

Investment Planning

Winston-Salem Development Management (WSDM) is trying to complete its investment plans for the next three years. Currently, WSDM has 2 million dollars available for investment. At six month intervals over the next three years, WSDM expects the following income stream from previous investments: \$500,000 (6 months from now), \$400,000; \$380,000; \$360,000; \$340,000; and \$300,000 (at the end of third year). There are three development projects in which WSDM is considering participating. The Foster City Development would, if WSDM participated fully, have the following cash flow stream (projected) at six month intervals over the next three years (negative numbers represent investments, positive numbers represent income): -\$3,000,000; -\$1,000,000; -\$1,800,000; \$400,000; \$1,800,000; \$1,800,000; \$5,500,000. The last figure is its estimated value at the end of three years. A second project involves taking over the operation of some old lower-middle income housing on the condition that certain initial repairs to it be made and that it be demolished at the end of three years. The cash flow stream for this project if participated in fully would be: -\$2,000,000; -\$500,000; \$1,500,000; \$1,500,000; \$1,500,000; \$200,000; -\$1,000,000.

The third project, The Disney-University Hotel, would have the following cash flow stream (six-month intervals) if WSDM participated fully. Again the last figure is the estimated value at the end of the three year: -\$2,000,000; -\$2,000,000; -\$1,800,000; \$1,000,000; \$1,000,000; \$1,000,000; \$6,000,000. WSDM can borrow money for half-year intervals at 3.5 percent interest per half year. At most, 2 million dollars can be borrowed at one time, i.e., the total outstanding principal can never exceed 2 million. WSDM can invest surplus funds at 3 percent per half-year.

Formulate the problem of maximizing WSDM's net worth at the end of three years as a linear program. If WSDM participates in a project at less than 100 percent, all the cash flows of that project are reduced appropriately.

LP Formulation

Let WSDM's percentage of cash flow streams be :

X_1 = Percentage investment in Foster City Development

X_2 = Percentage investment in Middle Housing Project

X_3 = Percentage investment in Disney-University Hotel

k_i = Amount of money borrowed in i th interval ($i = 1, \dots, 6$, as maximum intervals can be six in 3 years)

l_i = Amount of money lent in i th interval ($i = 1, \dots, 6$, as maximum intervals can be six in 3 years)

(All cash flow streams are converted into \$1000 units)

Objective Function :

Maximize

$$C = \text{Net Worth} = 5500 * X_1 - 1000 * X_2 + 6000 * X_3 - 1.035 * k_6 + 1.03 * l_6 - 300$$

(\$300,000 is the expected income stream at the end of the 3rd year or 6th interval.)

Constraints:

Net worth after successive six month intervals :

$$3000 * X_1 + 2000 * X_2 + 2000 * X_3 - k_1 + l_1 = 2000$$

$$1000 * X_1 + 500 * X_2 + 2000 * X_3 + 1.035 * k_1 - 1.03 * l_1 - k_2 + l_2 = 50$$

$$1800 * X_1 - 1500 * X_2 + 1800 * X_3 + 1.035 * k_2 - 1.03 * l_2 - k_3 + l_3 = 400$$

$$-400 * X_1 - 1500 * X_2 - 1000 * X_3 + 1.035 * k_3 - 1.03 * l_3 - k_4 + l_4 = 380$$

$$-1800 * X_1 - 1500 * X_2 - 1000 * X_3 + 1.035 * k_4 - 1.03 * l_4 - k_5 + l_5 = 360$$

$$-1800 * X_1 - 200 * X_2 - 1000 * X_3 + 1.035 * k_5 - 1.03 * l_5 - k_6 + l_6 = 340$$

Since WSDM cannot fully participate in any single project we have :

$$X_1 \leq 1$$

$$X_2 \leq 1$$

$$X_3 \leq 1$$

Maximum Borrowing cap for each interval :

$$k_1 \leq 2000$$

$$k_2 \leq 2000$$

$$k_3 \leq 2000$$

$$k_4 \leq 2000$$

$$k_5 \leq 2000$$

$$k_6 \leq 2000$$

$$X_1, X_2, X_3, k_i, l_i \geq 0 \text{ (for all } i = 1 \dots 6)$$

MATLAB CODE:

```

clear variables
close all
clc

% Defining the max/min requirement of objective function %
% condition = 1 for maximization and 0 for minimum %

condition = 1 ;

if condition==1
    fprintf('Maximization problem\n\nConverting objective function to minimization✓
form\n\n')
end

% Defining X matrix %
% S's are the slack variables %

X = ["Foster City", "Middle income housing", "Disney", "K1", "L1", "K2" "L2" "K3" "L3"✓
"K4" "L4" "K5" "L5" "K6" "L6" "S1" "S2" "S3" "S4" "S5" "S6" "S7" "S8" "S9" ];

% Defining cost coefficient matrix %
C = [5500 -1000 6000 0 0 0 0 0 0 0 0 0 0 0 -1.035 1.03 0 0 0 0 0 0 0 0 0];

% Converting cost coefficients to minimization form as algorithm is coded
% in standard minimization form%

if condition == 1,
    C = -C;
end

fprintf('Cost Coefficient matrix')
display(C);

% Entering any constants in the objective function%

constant = [300];

if condition == 1,
    constant = -constant;
end

% Defining the RHS of the constraints %

b = [ 2000 ; 500 ; 400 ; 380 ; 360 ; 340 ; 2000 ; 2000 ; 2000 ; 2000 ; 2000 ; 2000 ; 1 ;✓
1 ; 1 ]

% Writing the coefficients of the constraints in standard form %

const1 = [ 3000 2000 2000 -1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0];
const2 = [ 1000 500 2000 1.035 -1.03 -1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 ];
const3 = [ 1800 -1500 1800 0 0 1.035 -1.03 -1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 ];
const4 = [ -400 -1500 -1000 0 0 0 0 1.035 -1.03 -1 1 0 0 0 0 0 0 0 0 0 0 0 ];
const5 = [ -1800 -1500 -1000 0 0 0 0 0 0 0 1.035 -1.03 -1 1 0 0 0 0 0 0 0 0 0 ];

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        skip = 1                % Phase 1 skipping condition %

fprintf('\n Initial basis not found.\n\n Adding artificial variables and proceeding to Phase 1\n')
else
fprintf('\n Initial basis found and proceeding to Phase 2')
end

% if initial basis is not found we will proceed with Phase 1 and add artificial variables to A
% matrix %

while(skip==0)

    I = eye(A_rows);

% Binding the identity matrix with A %

A = [ A, I ]

% Now that we have our initial basis and new A matrix, we move on to the first phase of simplex method%

% _____ %

% Phase 1 %

% Objective function for Phase 1 %

CP1 = [ zeros(1,A_col), ones(1,A_rows) ];

% Indexing the Starting basic variables %
% We are going to take artificial variables as starting basic variables %

fprintf('Initializing Phase 1\n\n')

fprintf('Phase 1 objective function coefficients')
display(CP1);

u = 1:A_col+A_rows;
BasVar = u(CP1==1);
fprintf('Current Basic Variables are')
display(BasVar);

NonBasVar = u(CP1==0);
fprintf('Current non-basic variables are')
display(NonBasVar);

% Reduced cost for Phase 1 %

B = eye(A_rows);                % Identity Matrix %
cp1 = ones(1,A_rows);          % Phase 1 obj function coefficients %
binv = inv(B);                  % Identity inverse matrix %
N = A(:,NonBasVar);            % Non Basic Variable matrix %

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x = cp1*binv ;
zj = x*N ; % C'.B(inv).N %
redcost = [zj zeros(1,A_rows)]; % initial reduced cost %

Row1 = [redcost sum(b)]; % Binding reduced cost and initial rhs %
A = [A b]; % Binding A and B matrix %

T1 = [Row1 ; A]; % Starting Tableau for Phase 1 %

fprintf('Initial tableau for Phase 1 ')
display(T1);

% iterations %

% Finding the maximum reduced cost and indexing it%
% In case of a tie the lower index is automatically returned and hence
% Bland's rule is applied to prevent cycling.

[A B] = max(T1(1,1:A_rows+A_col));

% Checking the if the array of b/yi's<0 is completely empty or completely full to check for unboundedness %

rtest = T1(2:A_rows+1 , A_rows+A_col+1)./T1(2:A_rows+1,B);

if isempty(rtest(rtest>0))==1
    fprintf(' The Problem is Unbounded ')
    break;
end

% Finding the exiting variable corresponding to the min ratio
% test and indexing that column for further operations. %

mini = min(rtest(rtest>0));
exitVar = find((rtest==mini),1);
BasVar(exitVar) = B ; % Indexing Exiting Variable

fprintf('the current basis is')
display(BasVar)

% Row operations %

itr = itr +1;

% Element wise division to make pivot variable 1 %

T1(exitVar+1,:) = T1(exitVar+1,:)./T1(exitVar+1,B);

% Making other row elements of pivot column zero %

for q = 1:A_rows+1

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        if(q~=exitVar+1)
            T1(q,:) = T1(q,:) - (T1(exitVar+1,:)*T1(q,B));
        end
    end

fprintf('iteration number %d', itr+1)
display(T1);

% Phase 1 stopping condition - to check if reduced costs are negative"

if (isempty(T1(T1(1,1:A_rows+A_col)>0.00000001))==1) || (T1(1,A_rows+A_col+1)<=0)
    skip = 1;
end

% Checking feasibility of the LP %
% If rhs of phase optimal tableau is 0, then LP is feasible %
% we are not checking for degeneracy as the redundant rows have been
% removed at the start%

cb = CP1(BasVar);

rhs = cb*T1(2:A_rows+1,A_rows+A_col+1);
if rhs == 0
    fprintf('End of Phase 1. The problem is feasible, moving on to Phase 2\n\n\n')
else
    fprintf('End of Phase 1. The problem is infeasible. Optimal solution does not exists')
end
end

% If initial basis is found, we will directly jump to Phase 2 %

% _____ %

% Phase 2 %

% Reduced cost for starting tableau of Phase 2 %

if isempty(result)== 0
    Cb = C(BasVar);
    A = T1(2:A_rows+1,1:A_col)
    redcost = (Cb*A)-C ;
    rhs = Cb*T1(2:A_rows+1 , A_rows+A_col+1);
    redcost = [redcost, rhs];
    redcost;

    A = [A , T1(2:A_rows+1 , A_rows+A_col+1)];

else
    BasVar = u(C==0)
    NonBasVar = u(C~=0)
    Cb = C(BasVar);

    redcost = (Cb*A)-C ;

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rhs = Cb*A(2:A_rows+1 ,A_col+1);
redcost = [redcost, rhs];
redcost;
end

T2 = [redcost ; A]; % Binding Phase 2 initial tableau %
fprintf('Initial tableau for Phase 2 ')
display(T2);

% To check if current tableau is optimal before proceeding with row operations %
% By checking if all reduced costs are negative %

begin = 0;
itr = 0;
if isempty(T2(T2(1,1:A_col)>0.000000001))==1
    begin==1
end

% Moving on with Phase 2 %

while(begin==0)
    itr = itr+1;

    %indexing max reduced cost%
    % Again Bland's rule is automatically applied just like in phase 1 %

    [A,B] = max(T2(1,1:A_col));

    % Ratio test = b/yi %

    rtest = T2(2:A_rows+1 ,A_col+1)./T1(2:A_rows+1,B);

    % Checking for unboundedness - if all b/yi < 0 or not %

    if isempty(rtest(rtest>0))==1
        fprintf(' The Problem is Unbounded ')
        break;
    end

    % Indexing exiting variable by finding out minimum ratio %
    % Bland's rule automatically applied %

    mini = min(rtest(rtest>0));

    % Updating current basic variables %

    exitVar = find((rtest==mini),1);
    BasVar(exitVar) = B;

    fprintf('the current basis is')
    display(BasVar);

    % Row operations %
    % Element wise division to make pivot variable 1 %

```



```

T2(exitVar+1,:) = T2(exitVar+1,:)./T2(exitVar+1,B);

    % Making other row elements of pivot column zero %

for q = 1:A_rows+1
    if(q~=exitVar+1)
        T2(q,:) = T2(q,:) - (T2(exitVar+1,:)*T2(q,B));
    end
end

fprintf('iteration number %d', itr+1)
display(T2);

    % Stopping condition for Phase 2 by checking if all reduced costs are
    % negative %

if isempty(T2(T2(1,1:A_col)>0.000000001))==1
    begin = 1;
end
end
    if begin==1 && condition == 1
        fprintf('\n\n Final Reduced Costs \n\n')
        display(T2(1,1:A_col))

        fprintf('\n The current tableau is optimal and the optimal solution is')
        display(-(T2(1,A_col+1)));

        fprintf('\n The optimal objective function value is')
        display(-(T2(1,A_col+1)+ constant));

        fprintf('And the Optimal BFS is')
        display([(X(BasVar)) ',T2(2:A_rows+1,A_col+1)])

    elseif begin == 1 && condition == 0
        fprintf('\n\n Final Reduced Costs \n\n')
        display(T2(1,1:A_col))

        fprintf('\n The current tableau is optimal and the optimal solution is')
        display(T2(1,A_col+1));

        fprintf('\n The optimal objective function value is')
        display((T2(1,A_col+1)+ constant));

        fprintf('And the Optimal BFS is')
        display([(X(BasVar)) ',T2(2:A_rows+1,A_col+1)])
    end
end

```

MATLAB OUTPUT :

(Since there are many iterations involving large matrices, important screenshots are presented below. The completed output with 25 iterations is attached at the end) !!!

