**Change the price parameter of supplier 6**

**q6=0.95**

Node Left Iinf Objective Best Relaxatn Best Incumbent

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

1 0 12 -3.702417e+003 -3.702417e+003 3.602864e+005

10 9 9 -3.638600e+003 -3.700025e+003 3.602864e+005

20 19 8 -3.596678e+003 -3.641934e+003 3.602864e+005

30 27 7 -3.532993e+003 -3.612472e+003 -3.352573e+003

40 37 7 -3.591109e+003 -3.591658e+003 -3.501182e+003

50 43 -3.473812e+003 pr -3.590689e+003 -3.501182e+003

60 47 INFEASIBLE pr -3.590037e+003 -3.501182e+003

70 49 7 -3.578353e+003 -3.583582e+003 -3.501182e+003

80 53 5 -3.570356e+003 -3.570565e+003 -3.501182e+003

90 57 4 -3.568602e+003 -3.569339e+003 -3.553175e+003

100 59 -3.565951e+003 pr -3.567379e+003 -3.566427e+003

110 53 2 -3.566644e+003 -3.566646e+003 -3.566590e+003

EXIT: Optimal solution found.

Final Statistics for MIP

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

Final objective value = -3.56659016000902e+003

Final integrality gap (abs / rel) = 6.38e-004 / 1.79e-007 ( 0.00)

# of nodes processed = 117

# of subproblems processed = 117

Total program time (secs) = 447.171 ( 450.141 CPU time)

Time spent in evaluations (secs) = 449.938

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

>> x

x =

8 0 0 10 0 13 1 0 0 1 0 1 4 158 2

**q6=0.94**

Node Left Iinf Objective Best Relaxatn Best Incumbent

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

1 0 12 -3.702417e+003 -3.702417e+003 3.602864e+005

10 9 9 -3.638600e+003 -3.700025e+003 3.602864e+005

20 19 8 -3.596678e+003 -3.641934e+003 -3.176467e+003

30 27 6 -3.532993e+003 -3.612472e+003 -3.352573e+003

40 37 7 -3.591109e+003 -3.591658e+003 -3.501182e+003

50 43 -3.472757e+003 pr -3.590689e+003 -3.501182e+003

60 47 INFEASIBLE pr -3.590037e+003 -3.501182e+003

70 49 7 -3.578353e+003 -3.583582e+003 -3.501182e+003

80 53 4 -3.568137e+003 -3.570340e+003 -3.553175e+003

90 59 -3.566207e+003 pr -3.568137e+003 -3.566427e+003

100 53 3 -3.566644e+003 -3.566646e+003 -3.566590e+003

EXIT: Optimal solution found.

Final Statistics for MIP

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

Final objective value = -3.56659016000902e+003

Final integrality gap (abs / rel) = 6.43e-004 / 1.80e-007 ( 0.00)

# of nodes processed = 107

# of subproblems processed = 107

Total program time (secs) = 424.018 ( 426.008 CPU time)

Time spent in evaluations (secs) = 427.587

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

>> x

x =

8 0 0 10 0 13 1 0 0 1 0 1 4 158 2

**q6=0.935**

Node Left Iinf Objective Best Relaxatn Best Incumbent

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

1 0 12 -3.702417e+003 -3.702417e+003 3.602864e+005

10 9 9 -3.638600e+003 -3.700025e+003 3.602864e+005

20 19 -3.366995e+003 pr -3.638600e+003 -3.385144e+003

30 21 6 -3.532993e+003 -3.612472e+003 -3.385144e+003

40 31 8 -3.590748e+003 -3.591443e+003 -3.501182e+003

50 37 6 -3.590042e+003 -3.590444e+003 -3.501182e+003

60 41 INFEASIBLE pr -3.590042e+003 -3.501182e+003

70 45 INFEASIBLE pr -3.581717e+003 -3.501182e+003

80 47 8 -3.568097e+003 -3.570298e+003 -3.554272e+003

90 49 -3.565951e+003 pr -3.567220e+003 -3.566427e+003

100 43 2 -3.566644e+003 -3.566646e+003 -3.566590e+003

EXIT: Optimal solution found.

