$$\begin{array}{c|ccccc} x_1 & 1 & & -1x_5 - 2x_7 \\ x_3 & 3 & +1x_2 - 1x_4 & -1x_7 \\ x_6 & 0 & -1x_2 & -2x_5 \\ \hline z & 1 & -1x_2 + 2x_4 + 3x_5 + 1x_7 \end{array}$$

 $x_4$  enters and  $x_3$  leaves

$$\begin{array}{c|ccccc} x_1 & 1 & & -1x_5 - 2x_7 \\ x_4 & 3 & +1x_2 - 1x_3 & -1x_7 \\ x_6 & 0 & -1x_2 & -2x_5 \\ \hline z & 7 & +1x_2 - 2x_3 + 3x_5 - 1x_7 \end{array}$$

 $x_2$  enters and  $x_6$  leaves

$$\begin{array}{c|cccc} x_1 & 1 & -1x_5 - 2x_7 \\ x_4 & 3 & -1x_6 - 1x_3 - 2x_5 - 1x_7 \\ x_2 & 0 & -1x_6 & -2x_5 \\ \hline z & 7 & -1x_6 - 2x_3 + 1x_5 - 1x_7 \end{array}$$

 $x_5$  enters and  $x_2$  leaves

Final Dictionary

Solution: : 7.0 #Pivots: 3

# 2 dict2

$$\begin{array}{c|cccc} x_3 & 1 & -1x_2 \\ x_4 & 2 & -1x_1 + 2x_2 \\ x_5 & 1 & -2x_1 \\ \hline z & 1 & +3x_2 \end{array}$$

 $x_2$  enters and  $x_3$  leaves

$$\begin{array}{c|cccc} x_2 & 1 & -1x_3 \\ x_4 & 4 & -1x_1 - 2x_3 \\ x_5 & 1 & -2x_1 \\ \hline z & 4 & -3x_3 \end{array}$$

Final Dictionary

Solution: : 4.0 #Pivots: 1

$$\begin{array}{c|cccc} x_4 & 1 & +1x_1 - 1x_2 \\ x_5 & 2 & -1x_1 & -1x_3 \\ x_6 & 1 & -1x_1 - 1x_2 - 1x_3 \\ \hline z & 1 & +1x_1 + 1x_2 + 2x_3 \end{array}$$

 $x_1$  enters and  $x_6$  leaves

$$\begin{array}{c|cccc} x_4 & 2 & -1x_6 - 2x_2 - 1x_3 \\ x_5 & 1 & +1x_6 + 1x_2 \\ x_1 & 1 & -1x_6 - 1x_2 - 1x_3 \\ \hline z & 2 & -1x_6 & +1x_3 \\ \end{array}$$

 $x_3$  enters and  $x_1$  leaves

$$\begin{array}{c|cccc} x_4 & 1 & -1x_2 + 1x_1 \\ x_5 & 1 & +1x_6 + 1x_2 \\ x_3 & 1 & -1x_6 - 1x_2 - 1x_1 \\ \hline z & 3 & -2x_6 - 1x_2 - 1x_1 \end{array}$$

Final Dictionary

Solution: : 3.0 #Pivots: 2

# 4 dict4

$$\begin{array}{c|cccc} x_3 & 2 & +3x_1 - 1x_2 \\ x_4 & 11 & -1x_2 \\ x_5 & 3 & -1x_1 + 1x_2 \\ x_6 & 6 & -1x_1 \\ \hline z & 0 & +1x_1 + 2x_2 \\ \end{array}$$

 $x_1$  enters and  $x_5$  leaves

$$\begin{array}{c|cccc} x_3 & 11 & -3x_5 + 2x_2 \\ x_4 & 11 & -1x_2 \\ x_1 & 3 & -1x_5 + 1x_2 \\ x_6 & 3 & +1x_5 - 1x_2 \\ \hline z & 3 & -1x_5 + 3x_2 \\ \end{array}$$

 $x_2$  enters and  $x_6$  leaves

$$\begin{array}{c|cccc} x_3 & 17 & -1x_5 - 2x_6 \\ x_4 & 8 & -1x_5 + 1x_6 \\ x_1 & 6 & -1x_6 \\ x_2 & 3 & +1x_5 - 1x_6 \\ \hline z & 12 & +2x_5 - 3x_6 \\ \end{array}$$

 $x_5$  enters and  $x_4$  leaves

$$\begin{array}{c|cccc} x_3 & 9 & +1x_4 - 3x_6 \\ x_5 & 8 & -1x_4 + 1x_6 \\ x_1 & 6 & -1x_6 \\ x_2 & 11 & -1x_4 \\ \hline z & 28 & -2x_4 - 1x_6 \end{array}$$

Final Dictionary

Solution: : 28.0 #Pivots: 3

### 5 dict5

$$\begin{array}{c|cccc} x_6 & 6 & -1x_4 - 3x_3 + 2x_1 \\ x_2 & 12 & -6x_3 - 1x_1 - 1x_5 \\ \hline z & 0 & +2x_4 + 1x_3 - 3x_1 + 4x_5 \end{array}$$

 $x_3$  enters and  $x_2$  leaves

 $x_4$  enters and  $x_6$  leaves

 $x_1$  enters and  $x_3$  leaves

$$\begin{array}{c|cccc} x_4 & 30 & -1x_6 - 2x_2 - 15x_3 - 2x_5 \\ x_1 & 12 & -1x_2 - 6x_3 - 1x_5 \\ \hline z & 24 & -2x_6 - 1x_2 - 11x_3 + 3x_5 \end{array}$$

 $x_5$  enters and  $x_1$  leaves

Final Dictionary

Solution: : 60.0 #Pivots: 4

### 6 dict6

$$\begin{array}{c|cccc} x_4 & 1 & +1x_1 -1x_2 \\ x_5 & 2 & -1x_3 \\ \hline x_6 & 1 & -1x_2 -1x_3 \\ \hline z & 1 & +1x_1 +1x_2 +2x_3 \\ \hline \end{array}$$