Command Window

Maximization problem

Converting objective function to minimization form

Cost Coefficient matrix

C =

1.0e+03 *

Columns 1 through 7

-5.5000	1.0000	-6.0000	0	0	0	0
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Columns 8 through 14

0	0	0	0	0	0	0.0010
---	---	---	---	---	---	--------

Columns 15 through 21

-0.0010	0	0	0	0	0	0
---------	---	---	---	---	---	---

Columns 22 through 24

0	0	0
---	---	---

A =

1.0e+03 *

Columns 1 through 7

3.0000	2.0000	2.0000	-0.0010	0.0010	0	0
1.0000	0.5000	2.0000	0.0010	-0.0010	-0.0010	0.0010
1.8000	-1.5000	1.8000	0	0	0.0010	-0.0010
-0.4000	-1.5000	-1.0000	0	0	0	0
-1.8000	-1.5000	-1.0000	0	0	0	0
-1.8000	-0.2000	-1.0000	0	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0	0	0.0010	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
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Columns 8 through 14

f_x	0	0	0	0	0	0	0
-------	---	---	---	---	---	---	---

There are no redundant constraints

Initial basis not found.

Adding artificial variables and proceeding to Phase 1

A =

1.0e+03 *

Columns 1 through 7

3.0000	2.0000	2.0000	-0.0010	0.0010	0	0
1.0000	0.5000	2.0000	0.0010	-0.0010	-0.0010	0.0010
1.8000	-1.5000	1.8000	0	0	0.0010	-0.0010
-0.4000	-1.5000	-1.0000	0	0	0	0
-1.8000	-1.5000	-1.0000	0	0	0	0
-1.8000	-0.2000	-1.0000	0	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0	0	0.0010	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
0.0010	0	0	0	0	0	0
f_x	0	0.0010	0	0	0	0

Command Window

Initializing Phase 1

Phase 1 objective function coefficients
CP1 =

Columns 1 through 12

0 0 0 0 0 0 0 0 0 0 0 0

Columns 13 through 24

0 0 0 0 0 0 0 0 0 0 0 0

Columns 25 through 36

1 1 1 1 1 1 1 1 1 1 1 1

Columns 37 through 39

1 1 1

Command Window

Current Basic Variables are

BasVar =

Columns 1 through 12

25 26 27 28 29 30 31 32 33 34 35 36

Columns 13 through 15

37 38 39

Current non-basic variables are

NonBasVar =

Columns 1 through 12

1 2 3 4 5 6 7 8 9 10 11 12

Columns 13 through 24

13 14 15 16 17 18 19 20 21 22 23 24

Command Window

Initial tableau for Phase 1
T1 =

1.0e+04 *

Columns 1 through 7

0.1801	-0.2199	0.2801	0.0001	-0.0000	0.0001	-0.0000
0.3000	0.2000	0.2000	-0.0001	0.0001	0	0
0.1000	0.0500	0.2000	0.0001	-0.0001	-0.0001	0.0001
0.1800	-0.1500	0.1800	0	0	0.0001	-0.0001
-0.0400	-0.1500	-0.1000	0	0	0	0
-0.1800	-0.1500	-0.1000	0	0	0	0
-0.1800	-0.0200	-0.1000	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0	0.0001	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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

Command Window

the current basis is
BasVar =

Columns 1 through 12

25 26 3 28 29 30 31 32 33 34 35 36

Columns 13 through 15

37 38 39

iteration number 2

T1 =

1.0e+04 *

Columns 1 through 7

-0.1000	0.0135	0	0.0001	-0.0000	-0.0001	0.0002
0.1000	0.3667	0	-0.0001	0.0001	-0.0001	0.0001
-0.1000	0.2167	0	0.0001	-0.0001	-0.0002	0.0002
0.0001	-0.0001	0.0001	0	0	0.0000	-0.0000
0.0600	-0.2333	0	0	0	0.0001	-0.0001
-0.0800	-0.2333	0	0	0	0.0001	-0.0001
-0.0800	-0.1033	0	0	0	0.0001	-0.0001
f_x	0	0	0	0.0001	0	0

Command Window

iteration number 25

T1 =

1.0e+03 *

Columns 1 through 7

0	0.0000	-0.0000	0	0	0	-0.0000
0	1.4284	-0.9846	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
0	-1.7807	0.0090	0	0	0.0010	-0.0010
0	-1.4238	-0.6021	0	0	0	0.0000
0	-2.5666	0.9634	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0	1.7807	-0.0090	0	0	0	0.0010
0	1.4238	0.6021	0	0	0	-0.0000
0	0	0	0	0	0	0
0	-2.6306	0.1676	0	0	0	0.0000
0	0	0	0	0	0	0
0	-0.0002	-0.0010	0	0	0	-0.0000
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Command Window

End of Phase 1. The problem is feasible, moving on to Phase 2

Initial tableau for Phase 2

T2 =

1.0e+03 *

Columns 1 through 7

0	0.5955	-0.4640	0	0	0	-0.0000
0	1.4284	-0.9846	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
0	-1.7807	0.0090	0	0	0.0010	-0.0010
0	-1.4238	-0.6021	0	0	0	0.0000
0	-2.5666	0.9634	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0	1.7807	-0.0090	0	0	0	0.0010
0	1.4238	0.6021	0	0	0	-0.0000
0	0	0	0	0	0	0
0	-2.6306	0.1676	0	0	0	0.0000
0	0	0	0	0	0	0
0	-0.0002	-0.0010	0	0	0	-0.0000
f_2	0	0.0010	0	0	0	0

Command Window

the current basis is

BasVar =

Columns 1 through 12

16 8 1 6 19 15 4 2 10 20 13 21

Columns 13 through 15

22 23 24

iteration number 4

T2 =

1.0e+03 *

Columns 1 through 7

	0	0	-0.4524	0	-0.0000	0	-0.0003
	0	0	-0.9737	0	0.0010	0	-0.0008
	0	0	0	0	0	0	-0.0000
0.0010	0	0	0.0010	0	0.0000	0	-0.0000
0	0	0	0	0	0	0.0010	0.0000
0	0	0	-0.6107	0	0.0000	0	0.0008
0	0	0	0.9450	0	0.0000	0	0.0014
f_x	0	0	0.9737	0.0010	-0.0010	0	0.0008

Command Window

0 0 0.0010 0.0010

Final Reduced Costs

Columns 1 through 7

0 0 -452.3816 0 -0.0088 0 -0.3343

Columns 8 through 14

0 -0.2510 0 -0.0053 -0.0051 0 -0.0050

Columns 15 through 21

0 0 -0.3274 -0.2455 0 0 0

Columns 22 through 24

0 0 0

The current tableau is optimal and the optimal solution is 7.3652e+03

Command Window

The current tableau is optimal and the optimal solution is 7.3652e+03

The optimal objective function value is 7.6652e+03

And the Optimal BFS is 15×2 string array

"S1"	"582.55668"
"K3"	"2000"
"Foster City"	"0.71434135"
"K2"	"2000"
"S4"	"1551.551"
"L6"	"3954.865"
"K1"	"1417.4433"
"Middle income housing"	"0.63720963"
"K4"	"448.44902"
"S5"	"2000"
"L5"	"2137.4841"
"S6"	"2000"
"S7"	"0.28565865"
"S8"	"0.36279037"
"S9"	"1"


LP Commercial Solver : PHP Simplex :

<http://www.phpsimplex.com/simplex/simplex.htm?l=en>

PHPSimplex

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PHPSimplex



Which is the objective of the function? Maximize

Function: 5500 $X_1 +$ -1000 $X_2 +$ 6000 $X_3 +$ 0 $X_4 +$ 0 $X_5 +$ 0 $X_6 +$ 0 $X_7 +$ 0 $X_8 +$ 0 $X_9 +$ 0 $X_{10} +$ 0 $X_{11} +$ 0 $X_{12} +$ 0 $X_{13} +$ -1.035 $X_{14} +$ 1.03 X_{15}

Constraints:




3000	$X_1 +$ 2000	$X_2 +$ 2000	$X_3 +$ -1	$X_4 +$ 1	$X_5 +$ 0	$X_6 +$ 0	$X_7 +$ 0	$X_8 +$ 0	$X_9 +$ 0	$X_{10} +$ 0	$X_{11} +$ 0	$X_{12} +$ 0	$X_{13} +$ 0	$X_{14} +$ 0	$X_{15} =$ 2000
1000	$X_1 +$ 500	$X_2 +$ 2000	$X_3 +$ 1.035	$X_4 +$ -1.03	$X_5 +$ -1	$X_6 +$ 1	$X_7 +$ 0	$X_8 +$ 0	$X_9 +$ 0	$X_{10} +$ 0	$X_{11} +$ 0	$X_{12} +$ 0	$X_{13} +$ 0	$X_{14} +$ 0	$X_{15} =$ 500
1800	$X_1 +$ -1500	$X_2 +$ 1800	$X_3 +$ 0	$X_4 +$ 0	$X_5 +$ 1.035	$X_6 +$ -1.03	$X_7 +$ -1	$X_8 +$ 1	$X_9 +$ 0	$X_{10} +$ 0	$X_{11} +$ 0	$X_{12} +$ 0	$X_{13} +$ 0	$X_{14} +$ 0	$X_{15} =$ 400
-400	$X_1 +$ -1500	$X_2 +$ -1000	$X_3 +$ 0	$X_4 +$ 0	$X_5 +$ 0	$X_6 +$ 0	$X_7 +$ 1.035	$X_8 +$ -1.03	$X_9 +$ -1	$X_{10} +$ 1	$X_{11} +$ 0	$X_{12} +$ 0	$X_{13} +$ 0	$X_{14} +$ 0	$X_{15} =$ 380
-1800	$X_1 +$ -1500	$X_2 +$ -1000	$X_3 +$ 0	$X_4 +$ 0	$X_5 +$ 0	$X_6 +$ 0	$X_7 +$ 0	$X_8 +$ 0	$X_9 +$ 1.035	$X_{10} +$ -1.03	$X_{11} +$ -1	$X_{12} +$ 1	$X_{13} +$ 0	$X_{14} +$ 0	$X_{15} =$ 360
-1800	$X_1 +$ -200	$X_2 +$ -1000	$X_3 +$ 0	$X_4 +$ 0	$X_5 +$ 0	$X_6 +$ 0	$X_7 +$ 0	$X_8 +$ 0	$X_9 +$ 0	$X_{10} +$ 0	$X_{11} +$ 1.035	$X_{12} +$ -1.03	$X_{13} +$ -1	$X_{14} +$ 1	$X_{15} =$ 340

	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}
0	$X_1 + 0$	$X_2 + 0$	$X_3 + 1$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 2000$			
0	$X_1 + 0$	$X_2 + 0$	$X_3 + 0$	$X_4 + 0$	$X_5 + 1$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 2000$			
0	$X_1 + 0$	$X_2 + 0$	$X_3 + 0$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 1$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 2000$			
0	$X_1 + 0$	$X_2 + 0$	$X_3 + 0$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 1$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 2000$			
0	$X_1 + 0$	$X_2 + 0$	$X_3 + 0$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 1$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 2000$			
0	$X_1 + 0$	$X_2 + 0$	$X_3 + 0$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 1$	$X_{14} + 0$	$X_{15} \leq 2000$			
1	$X_1 + 0$	$X_2 + 0$	$X_3 + 0$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 1$			
0	$X_1 + 1$	$X_2 + 0$	$X_3 + 0$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 1$			
0	$X_1 + 0$	$X_2 + 1$	$X_3 + 0$	$X_4 + 0$	$X_5 + 0$	$X_6 + 0$	$X_7 + 0$	$X_8 + 0$	$X_9 + 0$	$X_{10} + 0$
			$X_{11} + 0$	$X_{12} + 0$	$X_{13} + 0$	$X_{14} + 0$	$X_{15} \leq 1$			

$X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{14}, X_{15} \geq 0$

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Two-Phase Simplex method

☐ Show results as fractions.

