e+002 -6.188447e+002

100 45 4 -7.364434e+002 -7.383511e+002 -6.188447e+002

110 53 5 -7.117239e+002 -7.377827e+002 -6.204393e+002

120 51 INFEASIBLE pr -7.370684e+002 -6.204393e+002

130 53 5 -7.330391e+002 -7.363959e+002 -6.221464e+002

140 57 INFEASIBLE pr -7.357297e+002 -6.284885e+002

150 53 INFEASIBLE pr -7.348695e+002 -6.284885e+002

160 49 5 -7.014146e+002 -7.317738e+002 -6.284885e+002

170 55 8 -7.232072e+002 -7.234718e+002 -6.284885e+002

180 61 6 -6.593017e+002 -7.189417e+002 -6.284885e+002

190 61 4 -7.110480e+002 -7.144045e+002 -6.284885e+002

\* 190 61 r -7.043095e+002

200 67 -7.036724e+002 pr -7.110484e+002 -7.043095e+002

210 71 -6.981542e+002 pr -7.108385e+002 -7.103730e+002

EXIT: Optimal solution found.

Final Statistics for MIP

------------------------

Final objective value = -7.10373033891096e+002

Final integrality gap (abs / rel) = 7.04e-004 / 9.92e-007 ( 0.00)

# of nodes processed = 219

# of subproblems processed = 219

Total program time (secs) = 807.046 ( 809.130 CPU time)

Time spent in evaluations (secs) = 807.196

===========================================================================

>> x

x =

0 0 0 8 0 8 0 0 0 1 0 1 7 97 -5