 $x_1$  enters and Unbounded Dictionary!

$$\begin{array}{c|cccc} x_4 & 2 & -1x_5 \\ x_6 & 2 & -1x_3 \\ x_2 & 2 & -2x_5 - 2x_3 \\ x_1 & 4 & +1x_5 + 1x_3 \\ \hline z & 0 & +6x_5 - 5x_3 \\ \end{array}$$

 $x_5$  enters and  $x_2$  leaves

Final Dictionary

Solution: : 6.0 #Pivots: 1

### 8 dict8

 $x_2$  enters and  $x_8$  leaves

```
7.96923076923
                       +0.753846x_1 +0.179487x_8 -5.738462x_3 -5.202564x_4
x_5
                       -6.976923x_1 + 0.410256x_8 + 7.869231x_3 + 3.251282x_4
x_6
     3.41538461538
                       +7.353846x_{1} -0.153846x_{8} +6.161538x_{3} +3.130769x_{4} \\
     4.46923076923
x_7
    0.307692307692
                       -0.038462x_1 - 0.128205x_8 - 0.115385x_3 - 0.141026x_4
x_2
     8.71538461538
                       -5.476923x_1 + 0.410256x_8 - 2.830769x_3 + 4.351282x_4
x_9
                       -1.088462x_1 -0.628205x_8 -4.165385x_3 +3.408974x_4
     1.50769230769
 z
```

 $x_4$  enters and  $x_5$  leaves

```
1.53178905865
                       +0.144899x_1 +0.0345x_8 -1.103006x_3 -0.192213x_5
x_4
                       -6.505816x_1 + 0.522425x_8 + 4.283046x_3 - 0.624938x_5
x_6
     8.39566288812
                       +7.807491x_1 -0.045835x_8 +2.70828x_3 -0.601774x_5
x_7
     9.26490882208
    0.0916707737802
                       -0.058896x_1 -0.13307x_8 +0.040168x_3 +0.027107x_5
x_2
     15.3806308526
                       -4.846427x_1 + 0.560375x_8 - 7.630261x_3 - 0.836373x_5
x_9
                       -0.594505x_1 - 0.510596x_8 - 7.925505x_3 - 0.655249x_5
     6.72952193199
```

Final Dictionary

**Solution:** : 6.72952193199 #Pivots: 2

#### $x_1$ enters and $x_9$ leaves

```
-0.871795x_9 - 8.476923x_2 \ -9.135897x_3 \ -11.261538x_4
      3.47435897436
x_5
      10.1487179487
                         -1.74359x_9 -5.153846x_2 -11.071795x_3 -4.423077x_4
x_6
                         -2.051282x_9 -5.269231x_2 -12.925641x_3 -4.315385x_4
x_7
      4.91025641026
                         -1.948718x_9 -3.130769x_2 -11.074359x_3 -15.684615x_4
      9.18974358974
x_8
                         -0.25641x_9 \ -0.846154x_2 \ -1.128205x_3 \ -1.076923x_4
x_1
     0.0512820512821
                         -0.717949x_9 + 2.130\overline{769x_2} \ -0.058\overline{974x_3} \ -0.415385x_4
      0.14358974359
```

#### $x_2$ enters and $x_1$ leaves

```
+1.69697x_9 +10.018182x_1 +2.166667x_3 -0.472727x_4
x_5
     2.96060606061
     9.83636363636
                       -0.181818x_9 +6.090909x_1
                                                     -4.2x_3
                                                               +2.136364x_4
x_6
     4.59090909091
                       -0.454545x_9 +6.227273x_1
                                                     -5.9x_3
                                                               +2.390909x_4
x_7
            9
                                                     -6.9x_3
                                                                  -11.7x_4
                           -1x_{9}
                                       +3.7x_1
x_8
    0.0606060606061
                        -0.30303x_9 -1.181818x_1 -1.3333333x_3 -1.272727x_4
                       -1.363636x_9 -2.518182x_1
                                                     -2.9x_{3}
     0.272727272727
                                                                -3.127273x_4
```