If you can imagine
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The optimal solution value is $Z = 7365.1788073654$

$X_1 = 0.71434135484768$
 $X_2 = 0.63720962581722$
 $X_3 = 0$
 $X_4 = 1417.4433161775$
 $X_5 = 0$
 $X_6 = 2000$
 $X_7 = 0$
 $X_8 = 2000$
 $X_9 = 0$
 $X_{10} = 448.44901933509$
 $X_{11} = 0$
 $X_{12} = 0$
 $X_{13} = 2137.4841424398$
 $X_{14} = 0$
 $X_{15} = 3954.8650306023$

 F = Foster City Development
M = Middle Income housing Project

We can see that the optimum value from :

simplex code = 7365.2

commercial solver = 7365.1788

Objective function value for both = $7365.2 + 300 = 7665.2$

Hence the working of the two phase simplex code is confirmed.

The Complete MATLAB output is printed below.

```

        end
    end

    fprintf('iteration number %d', itr+1)
    display(T2);

    % Stopping condition for Phase 2 by checking if all reduced costs are
    % negative %

    if isempty(T2(T2(1,1:A_col)>0.000000001))==1
        begin = 1;
    end
    end
    if begin==1 && condition == 1
        fprintf('\n\n Final Reduced Costs \n\n')
        display(T2(1,1:A_col))

        fprintf('\n The current tableau is optimal and the optimal solution is')
        display(-(T2(1,A_col+1)));

        fprintf('\n The optimal objective function value is')
        display(-(T2(1,A_col+1)+ constant));

        fprintf('And the Optimal BFS is')
        display([(X(BasVar))',T2(2:A_rows+1,A_col+1)])

    elseif begin == 1 && condition == 0
        fprintf('\n\n Final Reduced Costs \n\n')
        display(T2(1,1:A_col))

        fprintf('\n The current tableau is optimal and the optimal solution is')
        display(T2(1,A_col+1));

        fprintf('\n The optimal objective function value is')
        display((T2(1,A_col+1)+ constant));

        fprintf('And the Optimal BFS is')
        display([(X(BasVar))',T2(2:A_rows+1,A_col+1)])
    end
end

```

Maximization problem

Converting objective function to minimization form

Cost Coefficient matrix

C =

1.0e+03 *

Columns 1 through 7

-5.5000	1.0000	-6.0000	0	0	0	0
---------	--------	---------	---	---	---	---

Columns 8 through 14

0	0	0	0	0	0	0.0010
---	---	---	---	---	---	--------

Columns 15 through 21

-0.0010	0	0	0	0	0	0
---------	---	---	---	---	---	---

Columns 22 through 24

0	0	0
---	---	---

b =

2000
500
400
380
360
340
2000
2000
2000
2000
2000
2000
1
1
1

A =

1.0e+03 *

Columns 1 through 7

3.0000	2.0000	2.0000	-0.0010	0.0010	0	0
1.0000	0.5000	2.0000	0.0010	-0.0010	-0.0010	0.0010
1.8000	-1.5000	1.8000	0	0	0.0010	-0.0010
-0.4000	-1.5000	-1.0000	0	0	0	0
-1.8000	-1.5000	-1.0000	0	0	0	0
-1.8000	-0.2000	-1.0000	0	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0	0	0.0010	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
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	0	0	0	0	0	0
0	0	0	0	0	0	0
-0.0010	0.0010	0	0	0	0	0
0.0010	-0.0010	-0.0010	0.0010	0	0	0
0	0	0.0010	-0.0010	-0.0010	0.0010	0
0	0	0	0	0.0010	-0.0010	-0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

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
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 24

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
0.0010	0	0
0	0.0010	0
0	0	0.0010

There are no redundant constraints

Initial basis not found.

Adding artificial variables and proceeding to Phase 1

A =

1.0e+03 *

Columns 1 through 7

3.0000	2.0000	2.0000	-0.0010	0.0010	0	0
1.0000	0.5000	2.0000	0.0010	-0.0010	-0.0010	0.0010
1.8000	-1.5000	1.8000	0	0	0.0010	-0.0010
-0.4000	-1.5000	-1.0000	0	0	0	0
-1.8000	-1.5000	-1.0000	0	0	0	0
-1.8000	-0.2000	-1.0000	0	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0	0	0.0010	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
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	0	0	0	0	0	0
0	0	0	0	0	0	0
-0.0010	0.0010	0	0	0	0	0
0.0010	-0.0010	-0.0010	0.0010	0	0	0
0	0	0.0010	-0.0010	-0.0010	0.0010	0
0	0	0	0	0.0010	-0.0010	-0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

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
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

0	0	0	0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0	0	0	0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
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
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Columns 29 through 35

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
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
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

Columns 36 through 39

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
0.0010	0	0	0
0	0.0010	0	0
0	0	0.0010	0
0	0	0	0.0010

Initializing Phase 1

Phase 1 objective function coefficients

CP1 =

Columns 1 through 13

0	0	0	0	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---

Columns 14 through 26

0	0	0	0	0	0	0	0	0	0	0	1	1
---	---	---	---	---	---	---	---	---	---	---	---	---

Columns 27 through 39

1	1	1	1	1	1	1	1	1	1	1	1	1
---	---	---	---	---	---	---	---	---	---	---	---	---

Current Basic Variables are

BasVar =

Columns 1 through 13

25	26	27	28	29	30	31	32	33	34	35	36	37
----	----	----	----	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

Current non-basic variables are

NonBasVar =

Columns 1 through 13

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

Columns 14 through 24

14	15	16	17	18	19	20	21	22	23	24
----	----	----	----	----	----	----	----	----	----	----

Initial tableau for Phase 1

T1 =

1.0e+04 *

Columns 1 through 7

0.1801	-0.2199	0.2801	0.0001	-0.0000	0.0001	-0.0000
0.3000	0.2000	0.2000	-0.0001	0.0001	0	0

0.1000	0.0500	0.2000	0.0001	-0.0001	-0.0001	0.0001
0.1800	-0.1500	0.1800	0	0	0.0001	-0.0001
-0.0400	-0.1500	-0.1000	0	0	0	0
-0.1800	-0.1500	-0.1000	0	0	0	0
-0.1800	-0.0200	-0.1000	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0	0.0001	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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

Columns 8 through 14

0.0001	-0.0000	0.0001	-0.0000	0.0001	-0.0000	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
-0.0001	0.0001	0	0	0	0	0
0.0001	-0.0001	-0.0001	0.0001	0	0	0
0	0	0.0001	-0.0001	-0.0001	0.0001	0
0	0	0	0	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

Columns 29 through 35

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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.5983
0	0	0	0	0.2000
0	0	0	0	0.0500
0	0	0	0	0.0400
0	0	0	0	0.0380
0	0	0	0	0.0360
0	0	0	0	0.0340
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0001
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0001

the current basis is
 BasVar =

Columns 1 through 13

25	26	3	28	29	30	31	32	33	34	35	36	37
----	----	---	----	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 2
 T1 =

1.0e+04 *

Columns 1 through 7

-0.1000	0.0135	0	0.0001	-0.0000	-0.0001	0.0002
0.1000	0.3667	0	-0.0001	0.0001	-0.0001	0.0001
-0.1000	0.2167	0	0.0001	-0.0001	-0.0002	0.0002
0.0001	-0.0001	0.0001	0	0	0.0000	-0.0000
0.0600	-0.2333	0	0	0	0.0001	-0.0001
-0.0800	-0.2333	0	0	0	0.0001	-0.0001
-0.0800	-0.1033	0	0	0	0.0001	-0.0001
0	0	0	0.0001	0	0	0
0	0	0	0	0	0.0001	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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
-0.0001	0.0001	0	0	0	-0.0000	0.0000

Columns 8 through 14

0.0003	-0.0002	0.0001	-0.0000	0.0001	-0.0000	0
0.0001	-0.0001	0	0	0	0	0
0.0001	-0.0001	0	0	0	0	0
-0.0000	0.0000	0	0	0	0	0
0.0000	-0.0000	-0.0001	0.0001	0	0	0
-0.0001	0.0001	0.0001	-0.0001	-0.0001	0.0001	0
-0.0001	0.0001	0	0	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0000	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	0	0	-0.0002	0
0	0	0	0.0001	0	-0.0001	0
0	0	0	0	0.0001	-0.0001	0
0	0	0	0	0	0.0000	0
0	0	0	0	0	0.0001	0.0001
0	0	0	0	0	0.0001	0
0	0	0	0	0	0.0001	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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	-0.0000	0

Columns 29 through 35

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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.5361
0	0	0	0	0.1556
0	0	0	0	0.0056
0	0	0	0	0.0000
0	0	0	0	0.0602
0	0	0	0	0.0582
0	0	0	0	0.0562
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0001
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0001

the current basis is

BasVar =

Columns 1 through 13

25	2	3	28	29	30	31	32	33	34	35	36	37
----	---	---	----	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
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iteration number 3

T1 =

1.0e+04 *

Columns 1 through 7

-0.0938	0	0	0.0001	0.0000	-0.0000	0.0001
0.2692	0	0	-0.0003	0.0003	0.0002	-0.0002
-0.0000	0.0001	0	0.0000	-0.0000	-0.0000	0.0000
0.0001	0	0.0001	0.0000	-0.0000	-0.0000	0.0000
-0.0477	0	0	0.0001	-0.0001	-0.0002	0.0002
-0.1877	0	0	0.0001	-0.0001	-0.0002	0.0002
-0.1277	0	0	0.0000	-0.0000	-0.0000	0.0000
0	0	0	0.0001	0	0	0
0	0	0	0	0	0.0001	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
0.0001	0	0	0	0	0	0
0.0000	0	0	-0.0000	0.0000	0.0000	-0.0000
-0.0001	0	0	-0.0000	0.0000	0.0000	-0.0000

Columns 8 through 14

0.0003	-0.0002	0.0001	-0.0000	0.0001	-0.0000	0
-0.0001	0.0001	0	0	0	0	0
0.0000	-0.0000	0	0	0	0	0
-0.0000	0.0000	0	0	0	0	0
0.0002	-0.0002	-0.0001	0.0001	0	0	0
0.0001	-0.0001	0.0001	-0.0001	-0.0001	0.0001	0
-0.0000	0.0000	0	0	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
-0.0000	0.0000	0	0	0	0	0
0.0000	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	0	-0.0000	-0.0001	0
0	0	0	0.0001	-0.0002	0.0001	0
0	0	0	0	0.0000	-0.0000	0
0	0	0	0	0.0000	0.0000	0
0	0	0	0	0.0001	-0.0001	0.0001
0	0	0	0	0.0001	-0.0001	0
0	0	0	0	0.0000	0.0000	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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	-0.0000	0.0000	0

0	0	0.0001	0	-0.0000	-0.0000	0
---	---	--------	---	---------	---------	---

Columns 29 through 35

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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.5357
0	0	0	0	0.1462
0	0	0	0	0.0000
0	0	0	0	0.0000
0	0	0	0	0.0662
0	0	0	0	0.0642
0	0	0	0	0.0589
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0001
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0001

the current basis is

BasVar =

Columns 1 through 13

25	8	3	28	29	30	31	32	33	34	35	36	37
----	---	---	----	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 4