Final Statistics for MIP

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

Final objective value = -3.56659016000902e+003

Final integrality gap (abs / rel) = 6.28e-004 / 1.76e-007 ( 0.00)

# of nodes processed = 105

# of subproblems processed = 105

Total program time (secs) = 407.422 ( 409.893 CPU time)

Time spent in evaluations (secs) = 411.115

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

>> x

x =

8 0 0 10 0 13 1 0 0 1 0 1 4 158 2

**q6=0.93**

Node Left Iinf Objective Best Relaxatn Best Incumbent

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

1 0 12 -3.702417e+003 -3.702417e+003

10 9 9 -3.638600e+003 -3.700025e+003

20 19 -3.366995e+003 pr -3.638600e+003 -3.510654e+003

30 25 6 -3.511224e+003 -3.594526e+003 -3.510654e+003

40 27 -3.410778e+003 pr -3.570182e+003 -3.510654e+003

50 31 -3.388395e+003 pr -3.555660e+003 -3.518864e+003

60 37 INFEASIBLE pr -3.552228e+003 -3.530263e+003

70 31 5 -3.549151e+003 -3.549411e+003 -3.530263e+003

80 37 -3.542582e+003 pr -3.548761e+003 -3.543924e+003

90 37 2 -3.545490e+003 -3.547891e+003 -3.544363e+003

100 39 2 -3.544843e+003 -3.547274e+003 -3.544363e+003

110 33 -3.541022e+003 pr -3.545609e+003 -3.544363e+003

120 25 -3.539659e+003 pr -3.544605e+003 -3.544363e+003

EXIT: Optimal solution found.

Final Statistics for MIP

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

Final objective value = -3.54436323108708e+003

Final integrality gap (abs / rel) = 3.31e-005 / 9.34e-009 ( 0.00)

# of nodes processed = 121

# of subproblems processed = 121

Total program time (secs) = 1132.419 ( 1132.692 CPU time)

Time spent in evaluations (secs) = 1131.292

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

>> x

x =

10 0 0 9 0 12 1 0 0 1 0 1 4 152 3

**q6=0.925**

Node Left Iinf Objective Best Relaxatn Best Incumbent

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

1 0 12 -3.702006e+003 -3.702006e+003

10 9 9 -3.634838e+003 -3.699065e+003 -3.348332e+003

20 17 7 -3.591918e+003 -3.634838e+003 -3.352840e+003

30 27 -3.329560e+003 pr -3.597273e+003 -3.417571e+003

40 29 -3.294121e+003 pr -3.593488e+003 -3.511994e+003

50 33 -3.410020e+003 pr -3.590466e+003 -3.517329e+003

60 31 -3.329561e+003 pr -3.570813e+003 -3.525029e+003

70 31 -3.243029e+003 pr -3.549481e+003 -3.525029e+003

80 31 -3.210631e+003 pr -3.541431e+003 -3.527153e+003

90 29 -3.316980e+003 pr -3.537397e+003 -3.527153e+003

100 35 2 -3.529693e+003 -3.532635e+003 -3.527153e+003

\* 100 35 r -3.528400e+003

110 41 -3.525450e+003 pr -3.531867e+003 -3.528569e+003

120 31 -3.527509e+003 pr -3.530392e+003 -3.528569e+003

130 25 -3.529303e+003 pr -3.529427e+003 -3.529380e+003

EXIT: Optimal solution found.

Final Statistics for MIP

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

Final objective value = -3.52937985792533e+003

Final integrality gap (abs / rel) =-1.52e-009 / -4.31e-013 (-0.00)

# of nodes processed = 131

# of subproblems processed = 131

Total program time (secs) = 536.728 ( 538.203 CPU time)

Time spent in evaluations (secs) = 537.007

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

>> x

x =

8 0 0 8 9 0 1 0 0 1 1 0 4 163 1