### Final Dictionary

**Solution:** : 0.2727272727 #Pivots: 2

## $10 \quad dict 10$

```
0.2
                                                                   +0.3x_1 -7x_2 +7.6x_3+4.1x_4-0.5x_5+3.4x_6+1.3x_7+5.2x_8+1.5x_9-7.9x_{10}-2.7x_{11}+2.4x_{12}
 x_{13}
                                                                   -4.9x_1 - 5.5x_2 + 0.6x_3 + 1.8x_4 - 8x_5 + 2.9x_6 - 5.8x_7 - 2.3x_8 + 1.2x_9 + 0.6x_{10} - 7.8x_{11} + 6.8x_{12}
 x_{14}
                                  0.7
                                                                   -2.3x_1 + 6.8x_2 + 7.6x_3 - 6.1x_4 - 3.1x_5 - 1.2x_6 - 1.7x_7 - 6.9x_8 + 1.5x_9 - 6.7x_{10} + 7.2x_{11} - 0.9x_{12} + 7.2x_{13} + 7.2x_{14} - 0.9x_{12} + 7.2x_{14} - 0.9x_{14} + 7.2x_{14} - 0.9x_{14} + 7.2x_{14} + 7.2x_{
 x_{15}
                                 6.3
                                                                   -7.1x_1 + 1x_2 -3.6x_3 + 0.7x_4 + 3.7x_5 + 2.9x_6 -6.5x_7 +6.6x_8 -2.9x_9 +4.7x_{10} -2x_{11} -2.3x_{12}
                                  8.3
 x_{16}
                                    5.6
                                                                   +5.7x_1 +6.9x_2 -2.8x_3 +5.1x_4 +4.2x_5 +4.3x_6 -7.4x_7 -2.1x_8 +7x_9 +6.9x_{10} +5.4x_{11} -5x_{12}
 x_{17}
                                    7.9
                                                                   +0.5x_1 - 7.5x_2 + 5.3x_3 + 4.4x_4 - 0.9x_5 - 1x_6 + 0.7x_7 + 3.1x_8 + 4.6x_9 + 2.8x_{10} + 6x_{11} + 3x_{12}
 x_{18}
                                                                   +4.4x_1 + 2.1x_2 - 4.6x_3 + 7.7x_4 - 5x_5 + 2.7x_6 + 1.9x_7 - 4.1x_8 - 0.6x_9 - 1.8x_{10} - 3.6x_{11} - 3.7x_{12}
                                 6.1
 x_{19}
 x_{20}
                                    1.3
                                                                   -5.9x_1 - 4.7x_2 + 0.9x_3 - 3.1x_4 + 1.3x_5 - 5.6x_6 - 3.6x_7 - 5.4x_8 - 6.9x_9 + 4.8x_{10} - 3.8x_{11} + 5.6x_{12}
                                    3.9
                                                                   -4.4x_1 + 4.3x_2 + 1.1x_3 + 3.6x_4 - 4x_5 - 5x_6 + 1.2x_7 + 7x_8 + 2.4x_9 - 7.6x_{10} - 1.1x_{11} - 4.3x_{12}
 x_{21}
 x_{22}
                                    2.6
                                                                 +7.4x_1 - 6.3x_2 + 7.8x_3 - 3.8x_4 - 6.8x_5 + 4x_6 - 7.8x_7 - 4x_8 + 4x_9
                                                                  +7.9x_1 +1x_2 -1.7x_3 +6.5x_4 +7.6x_5 -2.9x_6 -6.4x_7 +4.5x_8 -5.6x_9 -1x_{10} -1.4x_{11} -7.5x_{12}
                                    8.2
  x_{23}
x_{24}
                                       9
                                                                   -6.9x_1 - 5.2x_2 - 7.7x_3 + 0.6x_4 + 1.6x_5 + 1x_6 + 3.1x_7 + 7.9x_8 - 0.6x_9 + 5.5x_{10} - 4.9x_{11} - 6.5x_{12} + 1.6x_{12} + 1.6x_{13} + 1.6x_{14} + 1.6x_{15} + 1.6x_{15
                                                                  -5.9x_{1} + 2.9x_{2} + 6.6x_{3} + 0.5x_{4} + 2.1x_{5} - 0.6x_{6} + 3.3x_{7} - 0.9x_{8} + 6.3x_{9} - 6.2x_{10} + 0.5x_{11} - 0.3x_{12} + 0.00x_{11} + 0.00x_{12} + 0.00x_{13} + 0.00x_{14} + 0.00x_{14}
  x_{25}
                                  0.1
 x_{26}
                                                                  -3.7x_1 +2x_2 +6.5x_3 -2.6x_4 +4.9x_5
                                                                                                                                                                                                                                                                                                                                                        -7.2x_7 - 5.1x_8 - 6.2x_9 + 4.2x_{10} - 1.8x_{11} - 2.6x_{12}
                                                                  7.6
  x_{27}
                                                                   -0.7x_1 - 6.5x_2 + 4.7x_3 - 1.5x_4 - 0.8x_5 + 1.8x_6 - 7.7x_7 - 4.8x_8 + 2.8x_9 - 7.1x_{10} + 1.2x_{11} - 3.4x_{12} + 1.2x_{13} - 1.2x_{14} - 1.2x_{14} - 1.2x_{14} - 1.2x_{15} - 1.2x_{
                                 9.8
 x_{28}
                                                                        +8x_1 -1.5x_2 - 7.6x_3 + 4.1x_4 - 5.9x_5 + 4.1x_6 + 4.7x_7 - 0.7x_8 - 7.3x_9 + 1.9x_{10} + 4.8x_{11} - 0.5x_{12}
                                       3
  x_{29}
                                                                                                                                                                                                                                                                                                                                                        -1.7x_7 + 7.2x_8 + 1.6x_9 - 7x_{10} + 1.5x_{11} + 5.6x_{12}
                                 9.6
                                                                  -0.9x_1 - 0.7x_2 - 7.3x_3 - 1.3x_4 + 7.7x_5
 x_{30}
                                                                   -7.3x_{1} - 7.3x_{2} + 4.9x_{3} + 6.9x_{4} + 7.7x_{5} - 6.3x_{6} + 6.2x_{7} - 6.1x_{8} - 6.9x_{9} - 6.8x_{10} + 5.2x_{11} + 5.9x_{12} + 5.9x_{13} + 5.9x_{14} + 5.9x_{15} + 
 x_{31}
                                                                    -2.3x_1 + 2.9x_2 + 2.3x_3 + 4.6x_4 - 2.7x_5 - 1.8x_6 + 0.9x_7 + 3.4x_8 - 1.6x_9 - 4.1x_{10} + 2.9x_{11} - 4.1x_{12}
       z
```