T1 =

1.0e+04 *

Columns 1 through 7

0.1332	-0.4918	0	-0.0001	0.0002	0.0004	-0.0003
0.2000	0.1500	0	-0.0002	0.0002	0.0001	-0.0001
-0.0900	0.1950	0	0.0001	-0.0001	-0.0002	0.0002
0.0001	0.0000	0.0001	0.0000	-0.0000	-0.0000	0.0000
0.1031	-0.3268	0	-0.0000	0.0000	0.0002	-0.0001
-0.1300	-0.1250	0	0.0001	-0.0001	-0.0001	0.0001
-0.1300	0.0050	0	0.0001	-0.0001	-0.0000	0.0000
0	0	0	0.0001	0	0	0
0	0	0	0	0	0.0001	0
0.0900	-0.1950	0	-0.0001	0.0001	0.0002	-0.0002
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
-0.0001	-0.0000	0	-0.0000	0.0000	0.0000	-0.0000

Columns 8 through 14

0	0.0001	0.0001	-0.0000	0.0001	-0.0000	0
0	0	0	0	0	0	0
0.0001	-0.0001	0	0	0	0	0
0	0	0	0	0	0	0
0	0.0000	-0.0001	0.0001	0	0	0
0	0	0.0001	-0.0001	-0.0001	0.0001	0
0	0	0	0	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0

0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	0	-0.0002	0.0001	0
0	0	0	0.0001	-0.0001	0	0
0	0	0	0	0.0001	-0.0001	0
0	0	0	0	0.0000	0	0
0	0	0	0	-0.0000	0.0001	0.0001
0	0	0	0	0.0001	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	-0.0001	0.0001	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	-0.0000	0	0

Columns 29 through 35

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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.5231
0	0	0	0	0.1500
0	0	0	0	0.0050
0	0	0	0	0.0000
0	0	0	0	0.0578
0	0	0	0	0.0610
0	0	0	0	0.0590
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.1950
0	0	0	0	0.2000
0	0	0	0	0.2000

0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0001
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0001

the current basis is

BasVar =

Columns 1 through 13

25	8	1	28	29	30	31	32	33	34	35	36	37
----	---	---	----	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 5

T1 =

1.0e+04 *

Columns 1 through 7

0	-0.5584	-0.2664	-0.0003	0.0004	0.0006	-0.0005
0	0.0500	-0.4000	-0.0004	0.0004	0.0003	-0.0003
0	0.2400	0.1800	0.0002	-0.0002	-0.0003	0.0003
0.0001	0.0001	0.0002	0.0000	-0.0000	-0.0000	0.0000
0	-0.3784	-0.2063	-0.0002	0.0002	0.0003	-0.0003
0	-0.0600	0.2600	0.0002	-0.0002	-0.0002	0.0002
0	0.0700	0.2600	0.0002	-0.0002	-0.0002	0.0002
0	0	0	0.0001	0	0	0
0	0	0	0	0	0.0001	0
0	-0.2400	-0.1800	-0.0002	0.0002	0.0003	-0.0003
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0001	-0.0002	-0.0000	0.0000	0.0000	-0.0000
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

Columns 8 through 14

0	0.0001	0.0001	-0.0000	0.0001	-0.0000	0
0	0	0	0	0	0	0
0.0001	-0.0001	0	0	0	0	0
0	0	0	0	0	0	0
0	0.0000	-0.0001	0.0001	0	0	0
0	0	0.0001	-0.0001	-0.0001	0.0001	0
0	0	0	0	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001

0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	0	-0.0004	0.0001	0
0	0	0	0.0001	-0.0003	0	0
0	0	0	0	0.0002	-0.0001	0
0	0	0	0	0.0000	0	0
0	0	0	0	-0.0001	0.0001	0.0001
0	0	0	0	0.0002	0	0
0	0	0	0	0.0002	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	-0.0002	0.0001	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	-0.0000	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

Columns 29 through 35

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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0

0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.4565
0	0	0	0	0.0500
0	0	0	0	0.0500
0	0	0	0	0.0001
0	0	0	0	0.0063
0	0	0	0	0.1260
0	0	0	0	0.1240
0	0	0	0	0.2000
0	0	0	0	0.2000
0	0	0	0	0.1500
0	0	0	0	0.2000
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0001
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0001

the current basis is

BasVar =

Columns 1 through 13

25	8	1	6	29	30	31	32	33	34	35	36	37
----	---	---	---	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 6

T1 =

1.0e+04 *

Columns 1 through 7

0	0.3032	0.2033	0.0001	0.0000	0	0.0001
0	0.4979	-0.1558	-0.0002	0.0002	0	-0.0000
0	-0.1833	-0.0508	0.0000	-0.0000	0	0.0000
0.0001	-0.0001	0.0001	0.0000	-0.0000	0	0.0000
0	-0.1493	-0.0814	-0.0001	0.0001	0.0001	-0.0001
0	-0.3288	0.1135	0.0001	-0.0001	0	0.0000
0	-0.1988	0.1135	0.0001	-0.0001	0	0.0000
0	0	0	0.0001	0	0	0
0	0.1493	0.0814	0.0001	-0.0001	0	0.0001
0	0.1833	0.0508	-0.0000	0.0000	0	-0.0000
0	0	0	0	0	0	0
0	0	0	0	0	0	0

0	0	0	0	0	0	0
0	0.0001	-0.0001	-0.0000	0.0000	0	-0.0000
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

Columns 8 through 14

0	0.0001	0.0003	-0.0002	0.0001	-0.0000	0
0	-0.0000	0.0001	-0.0001	0	0	0
0.0001	-0.0001	-0.0001	0.0001	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	0.0000	0.0000	-0.0000	-0.0001	0.0001	0
0	0.0000	-0.0001	0.0001	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	-0.0000	0.0000	-0.0000	0	0	0
0	0.0001	0.0001	-0.0001	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	-0.0000	0.0000	-0.0000	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	0	-0.0000	-0.0001	-0.0002
0	0	0	0.0001	-0.0001	-0.0001	-0.0001
0	0	0	0	0.0000	0.0000	0.0001
0	0	0	0	0.0000	0.0000	0.0000
0	0	0	0	-0.0001	0.0000	0.0000
0	0	0	0	0.0001	0.0001	0.0001
0	0	0	0	0.0001	0.0001	0.0001
0	0	0	0	0	0	0
0	0	0	0	0.0001	-0.0000	-0.0000
0	0	0	0	-0.0000	-0.0000	-0.0001

0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	-0.0000	-0.0000	-0.0000
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

Columns 29 through 35

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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.4423
0	0	0	0	0.0426
0	0	0	0	0.0570
0	0	0	0	0.0001
0	0	0	0	0.0025
0	0	0	0	0.1304
0	0	0	0	0.1284
0	0	0	0	0.2000
0	0	0	0	0.1975
0	0	0	0	0.1430
0	0	0	0	0.2000
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0000
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0001

the current basis is
BasVar =

Columns 1 through 13

2	8	1	6	29	30	31	32	33	34	35	36	37
---	---	---	---	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
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iteration number 7

T1 =

1.0e+04 *

Columns 1 through 7

0	0	0.2982	0.0002	-0.0001	0	0.0001
0	0.0001	-0.0000	-0.0000	0.0000	0	-0.0000
0	0	-0.1081	-0.0001	0.0001	0	-0.0000
0.0001	0	0.0001	-0.0000	0.0000	0	0.0000
0	0	-0.1281	-0.0001	0.0001	0.0001	-0.0001
0	0	0.0106	-0.0001	0.0001	0	-0.0000
0	0	0.0513	-0.0000	0.0000	0	0.0000
0	0	0	0.0001	0	0	0
0	0	0.1281	0.0001	-0.0001	0	0.0001
0	0	0.1081	0.0001	-0.0001	0	0.0000
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	-0.0001	0.0000	-0.0000	0	-0.0000
0	0	0.0000	0.0000	-0.0000	0	0.0000
0	0	0.0001	0	0	0	0

Columns 8 through 14

0	0.0001	0.0003	-0.0002	0.0001	-0.0000	0
0	-0.0000	0.0000	-0.0000	0	0	0
0.0001	-0.0001	-0.0001	0.0001	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	-0.0000	0.0001	-0.0001	-0.0001	0.0001	0
0	0.0000	-0.0000	0.0000	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	-0.0000	0.0000	-0.0000	0	0	0
0	0.0001	0.0001	-0.0001	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	-0.0000	0.0000	-0.0000	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0

0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	-0.0001	0.0000	-0.0001	-0.0002
0	0	0	0.0000	-0.0000	-0.0000	-0.0000
0	0	0	0.0000	-0.0000	-0.0000	0.0001
0	0	0	0.0000	0.0000	0.0000	0.0000
0	0	0	0.0000	-0.0001	0.0000	0.0000
0	0	0	0.0001	-0.0000	-0.0000	-0.0000
0	0	0	0.0000	0.0000	0.0000	0.0000
0	0	0	0	0	0	0
0	0	0	-0.0000	0.0001	-0.0000	-0.0000
0	0	0	-0.0000	0.0000	0.0000	-0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	-0.0000	-0.0000	-0.0000	-0.0000
0	0.0001	0	-0.0000	0.0000	0.0000	0.0000
0	0	0.0001	0	0	0	0

Columns 29 through 35

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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.4163
0	0	0	0	0.0000
0	0	0	0	0.0727
0	0	0	0	0.0001
0	0	0	0	0.0152
0	0	0	0	0.1586
0	0	0	0	0.1454

0	0	0	0	0.2000
0	0	0	0	0.1848
0	0	0	0	0.1273
0	0	0	0	0.2000
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0000
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0001

the current basis is

BasVar =

Columns 1 through 13

2	8	3	6	29	30	31	32	33	34	35	36	37
---	---	---	---	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 8

T1 =

1.0e+04 *

Columns 1 through 7

-0.3407	0	0	0.0002	-0.0001	0	0.0001
0.0000	0.0001	0	-0.0000	0.0000	0	-0.0000
0.1235	0	0	-0.0001	0.0001	0	-0.0000
0.0001	0	0.0001	-0.0000	0.0000	0	0.0000
0.1464	0	0	-0.0001	0.0001	0.0001	-0.0001
-0.0121	0	0	-0.0001	0.0001	0	-0.0000
-0.0586	0	0	-0.0000	0.0000	0	0.0000
0	0	0	0.0001	0	0	0
-0.1464	0	0	0.0001	-0.0001	0	0.0001
-0.1235	0	0	0.0001	-0.0001	0	0.0000
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
-0.0000	0	0	0.0000	-0.0000	0	0.0000
-0.0001	0	0	0.0000	-0.0000	0	-0.0000

Columns 8 through 14

0	0.0001	0.0003	-0.0002	0.0001	-0.0000	0
0	-0.0000	0.0000	-0.0000	0	0	0
0.0001	-0.0001	-0.0001	0.0001	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	-0.0000	0.0001	-0.0001	-0.0001	0.0001	0
0	0.0000	-0.0000	0.0000	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0

0	-0.0000	0.0000	-0.0000	0	0	0
0	0.0001	0.0001	-0.0001	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	-0.0000	0.0000	-0.0000	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
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
0.0001	0	0	0	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	-0.0001	-0.0000	-0.0001	-0.0002
0	0	0	0.0000	-0.0000	-0.0000	-0.0000
0	0	0	0.0001	-0.0000	-0.0000	0.0001
0	0	0	0.0000	0.0000	0.0000	0.0000
0	0	0	0.0001	-0.0001	0.0000	0.0000
0	0	0	0.0001	-0.0000	-0.0000	-0.0000
0	0	0	0.0000	0.0000	0.0000	0.0000
0	0	0	0	0	0	0
0	0	0	-0.0001	0.0001	-0.0000	-0.0000
0	0	0	-0.0001	0.0000	0.0000	-0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0.0001	0	-0.0000	0.0000	0.0000	0.0000
0	0	0.0001	-0.0000	-0.0000	-0.0000	-0.0000

Columns 29 through 35

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
0.0001	0	0	0	0	0	0

0	0.0001	0	0	0	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
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

Columns 36 through 40

0	0	0	0	1.2086
0	0	0	0	0.0000
0	0	0	0	0.1480
0	0	0	0	0.0001
0	0	0	0	0.1045
0	0	0	0	0.1512
0	0	0	0	0.1097
0	0	0	0	0.2000
0	0	0	0	0.0955
0	0	0	0	0.0520
0	0	0	0	0.2000
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0001
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0000

the current basis is
 BasVar =

Columns 1 through 13

2	8	3	6	29	30	31	32	10	34	35	36	37
---	---	---	---	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
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iteration number 9
 T1 =

1.0e+04 *

Columns 1 through 7

0.0995	0	0	-0.0000	0.0001	0	0.0001
0.0001	0.0001	0	-0.0000	0.0000	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0001	0	0.0001	0.0000	-0.0000	0	0.0000
0.1082	0	0	-0.0001	0.0001	0.0001	-0.0001
0.1461	0	0	-0.0002	0.0002	0	-0.0000
-0.0790	0	0	-0.0000	0.0000	0	0.0000

0	0	0	0.0001	0	0	0
-0.1082	0	0	0.0001	-0.0001	0	0.0001
-0.1406	0	0	0.0001	-0.0001	0	0.0000
0.1406	0	0	-0.0001	0.0001	0	-0.0000
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
-0.0001	0	0	0.0000	-0.0000	0	0.0000
-0.0001	0	0	-0.0000	0.0000	0	-0.0000

Columns 8 through 14

0	-0.0003	0	0.0001	0.0001	-0.0000	0
0	-0.0000	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	-0.0001	0	0.0000	-0.0001	0.0001	0
0	0.0000	0	0	0.0001	-0.0001	-0.0001
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0
0	0.0001	0.0001	-0.0001	0	0	0
0	-0.0001	0	0.0001	0	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0001	0.0001	0.0001	-0.0003	0.0001	0.0001	0.0001
0	0	0	-0.0000	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	-0.0001	0	0	0
0.0001	0	0	0.0000	0	0	0
0	0.0001	0	0	0	0	0
0	0	0.0001	-0.0000	0	0	0
0	0	0	0.0001	0	0	0
0	0	0	-0.0001	0.0001	0	0
0	0	0	0	0	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	-0.0000	0	0	0

Columns 22 through 28

0.0001	0.0001	0.0001	0.0001	-0.0000	-0.0001	0.0001
0	0	0	0.0000	-0.0000	-0.0000	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	0.0000	-0.0001	0.0000	0

0	0	0	0.0001	-0.0000	-0.0000	0.0001
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	0	0	0	0
0	0	0	-0.0000	0.0001	-0.0000	0
0	0	0	-0.0001	0.0000	0.0000	-0.0001
0	0	0	0.0001	-0.0000	-0.0000	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0001	0	0	0	0	0	0
0	0.0001	0	-0.0000	0.0000	0.0000	0
0	0	0.0001	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	0	0	0	-0.0004	0	0
0	0	0	0	-0.0000	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0.0000	0	0
0.0001	0	0	0	-0.0001	0	0
0	0.0001	0	0	0.0000	0	0
0	0	0.0001	0	0	0	0
0	0	0	0.0001	-0.0000	0	0
0	0	0	0	0.0001	0	0
0	0	0	0	-0.0001	0.0001	0
0	0	0	0	0	0	0.0001
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	1.0233
0	0	0	0	0.0000
0	0	0	0	0.2000
0	0	0	0	0.0001
0	0	0	0	0.1206
0	0	0	0	0.0846
0	0	0	0	0.1183
0	0	0	0	0.2000
0	0	0	0	0.0794
0	0	0	0	0.0592
0	0	0	0	0.1408
0	0	0	0	0.2000
0.0001	0	0	0	0.2000
0	0.0001	0	0	0.0001
0	0	0.0001	0	0.0001
0	0	0	0.0001	0.0000

the current basis is
BasVar =

Columns 1 through 13

1 8 3 6 29 30 31 32 10 34 35 36 37

Columns 14 through 15

38 39

iteration number 10

T1 =

1.0e+03 *

Columns 1 through 7

0	-1.6261	0	0.0007	0.0004	0	0.0010
0.0010	0.0016	0	-0.0000	0.0000	0	-0.0000
0	0	0	0	0	0	-0.0000
0	-0.0015	0.0010	0.0000	-0.0000	0	0.0000
0	-1.7677	0	-0.0000	0.0000	0.0010	-0.0010
0	-2.3875	0	-0.0002	0.0002	0	0.0000
0	1.2902	0	-0.0008	0.0008	0	-0.0000
0	0	0	0.0010	0	0	0
0	1.7677	0	0.0000	-0.0000	0	0.0010
0	2.2972	0	-0.0006	0.0006	0	-0.0000
0	-2.2972	0	0.0006	-0.0006	0	0.0000
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0016	0	0.0000	-0.0000	0	0.0000
0	0.0010	0	-0.0000	0	0	0
0	0.0015	0	-0.0000	0.0000	0	-0.0000

Columns 8 through 14

0	-0.0022	0	0.0010	0.0010	-0.0000	0
0	-0.0000	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0008	0	0.0000	-0.0010	0.0010	0
0	-0.0001	0	0	0.0010	-0.0010	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0.0007	0.0010	-0.0010	0	0	0
0	-0.0007	0	0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0	0.0010
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	0.0010	0.0010	-0.0022	0.0010	0.0010	0.0010
0	0	0	-0.0000	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0.0000	0	0	0

0	0	0	0.0007	0	0	0
0	0	0	-0.0008	0	0	0
0.0010	0	0	-0.0001	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	-0.0007	0	0	0
0	0	0	0.0007	0	0	0
0	0	0	-0.0007	0.0010	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0.0000	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	0.0003	-0.0001	-0.0011	0.0010
0	0	0	0.0000	-0.0000	-0.0000	0
0	0	0	0	0	0	0
0	0	0	-0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0005	0.0003	0.0003	0.0010
0	0	0	0.0007	-0.0001	-0.0001	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0.0002	-0.0004	-0.0004	-0.0010
0	0	0	-0.0002	0.0004	0.0004	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0010	0	0	-0.0000	0.0000	0.0000	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	0	0	0	-0.0032	0	0
0	0	0	0	-0.0000	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0.0007	0	0
0.0010	0	0	0	-0.0008	0	0
0	0.0010	0	0	-0.0001	0	0
0	0	0.0010	0	0	0	0
0	0	0	0.0010	-0.0007	0	0
0	0	0	0	0.0007	0	0
0	0	0	0	-0.0007	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0	0	0
0	0	0	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	9.9139
0	0	0	0	0.0003

0	0	0	0	2.0000
0	0	0	0	0.0005
0	0	0	0	0.8586
0	0	0	0	0.3769
0	0	0	0	1.4362
0	0	0	0	2.0000
0	0	0	0	1.1414
0	0	0	0	1.0428
0	0	0	0	0.9572
0	0	0	0	2.0000
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0007
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0005

the current basis is

BasVar =

Columns 1 through 13

1	8	3	6	28	30	31	32	10	34	35	36	37
---	---	---	---	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
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iteration number 11

T1 =

1.0e+03 *

Columns 1 through 7

0	0.7614	0	0.0008	0.0002	0	0.0010
0.0010	0.0016	0	-0.0000	0.0000	0	-0.0000
0	0	0	0	0	0	-0.0000
0	-0.0015	0.0010	0.0000	-0.0000	0	0.0000
0	-1.7677	0	-0.0000	0.0000	0.0010	-0.0010
0	-2.3067	0	-0.0002	0.0002	0	0.0000
0	1.2902	0	-0.0008	0.0008	0	-0.0000
0	0	0	0.0010	0	0	0
0	1.7677	0	0.0000	-0.0000	0	0.0010
0	-0.0095	0	-0.0008	0.0008	0	-0.0000
0	0.0095	0	0.0008	-0.0008	0	0.0000
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0016	0	0.0000	-0.0000	0	0.0000
0	0.0010	0	-0.0000	0	0	0
0	0.0015	0	-0.0000	0.0000	0	-0.0000

Columns 8 through 14

0	-0.0014	0	0.0010	0.0020	-0.0010	0
0	-0.0000	0	0	0	0	0
0.0010	0	0	0	0	0	0

0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0008	0	0.0000	-0.0010	0.0010	0
0	-0.0001	0	0	0.0010	-0.0010	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	-0.0001	0.0010	-0.0010	-0.0010	0.0010	0
0	0.0001	0	0.0010	0.0010	-0.0010	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0	0.0010
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	0.0010	0.0010	-0.0014	0.0010	0.0010	0.0010
0	0	0	-0.0000	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	0.0007	0	0	0
0	0	0	-0.0008	0	0	0
0.0010	0	0	-0.0001	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	-0.0007	0	0	0
0	0	0	-0.0001	0	0	0
0	0	0	0.0001	0.0010	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0.0000	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	-0.0002	-0.0004	-0.0014	0
0	0	0	0.0000	-0.0000	-0.0000	0
0	0	0	0	0	0	0
0	0	0	-0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0005	0.0003	0.0003	0.0010
0	0	0	0.0007	-0.0001	-0.0001	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0.0007	-0.0001	-0.0001	0
0	0	0	-0.0007	0.0001	0.0001	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0010	0	0	-0.0000	0.0000	0.0000	0
0	0.0010	0	0	0	0	0
0	0	0.0010	0.0000	-0.0000	-0.0000	0

Columns 29 through 35

-0.0010	0	0	0	-0.0024	0	0
---------	---	---	---	---------	---	---

0	0	0	0	-0.0000	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0.0007	0	0
0.0010	0	0	0	-0.0008	0	0
0	0.0010	0	0	-0.0001	0	0
0	0	0.0010	0	0	0	0
0	0	0	0.0010	-0.0007	0	0
0.0010	0	0	0	-0.0001	0	0
-0.0010	0	0	0	0.0001	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0	0	0
0	0	0	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	9.5370
0	0	0	0	0.0003
0	0	0	0	2.0000
0	0	0	0	0.0005
0	0	0	0	0.8586
0	0	0	0	0.3642
0	0	0	0	1.4362
0	0	0	0	2.0000
0	0	0	0	1.1414
0	0	0	0	1.4070
0	0	0	0	0.5930
0	0	0	0	2.0000
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0007
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0005

the current basis is
BasVar =

Columns 1 through 13

2	8	3	6	28	30	31	32	10	34	35	36	37
---	---	---	---	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
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iteration number 12
T1 =

1.0e+03 *

Columns 1 through 7

-0.4660	0	0	0.0013	-0.0003	0	0.0010
0.0006	0.0010	0	-0.0000	0.0000	0	-0.0000

0	0	0	0	0	0	-0.0000
0.0009	0	0.0010	0.0000	-0.0000	0	0.0000
1.0819	0	0	-0.0011	0.0011	0.0010	-0.0010
1.4119	0	0	-0.0016	0.0016	0	-0.0000
-0.7896	0	0	-0.0000	0.0000	0	0.0000
0	0	0	0.0010	0	0	0
-1.0819	0	0	0.0011	-0.0011	0	0.0010
0.0058	0	0	-0.0008	0.0008	0	-0.0000
-0.0058	0	0	0.0008	-0.0008	0	0.0000
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
-0.0006	0	0	0.0000	-0.0000	0	0.0000
-0.0009	0	0	-0.0000	0.0000	0	-0.0000

Columns 8 through 14

0	-0.0013	0	0.0010	0.0020	-0.0010	0
0	-0.0000	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0003	0	0	0	0	0
0	-0.0012	0	0.0000	-0.0010	0.0010	0
0	0.0002	0	0	0.0010	-0.0010	-0.0010
0	0	0	0	0	0	0
0	-0.0003	0	0	0	0	0
0	-0.0001	0.0010	-0.0010	-0.0010	0.0010	0
0	0.0001	0	0.0010	0.0010	-0.0010	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	0.0010	0.0010	-0.0013	0.0010	0.0010	0.0010
0	0	0	-0.0000	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	0.0003	0	0	0
0	0	0	-0.0012	0	0	0
0.0010	0	0	0.0002	0	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	-0.0003	0	0	0
0	0	0	-0.0001	0	0	0
0	0	0	0.0001	0.0010	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	-0.0005	-0.0003	-0.0012	0
0	0	0	0.0000	-0.0000	-0.0000	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	0.0004	-0.0007	0.0003	0
0	0	0	0.0014	-0.0002	-0.0002	0.0010
0	0	0	0.0002	0.0002	0.0002	0
0	0	0	0	0	0	0
0	0	0	-0.0004	0.0007	-0.0003	0
0	0	0	0.0007	-0.0001	-0.0001	0
0	0	0	-0.0007	0.0001	0.0001	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	-0.0000	0.0000	0.0000	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