 $x_2$  enters and  $x_{13}$  leaves

```
0.0285714285714
                                                                                                                                              +0.042857x_1 -0.142857x_{13} +1.085714x_3 +0.585714x_4 -0.071429x_5 +0.485714x_6 +0.071429x_5 +0.071428x_5 +0.07148x_5 +0.07148x_5
   x_2
                                    0.542857142857
                                                                                                                                               x_{14}
                                                                                                                                               6.49428571429
x_{15}
                                       8.32857142857
                                                                                                                                               x_{16}
x_{17}
                                       5.79714285714
                                                                                                                                              x_{18}
                                        7.68571428571
                                                                                                                                               +0.178571x_1+1.071429x_{13} -2.842857x_3 +0.007143x_4-0.364286x_5-4.642857x_6-0.007143x_4
                                                                                                                                                                                                                                                                                                                                                                                                             +8.93x_4
                                                                     6.16
                                                                                                                                                            +4.49x_1
                                                                                                                                                                                                                                            -0.3x_{13}
                                                                                                                                                                                                                                                                                                                              -2.32x_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -5.15x_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        +3.72x_{6}
x_{19}
                                                                                                                                               -6.101429x_1 + 0.671429x_{13} - 4.202857x_3 - 5.852857x_4 + 1.635714x_5 - 7.882857x_6 - 4.202857x_6 - 4.202857x_8 - 4.202857x_
                                        1.16571428571
x_{20}
                                        4.02285714286
                                                                                                                                              -4.215714x_1 - 0.614286x_{13} + 5.768571x_3 + 6.118571x_4 - 4.307143x_5 - 2.911429x_6 + 1
x_{21}
                                                                     2.42
                                                                                                                                                            +7.13x_1
                                                                                                                                                                                                                                             +0.9x_{13}
                                                                                                                                                                                                                                                                                                                              +0.96x_3
                                                                                                                                                                                                                                                                                                                                                                                                              -7.49x_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -6.35x_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         +0.94x_{6}
x_{22}
                                        8.22857142857
                                                                                                                                               x_{23}
                                       8.85142857143
                                                                                                                                               -7.122857x_1 + 0.742857x_{13} - 13.345714x_3 - 2.445714x_4 + 1.971429x_5 - 1.525714x_6 + 2.445714x_6 + 2.445714x
x_{24}
                                                                                                                                               0.182857142857
x_{25}
                                       6.85714285714
                                                                                                                                               x_{26}
x_{27}
                                       7.64857142857
                                                                                                                                               -4.127143x_1 - 0.242857x_{13} + 6.045714x_3 + 7.295714x_4 + 0.778571x_5 + 3.525714x_6 + 1
                                       9.61428571429
                                                                                                                                              x_{28}
x_{29}
                                        2.95714285714
                                                                                                                                               +7.935714x_1 + 0.214286x_{13} - 9.228571x_3 + 3.221429x_4 - 5.792857x_5 + 3.371429x_6 + 4.221429x_6 + 4.221420x_6 + 4.22140x_6 + 4
                                                                     9.58
                                                                                                                                                                                                                                                                                                                             -8.06x_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           +7.75x_5
                                                                                                                                                                                                                                            +0.1x_{13}
                                                                                                                                                                                                                                                                                                                                                                                                              -1.71x_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -0.34x_{6}
 x_{30}
                                       9.49142857143
                                                                                                                                               -7.612857x_1 + 1.042857x_{13} -3.025714x_3 +2.624286x_4 + 8.221429x_5 - 9.845714x_6 + 4.621429x_5 - 9.845714x_6 + 4.6214274x_6 + 4.621474x_6 + 4.62
x_{31}
                               0.0828571428571
                                                                                                                                               -2.175714x_1 - 0.414286x_{13} + 5.448571x_3 + 6.298571x_4 - 2.907143x_5 - 0.391429x_6 + 1
```

 $x_3$  enters and  $x_{14}$  leaves

```
0.13829787234
                                                                                                                   -0.995213x_1 + 0.015957x_{13} - 0.202128x_{14} + 0.298404x_4 - 1.609043x_5 + 0.531915x_6 -
  x_2
                           0.101063829787
                                                                                                                   -0.956117x_1 + 0.146277x_{13} - 0.18617x_{14} - 0.264628x_4 - 1.416223x_5 + 0.042553x_6
  x_3
                                                                                                                 -16.333936x_1 + 1.220213x_{13} - 2.789362x_{14} - 6.082021x_4 - 24.804787x_5 + 2.740426x_6 - 6.082021x_4 - 24.804787x_5 + 2.740426x_6 - 6.082021x_4 - 24.804787x_5 + 2.740426x_6 - 6.082021x_4 - 6.0
                               8.0085106383
x_{15}
x_{16}
                            8.07446808511
                                                                                                                   -4.653191x_1 -0.510638x_{13} + 0.468085x_{14} + 1.951064x_4 + 7.189362x_5 + 3.278723x_6 -
                                                                                                                     +1.51016x_1 -0.299468x_{13} -0.873404x_{14} +7.899947x_4 -2.936968x_5 +7.851064x_6 -
                             6.27127659574
x_{17}
                             7.39840425532
                                                                                                                   +2.896676x_1 +0.655585x_{13} +0.529255x_{14} +0.759441x_4 +3.661835x_5 -4.76383x_6
x_{18}
                                                                                                                   +6.708191x_1 -0.639362x_{13} +0.431915x_{14} +9.543936x_4 -1.864362x_5 +3.621277x_6 +
                            5.92553191489
x_{19}
                           0.740957446809
x_{20}
                                                                                                                   -2.083005x_1 +0.056649x_{13} +0.782447x_{14} -4.740665x_4 +7.587899x_5 -8.061702x_6 +
                                                                                                                   -9.731144x_1 + 0.229521x_{13} - 1.073936x_{14} + 4.592048x_4 - 12.476729x_5 - 2.665957x_6 = -1.073936x_{14} + 4.592048x_4 - 12.476729x_5 - 2.665957x_6 = -1.073936x_{14} + 4.592048x_4 - 1.073936x_{15} - 2.665957x_6 = -1.073936x_{15} - 2.665957x_6 = -1.073936x_5 - 2.665957x_5 = -1.073936x_5 - 2.665957x_5 = -1.073936x_5 - 2.0057x_5 = -1.073936x_5 - 2.0057x_5 = -1.073936x_5 - 2.0057x_5 = -1.073936x_5 = -1.07396x_5 
                             4.60585106383
x_{21}
                                                                                                                   +6.212128x_1 +1.040426x_{13} -0.178723x_{14} -7.744043x_4 -7.709574x_5 +0.980851x_6 -7.0080851x_6 
                                2.5170212766
x_{22}
                                                                                                                   +8.530186x_1 -0.232713x_{13} +0.114362x_{14} +7.248271x_4 +8.398537x_5 -2.440426x_6 -
                               8.1664893617
x_{23}
                                                                                                                   +5.637207x_1 -1.209309x_{13} + 2.484574x_{14} + 1.085931x_4 + 20.871941x_5 - 2.093617x_6 +
                             7.50265957447
x_{24}
                                                                                                                 -15.096489x_1 + 1.011702x_{13} - 1.814894x_{14} - 0.38117x_4 - 11.913298x_5 + 1.223404x_6
x_{25}
                             1.16808510638
                                                                                                                 7.7335106383
x_{26}
                                                                                                                   -9.907553x_1 + 0.641489x_{13} - 1.125532x_{14} + 5.695851x_4 - 7.783511x_5 + 3.782979x_6 - 6.641489x_{13} - 1.125532x_{14} + 5.695851x_4 - 7.783511x_5 + 3.782979x_6 - 6.641489x_{13} - 1.125532x_{14} + 5.695851x_4 - 7.783511x_5 + 3.782979x_6 - 6.641489x_{13} - 1.125532x_{14} + 5.695851x_4 - 7.783511x_5 + 3.782979x_6 - 6.641489x_{13} - 1.125532x_{14} + 5.695851x_4 - 7.783511x_5 + 3.782979x_6 - 6.641489x_{13} - 1.125532x_{14} + 5.695851x_4 - 7.783511x_5 + 3.782979x_6 - 6.641489x_6 - 6.641480x_6 - 6.64140x_6 - 6.64140x
                             8.25957446809
x_{27}
                             9.37606382979
                                                                                                                   +1.275133x_1 +0.583777x_{13} +0.43883x_{14} -4.683378x_4 +3.002527x_5 -1.457447x_6 -
x_{28}
                                                                                                                 +16.759309x_1 - 1.135638x_{13} + 1.718085x_{14} + 5.663564x_4 + 7.276862x_5 + 2.978723x_6 +
                             2.02446808511
x_{29}
                            8.76542553191
                                                                                                                   +6.776303x_1 -1.078989x_{13} +1.500532x_{14} +0.422899x_4 +19.164761x_5 -0.682979x_6 +
x_{30}
                            9.18563829787
                                                                                                                      -4.71992x_1 +0.600266x_{13} +0.563298x_{14} +3.424973x_4 +12.506516x_5 -9.974468x_6 +
x_{31}
                         0.633510638298
```

#### $x_4$ enters and $x_{20}$ leaves

```
0.184937923915
                                                                                                                               -1.126329x_1 + 0.019523x_{13} - 0.152876x_{14} - 0.062946x_{20} - 1.131417x_5 + 0.024466x_{6}
  x_2
                            0.0597029997363
 x_3
                                                                                                                              -0.839842x_1 + 0.143114x_{13} - 0.229847x_{14} + 0.055821x_{20} - 1.839786x_5 + 0.492564x_6
                                                                                                                           -13.661551x_1 + 1.147535x_{13} - 3.793199x_{14} + 1.282947x_{20} - 34.539659x_5 + 13.083161x_1 + 1.147535x_{13} - 3.793199x_{14} + 1.282947x_{20} - 34.539659x_5 + 13.083161x_1 + 1.147535x_{13} - 3.793199x_{14} + 1.282947x_{20} - 34.539659x_5 + 13.083161x_1 + 1.147535x_{13} - 3.793199x_{14} + 1.282947x_{20} - 34.539659x_5 + 13.083161x_1 + 1.147535x_{13} + 1.14755x_{13} + 1.14755x_{13} + 1.1475x_{13} + 1.1475x_
                                 7.05790158711
x_{15}
                                    8.3794158733
                                                                                                                              -5.510471x_1 -0.487324x_{13} + 0.790108x_{14} - 0.411559x_{20} + 10.312231x_5 -0.039144x_6
x_{16}
                                                                                                                              -1.961006x_1 -0.205067x_{13} + 0.430482x_{14} - 1.666422x_{20} + 9.707671x_5 -5.583131x_6
                                 7.50602415722
x_{17}
                                                                                                                              +2.562984x_1 +0.66466x_{13} +0.654601x_{14} -0.160197x_{20} +4.877396x_5 -6.055292x_{6}
x_{18}
                                 7.51710360226
x_{19}
                                 7.41723207423
                                                                                                                              +2.514672x_1 -0.525316x_{13} + 2.007142x_{14} - 2.013206x_{20} + 13.411644x_5 - 12.608592x_5 + 12.514672x_1 - 12.608592x_5 + 12.514672x_1 - 12.608592x_5 + 12.514672x_1 - 12.608592x_5 + 12.608572x_5 + 12.60872x_5 
                               0.156298212052
                                                                                                                              -0.439391x_1 + 0.01195x_{13} + 0.16505x_{14} - 0.210941x_{20} + 1.600598x_5 - 1.700542x_6
  x_4
                                 5.32357993593
                                                                                                                           -11.748848x_1 + 0.284394x_{13} - 0.316019x_{14} - 0.968651x_{20} - 5.126706x_5 - 10.47493x_6
x_{21}
                                 1.30664127148
                                                                                                                                +9.61479x_1 +0.947888x_{13} -1.456878x_{14} +1.633535x_{20} -20.104674x_5 +14.149925x_{14} +1.633535x_{20} +1.04674x_{15} +1
x_{22}
                                                                                                                              x_{23}
                                    9.2993812027
                                    7.6723886249
                                                                                                                              +5.160059x_1 -1.196332x_{13} + 2.663807x_{14} - 0.229067x_{20} + 22.61008x_5 -3.940289x_6
x_{24}
x_{25}
                                  1.10850888364
                                                                                                                           -14.929007x_1 + 1.007147x_{13} - 1.877806x_{14} + 0.080404x_{20} - 12.523398x_5 + 1.8716x_6
                                                                                                                           -10.269214x_1 + 0.938221x_{13} - 2.228888x_{14} + 0.78539x_{20} - 13.482998x_5 + 7.672007x_{60}x_{10} + 7.672007x_{10}x_{10} + 7.672007
                                 7.15156999478
x_{26}
x_{27}
                                 9.14982580547
                                                                                                                           -12.410259x_1 + 0.709552x_{13} - 0.185432x_{14} - 1.201488x_{20} + 1.333257x_5 - 5.903058x_6
                                                                                                                              +3.332967x_1 + 0.527812x_{13} - 0.334162x_{14} + 0.987916x_{20} - 4.493679x_5 + 6.506836x_6
                                 8.64406027523
x_{28}
                                 2.90967298554
                                                                                                                              +14.27079x_1 -1.067961x_{13} + 2.652856x_{14} -1.194677x_{20} +16.341951x_5 -6.652408x_6
x_{29}
                                                                                                                             +6.590485x_1 -1.073936x_{13} +1.570331x_{14} -0.089207x_{20} +19.841652x_5 -1.402136x_6
x_{30}
                                 8.83152387952
x_{31}
                                 9.72095551728
```