-0.0010	0	0	0	-0.0023	0	0
0	0	0	0	-0.0000	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0.0003	0	0
0.0010	0	0	0	-0.0012	0	0
0	0.0010	0	0	0.0002	0	0
0	0	0.0010	0	0	0	0
0	0	0	0.0010	-0.0003	0	0
0.0010	0	0	0	-0.0001	0	0
-0.0010	0	0	0	0.0001	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	9.3875
0	0	0	0	0.0002
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	1.2056
0	0	0	0	0.8170
0	0	0	0	1.1830
0	0	0	0	2.0000
0	0	0	0	0.7944
0	0	0	0	1.4088
0	0	0	0	0.5912
0	0	0	0	2.0000
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0008
0	0	0	0.0010	0.0002

the current basis is
BasVar =

Columns 1 through 13

2 8 3 6 28 30 31 32 10 12 35 36 37

Columns 14 through 15

38 39

iteration number 13
T1 =

1.0e+03 *

Columns 1 through 7

-0.4538	0	0	-0.0004	0.0014	0	0.0010
0.0006	0.0010	0	-0.0000	0.0000	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0009	0	0.0010	0.0000	-0.0000	0	0.0000
1.0819	0	0	-0.0011	0.0011	0.0010	-0.0010
1.4060	0	0	-0.0008	0.0008	0	-0.0000
-0.7834	0	0	-0.0008	0.0008	0	0.0000
0	0	0	0.0010	0	0	0
-1.0819	0	0	0.0011	-0.0011	0	0.0010
0	0	0	0	0	0	0
-0.0060	0	0	0.0008	-0.0008	0	0.0000
0.0060	0	0	-0.0008	0.0008	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
-0.0006	0	0	0.0000	-0.0000	0	0.0000
-0.0009	0	0	-0.0000	0.0000	0	-0.0000

Columns 8 through 14

0	-0.0015	0	-0.0011	0	0.0010	0
0	-0.0000	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0003	0	0	0	0	0
0	-0.0011	0	0.0010	0	0	0
0	0.0001	0	-0.0011	0	0.0000	-0.0010
0	0	0	0	0	0	0
0	-0.0003	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0.0001	0	0.0010	0.0010	-0.0010	0
0	-0.0001	0	-0.0010	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	0.0010	0.0010	-0.0015	-0.0011	0.0010	0.0010
0	0	0	-0.0000	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	0.0003	0	0	0
0	0	0	-0.0011	0.0010	0	0
0.0010	0	0	0.0001	-0.0011	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	-0.0003	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0.0001	0.0010	0	0
0	0	0	-0.0001	-0.0010	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	0.0009	-0.0005	-0.0015	0
0	0	0	0.0000	-0.0000	-0.0000	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	0.0004	-0.0007	0.0003	0
0	0	0	0.0007	-0.0001	-0.0001	0.0010
0	0	0	0.0009	0.0001	0.0001	0
0	0	0	0	0	0	0
0	0	0	-0.0004	0.0007	-0.0003	0
0	0	0	0	0	0	0
0	0	0	-0.0007	0.0001	0.0001	0
0	0	0	0.0007	-0.0001	-0.0001	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	-0.0000	0.0000	0.0000	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0.0010	0	0	0	-0.0025	-0.0021	0
0	0	0	0	-0.0000	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0.0003	0	0
0	0	0	0	-0.0011	0.0010	0
0.0010	0.0010	0	0	0.0001	-0.0011	0
0	0	0.0010	0	0	0	0
0	0	0	0.0010	-0.0003	0	0
0	0	0	0	0	0.0010	0
-0.0010	0	0	0	0.0001	0.0010	0
0.0010	0	0	0	-0.0001	-0.0010	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	8.1424
0	0	0	0	0.0002
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	1.2056
0	0	0	0	1.4081
0	0	0	0	0.5497
0	0	0	0	2.0000
0	0	0	0	0.7944
0	0	0	0	2.0000
0	0	0	0	0.6119
0	0	0	0	1.3881
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0008
0	0	0	0.0010	0.0002

the current basis is

BasVar =

Columns 1 through 13

5	8	3	6	28	30	31	32	10	12	35	36	37
---	---	---	---	----	----	----	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 14

T1 =

1.0e+03 *

Columns 1 through 7

-1.7981	-2.1965	0	0.0010	0	0	0.0010
0.9897	1.6169	0	-0.0010	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0.0000	0	0	0.0000
-0.0090	-1.7824	0	-0.0000	0	0.0010	-0.0010
0.6052	-1.3085	0	0.0000	0	0	0.0000
-1.6175	-1.3627	0	0.0000	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0.0000	0	0	0.0010
0	0	0	0	0	0	0
0.7948	1.3085	0	-0.0000	0	0	-0.0000
-0.7948	-1.3085	0	0.0000	0	0	0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	-0.0000	0	0	0
-0.0010	-0.0002	0	-0.0000	0	0	-0.0000

Columns 8 through 14

0	-0.0010	0	-0.0011	0	0.0010	0
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0011	0	0.0000	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	-0.0002	0	0.0010	0.0010	-0.0010	0
0	0.0002	0	-0.0010	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	0.0010	0.0010	-0.0010	-0.0011	0.0010	0.0010
0	0	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	0.0007	0	0	0
0	0	0	-0.0009	0.0010	0	0
0.0010	0	0	0.0003	-0.0011	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	-0.0002	0.0010	0	0
0	0	0	0.0002	-0.0010	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	0.0000	-0.0000	-0.0010	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0004	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0.0002	0.0002	0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0


```

0      0      0.0010      -0.0000      -0.0000      -0.0000      0

```

Columns 29 through 35

```

0.0010      0      0      0      -0.0020      -0.0021      0
0      0      0      0      -0.0003      0      0
0      0      0      0      0.0010      0      0
0      0      0      0      0.0000      0      0
0      0      0      0      0.0007      0      0
0      0      0      0      -0.0009      0.0010      0
0.0010      0.0010      0      0      0.0003      -0.0011      0
0      0      0.0010      0      0      0      0
0      0      0      0.0010      -0.0007      0      0
0      0      0      0      0      0.0010      0
-0.0010      0      0      0      -0.0002      0.0010      0
0.0010      0      0      0      0.0002      -0.0010      0.0010
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      -0.0000      0      0

```

Columns 36 through 40

```

0      0      0      0      7.7113
0      0      0      0      0.3174
0      0      0      0      2.0000
0      0      0      0      0.0008
0      0      0      0      0.8557
0      0      0      0      1.1513
0      0      0      0      0.2822
0      0      0      0      2.0000
0      0      0      0      1.1443
0      0      0      0      2.0000
0      0      0      0      0.8687
0      0      0      0      1.1313
0.0010      0      0      0      2.0000
0      0.0010      0      0      0.0010
0      0      0.0010      0      0.0010
0      0      0      0.0010      0.0002

```

the current basis is

BasVar =

Columns 1 through 13

```

5      8      3      6      28      29      31      32      10      12      35      36      37

```

Columns 14 through 15

```

38      39

```

iteration number 15

T1 =

```

1.0e+03 *

```

Columns 1 through 7

-0.1807	-0.8337	0	0.0010	0	0	0.0010
0.9897	1.6169	0	-0.0010	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0.0000	0	0	0.0000
-0.0090	-1.7824	0	-0.0000	0	0.0010	-0.0010
0.6052	-1.3085	0	0.0000	0	0	0.0000
-1.5628	-1.3166	0	0.0000	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0.0000	0	0	0.0010
0	0	0	0	0	0	0
-0.7679	-0.0082	0	0.0000	0	0	0.0000
0.7679	0.0082	0	-0.0000	0	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	-0.0000	0	0	0
-0.0010	-0.0002	0	-0.0000	0	0	-0.0000

Columns 8 through 14

0	-0.0014	0	-0.0000	0	0.0010	0.0010
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0.0000	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0.0002	0	0	0.0010	-0.0010	-0.0010
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0	0.0010	0.0010	-0.0014	-0.0000	0.0010	0.0010
0	0	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	0	0	0.0000	0	0	0
0	0	0	0.0007	0	0	0
0	0	0	-0.0009	0.0010	0	0
0.0010	0	0	0.0003	-0.0010	0	0
0	0.0010	0	0	0	0	0
0	0	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0.0010	0	0	0.0002	0	0	0
-0.0010	0	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0

0	0	0	0	0	0	0
0	0	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	-0.0003	-0.0004	-0.0013	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0003	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0.0002	0.0002	0.0002	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0010	0	0	-0.0024	-0.0010	0
0	0	0	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0.0000	0	0
0	0	0	0	0.0007	0	0
0	0	0	0	-0.0009	0.0010	0
0.0010	0.0010	0	0	0.0003	-0.0010	0
0	0	0.0010	0	0	0	0
0	0	0	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0.0010	0	0	0.0002	0	0
0	-0.0010	0	0	-0.0002	0	0.0010
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	-0.0000	0	0

Columns 36 through 40

0	0	0	0	7.4291
0	0	0	0	0.3174
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8557
0	0	0	0	1.1513
0	0	0	0	0.2727
0	0	0	0	2.0000
0	0	0	0	1.1443
0	0	0	0	2.0000
0	0	0	0	1.1414
0	0	0	0	0.8586

0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is

BasVar =

Columns 1 through 13

5	8	3	6	28	29	4	32	10	12	35	36	37
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 16

T1 =

1.0e+03 *

Columns 1 through 7

-0.1807	-0.8337	0	0	0	0	0.0010
0.9897	1.6169	0	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.5628	-1.3166	0	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
-0.7679	-0.0082	0	0	0	0	0.0000
0.7679	0.0082	0	0	0	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0014	0	-0.0000	0	0.0010	0.0010
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0.0000	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0.0002	0	0	0.0010	-0.0010	-0.0010
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010

0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0	-0.0000	0.0010	-0.0014	-0.0000	0.0010	0.0010
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0010	0	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0.0010	-0.0000	0	0.0002	0	0	0
-0.0010	0.0000	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	-0.0003	-0.0004	-0.0013	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0003	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0.0002	0.0002	0.0002	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0010	-0.0010	0	-0.0024	-0.0010	0
0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0
0.0010	0.0010	-0.0000	0	0.0003	-0.0010	0
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0.0010	-0.0000	0	0.0002	0	0

0	-0.0010	0.0000	0	-0.0002	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	5.4226
0	0	0	0	2.3208
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2693
0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	1.1397
0	0	0	0	0.8603
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is

BasVar =

Columns 1 through 13

5	8	3	6	28	29	4	32	10	12	13	36	37
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 17

T1 =

1.0e+03 *

Columns 1 through 7

-0.9523	-0.8420	0	0	0	0	0.0010
0.9897	1.6169	0	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.5665	-1.3167	0	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.7717	0.0082	0	0	0	0	-0.0000

0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0012	0	-0.0000	0	0	0.0000
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	-0.0000	0.0010	-0.0012	-0.0000	-0.0000	0.0010
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0010	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
-0.0010	0.0000	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	-0.0002	-0.0002	-0.0012	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0

0	0	0	0	0	0	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0000	-0.0010	0	-0.0022	-0.0010	-0.0010
0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0
0.0010	0.0010	-0.0000	0	0.0003	-0.0010	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0010	0.0000	0	-0.0002	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	4.5581
0	0	0	0	2.3208
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2651
0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	0.8645
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is
BasVar =

Columns 1 through 13

5	8	3	6	28	29	4	17	10	12	13	36	37
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 18

T1 =

1.0e+03 *

Columns 1 through 7

-0.9613	-2.6243	0	0	0	0	0.0000
0.9897	1.6169	0	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.5665	-1.3167	0	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.7717	0.0082	0	0	0	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0005	0	-0.0000	0	0	0.0000
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	-0.0000	0	-0.0005	-0.0000	-0.0000	0.0010
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0010	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0

0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
-0.0010	0.0000	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	-0.0005	-0.0005	-0.0005	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0000	-0.0010	-0.0010	-0.0015	-0.0010	-0.0010
0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0
0.0010	0.0010	-0.0000	0	0.0003	-0.0010	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0010	0.0000	0	-0.0002	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

0	0	0	0	3.4168
0	0	0	0	2.3208
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2651

0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	0.8645
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is

BasVar =

Columns 1 through 13

5	8	3	6	28	29	4	17	10	12	13	21	37
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

38	39
----	----

iteration number 19

T1 =

1.0e+03 *

Columns 1 through 7

-0.9613	-2.6243	0	0	0	0	0.0000
0.9897	1.6169	0	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.5665	-1.3167	0	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.7717	0.0082	0	0	0	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0005	0	-0.0000	0	0	-0.0010
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0	-0.0010
0	0	0	0	0	0	0