 $-9.519189x_1 +0.440749x_{13} -0.212759x_{14} -1.024483x_{20} -2.849867x_5 -8.418648x_{60} +2.849867x_{10} -2.849867x_{10} -2$ 

 $x_{10}$  enters and  $x_{30}$  leaves

1.39260865419

```
-0.900537x_1 -0.01727x_{13} -0.099076x_{14} -0.066002x_{20} -0.451638x_5 -0.023572x_6
     0.487507878785
x_2
     0.612054675522
                       -0.427652x_1 + 0.075947x_{13} - 0.131633x_{14} + 0.050242x_{20} - 0.598826x_5 + 0.40487x_6
x_3
                       -14.286361x_1 + 1.24935x_{13} -3.942074x_{14} + 1.291404x_{20} -36.420743x_5 + 13.216091x_6
     6.22063033503
x_{15}
x_{16}
     9.67756108105
                       +3.402847x_1 -1.07912x_{13} +1.708541x_{14} -1.739025x_{20} +25.856359x_5 -6.7243x_6
      14.6938088375
x_{17}
      12.1691096901
                       +6.034523x_1 +0.098964x_{13} +1.481773x_{14} -0.207187x_{20} +15.328988x_5 -6.793868x_6
x_{18}
     8.80235104617
                       +3.548311x_1 -0.69375x_{13} +2.253429x_{14} -2.027197x_{20} +16.52357x_5 -12.828501x_6
x_{19}
x_4
     0.712688365812
                       -0.024187x_1 -0.055709x_{13} + 0.263982x_{14} - 0.216561x_{20} + 2.850631x_5 -1.788878x_6
                       -11.960655x_1 + 0.318909x_{13} - 0.366486x_{14} - 0.965784x_{20} - 5.764382x_5 - 10.429868x_6
     5.03975019124
x_{21}
                       +9.829612x_1 +0.912882x_{13} -1.405692x_{14} +1.630627x_{20} -19.457921x_5 +14.104221x_6
      1.59451104264
x_{22}
                       +7.157299x_1 -0.441359x_{13} +1.742424x_{14} -1.553482x_{20} +25.45522x_5 -15.151912x_6
     11.7274535256
x_{23}
                       +3.326951x_1 -0.897623x_{13} + 2.227028x_{14} - 0.204255x_{20} + 17.091232x_5 -3.550292x_6
      5.21594785242
x_{24}
                       -13.900272x_1 + 0.839512x_{13} - 1.632687x_{14} + 0.06648x_{20} - 9.426237x_5 + 1.652735x_6
x_{25}
      2.48705603789
                       12.2189316841
x_{26}
                       -8.915295x_1 + 0.140039x_{13} + 0.647322x_{14} - 1.248795x_{20} + 11.855374x_5 - 6.646617x_6
      13.833222388
x_{27}
      4.51936915789
                       +0.254934x_1 +1.029385x_{13} -1.067572x_{14} +1.029579x_{20} -13.76056x_5 +7.161692x_6
x_{28}
                       +13.284507x_1 - 0.907244x_{13} + 2.417852x_{14} - 1.181327x_{20} + 13.372597x_5 - 6.442574x_6
      1.58801293457
x_{29}
     0.55203578257
                       +0.411954x_1 -0.067129x_{13} +0.098157x_{14} -0.005576x_{20} +1.24025x_5 -0.087644x_6
x_{10}
      10.3039667976
                       -5.789753x_1 + 0.570297x_{13} + 1.232255x_{14} - 0.728356x_{20} + 19.298364x_5 - 15.891343x_6
x_{31}
     3.83651837637
                       -7.695432x_1 +0.143563x_{13} +0.221793x_{14} -1.049168x_{20} +2.640828x_5 -8.806655x_6
```

#### $x_5$ enters and $x_{22}$ leaves

```
0.450497673628
                                                                            -1.128693x_1 -0.038459x_{13} -0.066449x_{14} -0.10385x_{20} +0.023211x_{22} -0.350945x_6
 x_2
                  0.562982926693
                                                                            -0.730162x_1 + 0.047853x_{13} - 0.088373x_{14} + 0.000058x_{20} + 0.030775x_{22} - 0.029194x_6
 x_3
                    3.23607319647
                                                                          -32.685128x_1 - 0.459355x_{13} - 1.310944x_{14} - 1.760754x_{20} + 1.87177x_{22} - 13.18376x_{6}
x_{15}
                    10.7616128734
                                                                             +2.14107x_1 -0.024546x_{13} +0.065251x_{14} +0.683934x_{20} -0.679865x_{22} +9.343719x_{6}
x_{16}
                                                                          +16.464774x_1 + 0.133949x_{13} - 0.159391x_{14} + 0.427809x_{20} - 1.328835x_{22} + 12.017877x_{13} + 0.017877x_{13} + 0.017877x_{14} + 0.017877x_{15} + 0.01787x_{15} + 0.0177x_{15} + 0.017x_{15} + 0.017x_{15
                    16.8126502962
x_{17}
                                                                          +13.778309x_1 + 0.818134x_{13} + 0.374367x_{14} + 1.077424x_{20} - 0.787802x_{22} + 4.317465x_{6}
                    13.4252685632
x_{18}
                                                                          +11.895568x_1 + 0.081465x_{13} + 1.059723x_{14} - 0.642477x_{20} - 0.849195x_{22} - 0.851267x_6
                    10.1564018888
x_{19}
                  0.946288001887
                                                                           +1.415874x_1 +0.07803x_{13} +0.058044x_{14} +0.02233x_{20} -0.146502x_{22} +0.277424x_{6}
 x_4
                    4.56737852481
                                                                           -14.872663x_1 + 0.048469x_{13} + 0.049948x_{14} - 1.448855x_{20} + 0.296249x_{22} - 14.608224x_{02} + 0.048469x_{13} + 0.049948x_{14} - 0.048865x_{20} + 0.0496249x_{22} - 0.048696x_{21} + 0.048669x_{22} + 0.048669x_{23} + 0.049948x_{24} + 0.048669x_{24} + 0.048660x_{24} + 0.04860x_{24} + 0.04860x_{
x_{21}
                 0.0819466289976
                                                                           +0.505173x_1 +0.046916x_{13} -0.072243x_{14} +0.083803x_{20} -0.051393x_{22} +0.724858x_{6}
 x_5
                                                                          +20.016583x_1 +0.75289x_{13} -0.096528x_{14} +0.579735x_{20} -1.308219x_{22} +3.299496x_{6}
x_{23}
                    13.8134229617
                    6.61651667975
                                                                          +11.960976x_1 - 0.095776x_{13} + 0.992312x_{14} + 1.228037x_{20} - 0.878369x_{22} + 8.838416x_6
x_{24}
x_{25}
                    1.71460769047
                                                                            -18.66215x_1 + 0.397274x_{13} - 0.95171x_{14} - 0.723465x_{20} + 0.484442x_{22} - 5.179944x_6
                                                                            -7.547688x_1 +0.223577x_{13} -1.176279x_{14} +0.558367x_{20} +0.107834x_{22} +5.346567x_{6}
                    12.0469885906
x_{26}
x_{27}
                    14.8047303277
                                                                            -2.926283x_1 + 0.696242x_{13} - 0.209141x_{14} - 0.255282x_{20} - 0.609283x_{22} + 1.94684x_6
                     3.3917376535
                                                                            -6.696525x_1 + 0.383799x_{13} - 0.073473x_{14} - 0.123594x_{20} + 0.707196x_{22} - 2.812753x_{6}
x_{28}
                    2.68385218882
                                                                          +20.039978x_1 - 0.279859x_{13} + 1.451781x_{14} - 0.060667x_{20} - 0.687257x_{22} + 3.250654x_{6}
x_{29}
                                                                           +1.038495x_1 -0.008942x_{13} +0.008558x_{14} +0.09836x_{20} -0.06374x_{22} +0.811361x_6
                  0.653670129204
x_{10}
x_{31}
                     11.885402701
                                                                            +3.959255x_1 +1.475693x_{13} -0.16191x_{14} +0.8889x_{20} -0.9918x_{22} -1.902778x_6
                    4.05292536556
                                                                             -6.361358x_1 + 0.267459x_{13} + 0.031012x_{14} - 0.82786x_{20} - 0.13572x_{22} - 6.892431x_6
```

 $x_{11}$  enters and  $x_{25}$  leaves

```
+1.166981x_1 -0.087329x_{13} +0.050623x_{14} -0.014855x_{20} -0.036381x_{22} +0.286252x_6
                    0.23957986292
 x_2
                  0.468971505772
                                                                            +0.293078x_1 +0.02607x_{13} -0.036191x_{14} +0.039726x_{20} +0.004214x_{22} +0.254821x_{6}
 x_3
                                                                          -13.269263x_{1} - 0.872674x_{13} - 0.320796x_{14} - 1.008071x_{20} + 1.367762x_{22} - 7.794612x_{6} + 1.008071x_{10} + 1.00
                    1.45221706491
x_{15}
x_{16}
                    10.7779448268
                                                                            +1.963309x_1 -0.020761x_{13} +0.056186x_{14} +0.677043x_{20} -0.67525x_{22} +9.294379x_{6}
                    17.9617344965
                                                                            +3.957901x_1 +0.400191x_{13} -0.797202x_{14} -0.057038x_{20} -1.004174x_{22} +8.546418x_{6}
x_{17}
x_{18}
                    16.7630228856
                                                                          -22.550509x_1 + 1.591491x_{13} - 1.478287x_{14} - 0.330914x_{20} + 0.155241x_{22} - 5.766113x_{6}
                                                                           +8.934888x_1 +0.144491x_{13} +0.908738x_{14} -0.757252x_{20} -0.77234x_{22} -1.673045x_{6}
                    10.4284180209
x_{19}
                                                                            -0.039484x_1 + 0.109012x_{13} - 0.016174x_{14} - 0.034089x_{20} - 0.108723x_{22} - 0.126531x_{6}
 x_4
                    1.08000082475
                    3.28676652538
                                                                            -0.934213x_1 - 0.248249x_{13} + 0.760764x_{14} - 0.908511x_{20} - 0.065573x_{22} - 10.73941x_{6}
x_{21}
                                                                            +1.022442x_1 +0.035904x_{13} -0.045864x_{14} +0.103855x_{20} -0.06482x_{22} +0.868433x_{6}
                 0.0344219120165
 x_5
                                                                          +19.509046x_1 + 0.763695x_{13} - 0.122411x_{14} + 0.56006x_{20} - 1.295044x_{22} + 3.158622x_{6}
                    13.8600534889
x_{23}
                                                                            -1.178144x_1 + 0.183926x_{13} + 0.322259x_{14} + 0.718681x_{20} - 0.537297x_{22} + 5.191468x_{6}
x_{24}
                    7.82368924773
                                                                            -2.482522x_1 + 0.052847x_{13} - 0.126601x_{14} - 0.096238x_{20} + 0.064443x_{22} - 0.689059x_{6}
x_{11}
                  0.228084707138
                     10.404773354
                                                                          +10.326527x_1 - 0.156924x_{13} - 0.264751x_{14} + 1.251287x_{20} - 0.356154x_{22} + 10.307809x_{01} + 10.326527x_{12} + 10.307809x_{03} + 10.326527x_{13} + 10.326527x_{14} + 10.326527x_{15} + 10.3267x_{15} + 10.3267x_{
x_{26}
                                                                            -1.205944x_1 + 0.65962x_{13} -0.12141x_{14} -0.18859x_{20} -0.65394x_{22} +2.424345x_{6}
                    14.6466720709
x_{27}
                    3.78662622346
                                                                          -10.994576x_1 + 0.475295x_{13} - 0.29266x_{14} - 0.290214x_{20} + 0.818767x_{22} - 4.005738x_{6}
x_{28}
                                                                          -13.994888x_1 + 0.444664x_{13} - 0.283889x_{14} - 1.380077x_{20} + 0.196238x_{22} - 6.196205x_{6}
                    5.81084687779
x_{29}
                                                                           +0.049142x_1 +0.012119x_{13} -0.041895x_{14} +0.060007x_{20} -0.038058x_{22} +0.536752x_6
x_{10}
                    0.74456811641
                    14.0890590778
                                                                          -20.025804x_1 + 1.98628x_{13} - 1.385072x_{14} - 0.040915x_{20} - 0.369183x_{22} - 8.56017x_6
x_{31}
                    4.25719707059
                                                                             -8.584694x_1 +0.314789x_{13} -0.082371x_{14} -0.91405x_{20} -0.078005x_{22} -7.509549x_6
```