0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	-0.0000	0	-0.0005	-0.0000	-0.0000	0
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0010	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
-0.0010	0.0000	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0.0010	0.0010	0.0010	-0.0005	-0.0005	-0.0005	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0000	-0.0010	-0.0010	-0.0015	-0.0010	-0.0010
0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0

0.0010	0.0010	-0.0000	0	0.0003	-0.0010	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0010	0.0000	0	-0.0002	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

-0.0010	0	0	0	1.4168
0	0	0	0	2.3208
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2651
0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	0.8645
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is
 BasVar =

Columns 1 through 13

5	8	3	6	28	29	4	17	10	12	13	21	22
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

38	39
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iteration number 20
 T1 =

1.0e+03 *

Columns 1 through 7

-0.9623	-2.6243	0	0	0	0	0.0000
0.9897	1.6169	0	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.5665	-1.3167	0	0	0	0	0.0000

0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.7717	0.0082	0	0	0	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0005	0	-0.0000	0	0	-0.0010
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	-0.0000	0	-0.0005	-0.0000	-0.0000	0
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0010	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
-0.0010	0.0000	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0	0.0010	0.0010	-0.0005	-0.0005	-0.0005	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0

0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0000	-0.0010	-0.0010	-0.0015	-0.0010	-0.0010
0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0
0.0010	0.0010	-0.0000	0	0.0003	-0.0010	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0010	0.0000	0	-0.0002	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

-0.0010	-0.0010	0	0	1.4158
0	0	0	0	2.3208
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2651
0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	0.8645
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is
 BasVar =

Columns 1 through 13

5 8 3 6 28 29 4 17 10 12 13 21 22

Columns 14 through 15

23 39

iteration number 21

T1 =

1.0e+03 *

Columns 1 through 7

-0.9623	-2.6253	0	0	0	0	0.0000
0.9897	1.6169	0	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.5665	-1.3167	0	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.7717	0.0082	0	0	0	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0005	0	-0.0000	0	0	-0.0010
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	-0.0000	0	-0.0005	-0.0000	-0.0000	0
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0

0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0010	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
-0.0010	0.0000	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0	0	0.0010	-0.0005	-0.0005	-0.0005	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0000	-0.0010	-0.0010	-0.0015	-0.0010	-0.0010
0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0
0.0010	0.0010	-0.0000	0	0.0003	-0.0010	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0010	0.0000	0	-0.0002	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

-0.0010	-0.0010	-0.0010	0	1.4148
0	0	0	0	2.3208

0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2651
0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	0.8645
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is

BasVar =

Columns 1 through 13

5	8	3	6	28	29	4	17	10	12	13	21	22
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

23	24
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iteration number 22

T1 =

1.0e+03 *

Columns 1 through 7

-0.9613	-2.6252	0	0	0	0	0.0000
0.9897	1.6169	0	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.5665	-1.3167	0	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0.7717	0.0082	0	0	0	0	-0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0005	0	-0.0000	0	0	-0.0010
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0

0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0010	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0002	0	0	0	0.0010	0.0010
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0.0010	-0.0000	0	-0.0005	-0.0000	-0.0000	0
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0010	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
-0.0010	0.0000	0	-0.0002	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0	0	0	-0.0005	-0.0005	-0.0005	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0003	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	-0.0002	-0.0002	-0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

0	-0.0000	-0.0010	-0.0010	-0.0015	-0.0010	-0.0010
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0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0
0.0010	0.0010	-0.0000	0	0.0003	-0.0010	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0010	0.0000	0	-0.0002	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

-0.0010	-0.0010	-0.0010	-0.0010	1.4147
0	0	0	0	2.3208
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2651
0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	0.8645
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is
BasVar =

Columns 1 through 13

5	8	3	6	28	15	4	17	10	12	13	21	22
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

23	24
----	----

iteration number 23
T1 =

1.0e+03 *

Columns 1 through 7

0.6052	-1.3085	0	0	0	0	0.0000
0.9897	1.6169	0	0	0.0010	0	-0.0000

0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
-0.0090	-1.7824	0	0	0	0.0010	-0.0010
0.6052	-1.3085	0	0	0	0	0.0000
-1.6135	-1.3562	0	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0.0090	1.7824	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
-0.7948	-1.3085	0	0	0	0	0.0000
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0	0	0
-0.0010	-0.0002	0	0	0	0	-0.0000

Columns 8 through 14

0	-0.0009	0	0.0010	0	0	0
0	-0.0003	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0009	0	0.0010	0	0	0
0	0.0003	0	-0.0011	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	0.0002	0	-0.0010	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0

Columns 15 through 21

0	-0.0000	0	-0.0009	0.0010	-0.0000	0
0	0.0010	0	-0.0003	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0009	0.0010	0	0
0.0010	-0.0000	0	0.0003	-0.0011	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
0	-0.0000	0	0.0002	-0.0010	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0000	0	-0.0000	0	0	0

Columns 22 through 28

0	0	0	-0.0008	-0.0008	-0.0008	0
0	0	0	0.0006	-0.0003	-0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0002	0.0002	0.0002	0.0010
0	0	0	0.0004	0.0004	0.0003	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0.0002	0.0002	0.0002	0
0	0	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	-0.0000	-0.0000	-0.0000	0

Columns 29 through 35

-0.0010	-0.0010	-0.0010	-0.0010	-0.0019	0	-0.0010
0	0	0.0010	0	-0.0003	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0009	0.0010	0
0.0010	0.0010	-0.0000	0	0.0003	-0.0011	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0.0010	0	-0.0000	0	0.0002	-0.0010	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0.0000	0	0	0	0
0	0	0.0000	0	-0.0000	0	0

Columns 36 through 40

-0.0010	-0.0010	-0.0010	-0.0010	1.1496
0	0	0	0	2.3208
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8587
0	0	0	0	1.1496
0	0	0	0	0.2730
0	0	0	0	2.0000
0	0	0	0	1.1413
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	1.1296
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0010
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0002

the current basis is
 BasVar =

Columns 1 through 13

5 8 1 6 28 15 4 17 10 12 13 21 22

Columns 14 through 15

23 24

iteration number 24
 T1 =

1.0e+03 *

Columns 1 through 7

0	-1.4238	-0.6021	0	0	0	0.0000
0	1.4284	-0.9846	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
0	-1.7807	0.0090	0	0	0.0010	-0.0010
0	-1.4238	-0.6021	0	0	0	0.0000
0	-1.0487	1.6052	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0	1.7807	-0.0090	0	0	0	0.0010
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	-1.1570	0.7907	0	0	0	0.0000
0	0	0	0	0	0	0
0	-0.0002	-0.0010	0	0	0	-0.0000
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	-0.0010	0	0.0010	0	0	0
0	-0.0005	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0010	0	0.0010	0	0	0
0	0.0006	0	-0.0011	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0	0.0010	0	0	0	0
0	0	0	0	0.0010	0	0
0	0.0003	0	-0.0010	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0000	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0	-0.0000	0	-0.0010	0.0010	-0.0000	0
0	0.0010	0	-0.0005	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0010	0.0010	0	0
0.0010	-0.0000	0	0.0006	-0.0011	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0	0	0	0.0010	0	0
0	0	0	0	0	0.0010	0
0	-0.0000	0	0.0003	-0.0010	0.0010	0
0	0	0	0	0	0	0.0010
0	0.0000	0	-0.0000	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0	0	0	-0.0009	-0.0009	-0.0009	0
0	0	0	0.0005	-0.0005	-0.0005	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0001	0.0001	0.0001	0.0010
0	0	0	0.0006	0.0006	0.0006	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	0.0003	0
0	0	0	0	0	0	0
0.0010	0	0	-0.0000	-0.0000	-0.0000	0
0	0.0010	0	0	0.0000	0	0
0	0	0.0010	0	0	0	0

Columns 29 through 35

-0.0010	-0.0010	-0.0010	-0.0010	-0.0020	0	-0.0010
0	0	0.0010	0	-0.0005	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0010	0.0010	0
0.0010	0.0010	-0.0000	0	0.0006	-0.0011	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0	0	0	0.0010	0
0	0	0	0	0	0	0.0010
0.0010	0	-0.0000	0	0.0003	-0.0010	0.0010
0	0	0	0	0	0	0
0	0	0.0000	0	-0.0000	0	0
0	0	0.0000	0	0	0	0
0	0	0	0	0	0	0

Columns 36 through 40

-0.0010	-0.0010	-0.0010	-0.0010	0.6441
0	0	0	0	1.4942
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8662
0	0	0	0	0.6441
0	0	0	0	1.6207
0	0	0	0	2.0000
0	0	0	0	1.1338
0	0	0	0	2.0000
0	0	0	0	2.0000
0	0	0	0	1.7935
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0002
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0010

the current basis is

BasVar =

Columns 1 through 13

5	8	1	6	19	15	4	17	10	12	13	21	22
---	---	---	---	----	----	---	----	----	----	----	----	----

Columns 14 through 15

23	24
----	----

iteration number 25

T1 =

1.0e+03 *

Columns 1 through 7

0	0.0000	-0.0000	0	0	0	-0.0000
0	1.4284	-0.9846	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
0	-1.7807	0.0090	0	0	0.0010	-0.0010
0	-1.4238	-0.6021	0	0	0	0.0000
0	-2.5666	0.9634	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0	1.7807	-0.0090	0	0	0	0.0010
0	1.4238	0.6021	0	0	0	-0.0000
0	0	0	0	0	0	0
0	-2.6306	0.1676	0	0	0	0.0000
0	0	0	0	0	0	0
0	-0.0002	-0.0010	0	0	0	-0.0000
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	-0.0000	0	-0.0000	0	0	0
0	-0.0005	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0010	0	0.0010	0	0	0
0	-0.0004	0	0.0000	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0.0010	0.0010	-0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0007	0	0.0000	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0000	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0	0.0000	0	0.0000	0	-0.0000	0
0	0.0010	0	-0.0005	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0010	0.0010	0	0
0.0010	-0.0000	0	-0.0004	0	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0.0000	0	0.0010	0	0	0
0	0	0	0	0	0.0010	0
0	-0.0000	0	-0.0007	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0.0000	0	-0.0000	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 28

0	0	0	-0.0010	-0.0010	-0.0010	-0.0010
0	0	0	0.0005	-0.0005	-0.0005	0
0	0	0	0	0	0	0
0	0	0	0.0000	0.0000	0.0000	0
0	0	0	-0.0003	-0.0003	0.0007	0
0	0	0	0.0001	0.0001	0.0001	0.0010
0	0	0	0.0007	0.0007	0.0007	0.0011
0	0	0	0	0	0	0
0	0	0	0.0003	0.0003	-0.0007	0
0	0	0	-0.0001	-0.0001	-0.0001	-0.0010
0	0	0	0	0	0	0
0	0	0	0.0004	0.0004	0.0004	0.0010
0	0	0	0	0	0	0
0.0010	0	0	-0.0000	-0.0000	-0.0000	0
0	0.0010	0	0	0.0000	0	0

0	0	0.0010	0	0	0	0
---	---	--------	---	---	---	---

Columns 29 through 35

-0.0010	-0.0010	-0.0010	-0.0010	-0.0010	-0.0010	-0.0010
0	0	0.0010	0	-0.0005	0	0
0	0	0	0	0.0010	0	0
0	0	-0.0000	0	0.0000	0	0
0	0	0.0000	0	0.0007	0	0
0	0	-0.0000	0	-0.0010	0.0010	0
0.0010	0.0010	-0.0000	0	-0.0004	0	-0.0000
0	0	0.0010	0	0	0	0
0	0	-0.0000	0.0010	-0.0007	0	0
0	0	0.0000	0	0.0010	0	0
0	0	0	0	0	0	0.0010
0.0010	0	-0.0000	0	-0.0007	0	0.0010
0	0	0	0	0	0	0
0	0	0.0000	0	-0.0000	0	0
0	0	0.0000	0	0	0	0
0	0	0	0	0	0	0

Columns 36 through 40

-0.0010	-0.0010	-0.0010	-0.0010	0.0000
0	0	0	0	1.4942
0	0	0	0	2.0000
0	0	0	0	0.0008
0	0	0	0	0.8662
0	0	0	0	0.6441
0	0	0	0	2.3074
0	0	0	0	2.0000
0	0	0	0	1.1338
0	0	0	0	1.3559
0	0	0	0	2.0000
0	0	0	0	2.4601
0.0010	0	0	0	2.0000
0	0.0010	0	0	0.0002
0	0	0.0010	0	0.0010
0	0	0	0.0010	0.0010

End of Phase 1. The problem is feasible, moving on to Phase 2

Initial tableau for Phase 2

T2 =

1.0e+03 *

Columns 1 through 7

0	0.5955	-0.4640	0	0	0	-0.0000
0	1.4284	-0.9846	0	0.0010	0	-0.0000
0	0	0	0	0	0	-0.0000
0.0010	0.0002	0.0010	0	0	0	0.0000
0	-1.7807	0.0090	0	0	0.0010	-0.0010

0	-1.4238	-0.6021	0	0	0	0.0000
0	-2.5666	0.9634	0	0	0	0.0000
0	0	0	0.0010	0	0	0
0	1.7807	-0.0090	0	0	0	0.0010
0	1.4238	0.6021	0	0	0	-0.0000
0	0	0	0	0	0	0
0	-2.6306	0.1676	0	0	0	0.0000
0	0	0	0	0	0	0
0	-0.0002	-0.0010	0	0	0	-0.0000
0	0.0010	0	0	0	0	0
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	-0.0005	0	-0.0000	0	0	-0.0000
0	-0.0005	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0.0007	0	0	0	0	0
0	-0.0010	0	0.0010	0	0	0
0	-0.0004	0	0.0000	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0007	0	0	0	0	0
0	0.0010	0.0010	-0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0007	0	0.0000	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0000	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0	0.0000	0	-0.0005	0	0.0000	0
0	0.0010	0	-0.0005	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	0	0.0000	0	0	0
0	0.0000	0	0.0007	0	0	0
0	-0.0000	0	-0.0010	0.0010	0	0
0.0010	-0.0000	0	-0.0004	0	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0010	-0.0007	0	0	0
0	0.0000	0	0.0010	0	0	0
0	0	0	0	0	0.0010	0
0	-0.0000	0	-0.0007	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0.0000	0	-0.0000	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0

Columns 22 through 25

0	0	0	-6.9705
0	0	0	1.4942
0	0	0	2.0000

0	0	0	0.0008
0	0	0	0.8662
0	0	0	0.6441
0	0	0	2.3074
0	0	0	2.0000
0	0	0	1.1338
0	0	0	1.3559
0	0	0	2.0000
0	0	0	2.4601
0	0	0	2.0000
0.0010	0	0	0.0002
0	0.0010	0	0.0010
0	0	0.0010	0.0010

the current basis is

BasVar =

Columns 1 through 13

5	8	1	6	19	15	4	2	10	12	13	21	22
---	---	---	---	----	----	---	---	----	----	----	----	----

Columns 14 through 15

23	24
----	----

iteration number 2

T2 =

1.0e+03 *

Columns 1 through 7

0	0	-0.4610	0	0	0	-0.0003
0	0	-0.9774	0	0.0010	0	-0.0008
0	0	0	0	0	0	-0.0000
0.0010	0	0.0010	0	0	0	-0.0000
0	0	0	0	0	0.0010	0.0000
0	0	-0.6092	0	0	0	0.0008
0	0	0.9505	0	0	0	0.0014
0	0	0	0.0010	0	0	0
0	0.0010	-0.0000	0	0	0	0.0000
0	0	0.6092	0	0	0	-0.0008
0	0	0	0	0	0	0
0	0	0.1544	0	0	0	0.0015
0	0	0	0	0	0	0
0	0	-0.0010	0	0	0	0.0000
0	0	0.0000	0	0	0	-0.0000
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	-0.0003	0	-0.0000	0	0	-0.0000
0	0.0000	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0

0	0	0	0	0	0	0
0	-0.0015	0	0.0010	0	0	0
0	-0.0014	0	0.0000	0	0	-0.0010
0	0	0	0	0	0	0
0	-0.0000	0	0	0	0	0
0	0.0015	0.0010	-0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0017	0	0.0000	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0000	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0	0.0000	-0.0003	-0.0002	0	0.0000	0
0	0.0010	-0.0008	0.0000	0	0	0
0	0	0	0.0010	0	0	0
0	-0.0000	-0.0000	0.0000	0	0	0
0	0	0.0010	0	0	0	0
0	-0.0000	0.0008	-0.0015	0.0010	0	0
0.0010	-0.0000	0.0014	-0.0014	0	-0.0000	0
0	0.0010	0	0	0	0	0
0	-0.0000	0.0000	-0.0000	0	0	0
0	0.0000	-0.0008	0.0015	0	0	0
0	0	0	0	0	0.0010	0
0	-0.0000	0.0015	-0.0017	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0.0000	0.0000	-0.0000	0	0	0
0	0.0000	-0.0000	0.0000	0	0	0
0	0	0	0	0	0	0

Columns 22 through 25

0	0	0	-7.3497
0	0	0	0.5848
0	0	0	2.0000
0	0	0	0.0007
0	0	0	2.0000
0	0	0	1.5507
0	0	0	3.9416
0	0	0	2.0000
0	0	0	0.0006
0	0	0	0.4493
0	0	0	2.0000
0	0	0	4.1351
0	0	0	2.0000
0.0010	0	0	0.0003
0	0.0010	0	0.0004
0	0	0.0010	0.0010

the current basis is
 BasVar =

Columns 1 through 13

16 8 1 6 19 15 4 2 10 12 13 21 22

Columns 14 through 15

23 24

iteration number 3

T2 =

1.0e+03 *

Columns 1 through 7

0	0	-0.4524	0	-0.0000	0	-0.0003
0	0	-0.9737	0	0.0010	0	-0.0008
0	0	0	0	0	0	-0.0000
0.0010	0	0.0010	0	0.0000	0	-0.0000
0	0	0	0	0	0.0010	0.0000
0	0	-0.6107	0	0.0000	0	0.0008
0	0	0.9450	0	0.0000	0	0.0014
0	0	0.9737	0.0010	-0.0010	0	0.0008
0	0.0010	-0.0000	0	0.0000	0	0.0000
0	0	0.6107	0	-0.0000	0	-0.0008
0	0	0	0	0	0	0
0	0	0.1504	0	0.0000	0	0.0015
0	0	0	0	0	0	0
0	0	-0.0010	0	-0.0000	0	0.0000
0	0	0.0000	0	-0.0000	0	-0.0000
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	-0.0003	0	-0.0000	0	0	-0.0000
0	0.0000	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0015	0	0.0010	0	0	0
0	-0.0014	0	0.0000	0	0	-0.0010
0	-0.0000	0	0	0	0	0
0	-0.0000	0	0	0	0	0
0	0.0015	0.0010	-0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0017	0	0.0000	0	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0000	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0	0	-0.0003	-0.0002	0	0.0000	0
0	0.0010	-0.0008	0.0000	0	0	0
0	0	0	0.0010	0	0	0

0	0	-0.0000	0.0000	0	0	0
0	0	0.0010	0	0	0	0
0	0	0.0008	-0.0015	0.0010	0	0
0.0010	0	0.0014	-0.0014	0	-0.0000	0
0	0	0.0008	-0.0000	0	0	0
0	0	0.0000	-0.0000	0	0	0
0	0	-0.0008	0.0015	0	0	0
0	0	0	0	0	0.0010	0
0	0	0.0015	-0.0017	0	0.0010	0
0	0	0	0	0	0	0.0010
0	0	0.0000	-0.0000	0	0	0
0	0	-0.0000	0.0000	0	0	0
0	0	0	0	0	0	0

Columns 22 through 25

0	0	0	-7.3549
0	0	0	0.5826
0	0	0	2.0000
0	0	0	0.0007
0	0	0	2.0000
0	0	0	1.5516
0	0	0	3.9449
0	0	0	1.4174
0	0	0	0.0006
0	0	0	0.4484
0	0	0	2.0000
0	0	0	4.1375
0	0	0	2.0000
0.0010	0	0	0.0003
0	0.0010	0	0.0004
0	0	0.0010	0.0010

the current basis is

BasVar =

Columns 1 through 13

16	8	1	6	19	15	4	2	10	20	13	21	22
----	---	---	---	----	----	---	---	----	----	----	----	----

Columns 14 through 15

23	24
----	----

iteration number 4

T2 =

1.0e+03 *

Columns 1 through 7

0	0	-0.4524	0	-0.0000	0	-0.0003
0	0	-0.9737	0	0.0010	0	-0.0008
0	0	0	0	0	0	-0.0000
0.0010	0	0.0010	0	0.0000	0	-0.0000

0	0	0	0	0	0.0010	0.0000
0	0	-0.6107	0	0.0000	0	0.0008
0	0	0.9450	0	0.0000	0	0.0014
0	0	0.9737	0.0010	-0.0010	0	0.0008
0	0.0010	-0.0000	0	0.0000	0	0.0000
0	0	0.6107	0	-0.0000	0	-0.0008
0	0	0	0	0	0	0
0	0	0.1504	0	0.0000	0	0.0015
0	0	0	0	0	0	0
0	0	-0.0010	0	-0.0000	0	0.0000
0	0	0.0000	0	-0.0000	0	-0.0000
0	0	0.0010	0	0	0	0

Columns 8 through 14

0	-0.0003	0	-0.0000	-0.0000	0	-0.0000
0	0.0000	0	0	0	0	0
0.0010	0	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0
0	-0.0015	0	0.0010	0	0	0
0	-0.0014	0	0.0000	0.0000	0	-0.0010
0	-0.0000	0	0	0	0	0
0	-0.0000	0	0	0	0	0
0	0.0015	0.0010	-0.0010	0	0	0
0	0	0	0	0.0010	0	0
0	-0.0017	0	0.0000	-0.0010	0.0010	0
0	0	0	0	0	0	0.0010
0	-0.0000	0	0	0	0	0
0	0.0000	0	0	0	0	0
0	0	0	0	0	0	0

Columns 15 through 21

0	0	-0.0003	-0.0002	0	0	0
0	0.0010	-0.0008	0.0000	0	0	0
0	0	0	0.0010	0	0	0
0	0	-0.0000	0.0000	0	0	0
0	0	0.0010	0	0	0	0
0	0	0.0008	-0.0015	0.0010	0	0
0.0010	0	0.0014	-0.0014	0	0	0
0	0	0.0008	-0.0000	0	0	0
0	0	0.0000	-0.0000	0	0	0
0	0	-0.0008	0.0015	0	0	0
0	0	0	0	0	0.0010	0
0	0	0.0015	-0.0017	0	0	0
0	0	0	0	0	0	0.0010
0	0	0.0000	-0.0000	0	0	0
0	0	-0.0000	0.0000	0	0	0
0	0	0	0	0	0	0

Columns 22 through 25

0	0	0	-7.3652
0	0	0	0.5826

0	0	0	2.0000
0	0	0	0.0007
0	0	0	2.0000
0	0	0	1.5516
0	0	0	3.9549
0	0	0	1.4174
0	0	0	0.0006
0	0	0	0.4484
0	0	0	2.0000
0	0	0	2.1375
0	0	0	2.0000
0.0010	0	0	0.0003
0	0.0010	0	0.0004
0	0	0.0010	0.0010

Final Reduced Costs

Columns 1 through 7

0	0	-452.3816	0	-0.0088	0	-0.3343
---	---	-----------	---	---------	---	---------

Columns 8 through 14

0	-0.2510	0	-0.0053	-0.0051	0	-0.0050
---	---------	---	---------	---------	---	---------

Columns 15 through 21

0	0	-0.3274	-0.2455	0	0	0
---	---	---------	---------	---	---	---

Columns 22 through 24

0	0	0
---	---	---

The current tableau is optimal and the optimal solution is 7.3652e+03

The optimal objective function value is 7.6652e+03

And the Optimal BFS is 15×2 string array

"S1"	"582.55668"
"B3"	"2000"
"Foster City"	"0.71434135"
"B2"	"2000"
"S4"	"1551.551"
"L6"	"3954.865"
"B1"	"1417.4433"
"Middle income housing"	"0.63720963"
"B4"	"448.44902"
"S5"	"2000"
"L5"	"2137.4841"
"S6"	"2000"

"S7"	"0.28565865"
"S8"	"0.36279037"
"S9"	"1"

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