#### $x_{12}$ enters and $x_{28}$ leaves

```
0.371318944779
                                                                                                   +0.784473x_1 -0.070793x_{13} +0.040442x_{14} -0.024952x_{20} -0.007896x_{22} +0.14689x_{6}
  x_2
 x_3
                        0.582416556566
                                                                                                    -0.036313x_1 +0.04031x_{13} -0.044959x_{14} +0.031031x_{20} +0.028743x_{22} +0.134812x_6
                                                                                                 -12.537955x_1 - 0.904288x_{13} - 0.30133x_{14} - 0.988767x_{20} + 1.313301x_{22} - 7.528169x_{6}
                          1.20034830947
x_{15}
                           10.1430294599
                                                                                                  +3.806804x_1 -0.100456x_{13} +0.105257x_{14} +0.725704x_{20} -0.812535x_{22} +9.966033x_{6}
x_{16}
                                                                                                 -10.229731x_1 + 1.013521x_{13} - 1.174856x_{14} - 0.431536x_{20} + 0.05238x_{22} + 3.377329x_{6}
                          22.8480766826
x_{17}
                                                                                                 -40.973092x_1 + 2.387898x_{13} -1.96867x_{14} -0.817198x_{20} +1.527172x_{22} -12.478154x_{02} +1.527172x_{23} -1.06867x_{14} -0.06817198x_{20} +0.0687172x_{22} -1.06867x_{14} -0.0687198x_{20} +0.0687172x_{22} -1.06867x_{21} -0.0687172x_{22} -1.06867x_{21} -0.0687172x_{22} -1.06867x_{21} -0.0687172x_{22} -1.06867x_{21} -0.068772x_{22} -0.068772x_{22} -0.068772x_{22} -0.06872x_{22} -0.0672x_{22} -0.06872x_{22} -0.0687
                               23.10791874
x_{18}
x_{19}
                           10.3205997335
                                                                                                  +9.247941x_1 +0.130958x_{13} +0.917071x_{14} -0.748988x_{20} -0.795653x_{22} -1.558988x_{6}
                          1.57576180969
                                                                                                     -1.47894x_1 +0.171239x_{13} -0.05449x_{14} -0.072085x_{20} -0.001527x_{22} -0.650979x_6
  x_4
                            1.5017373811
                                                                                                   +4.248669x_1 -0.472304x_{13} +0.898725x_{14} -0.771703x_{20} -0.451543x_{22} -8.851091x_{6}
x_{21}
                      0.0473648944762
                                                                                                  +0.984861x_1 +0.037529x_{13} -0.046864x_{14} +0.102863x_{20} -0.062022x_{22} +0.854741x_{6}
  x_5
                                                                                                 +22.202193x_1 +0.64727x_{13} -0.050723x_{14} +0.631148x_{20} -1.495603x_{22} +4.139837x_{6}
                          12.9325107458
x_{23}
                          2.91133731825
                                                                                                 +13.085008x_1 - 0.432669x_{13} + 0.701924x_{14} + 1.095172x_{20} - 1.599475x_{22} + 10.388071x_{02} + 10.088071x_{03} + 10.088071x_{04} + 10.088071x_{05} 
x_{24}
x_{11}
                        0.653181147524
                                                                                                   -3.716801x_1 + 0.106205x_{13} - 0.159455x_{14} - 0.128819x_{20} + 0.15636x_{22} - 1.138754x_6
                                                                                                 +13.655857x_1 -0.30085x_{13} -0.176129x_{14} + 1.339168x_{20} -0.60409x_{22} +11.520809x_{20}
                          9.25812345374
x_{26}
                          15.0303955414
                                                                                                   -2.320096x_1 + 0.707785x_{13} - 0.151067x_{14} - 0.217999x_{20} - 0.570969x_{22} + 2.018417x_{6}
x_{27}
                                                                                                   -1.297956x_1 + 0.056111x_{13} - 0.03455x_{14} - 0.034261x_{20} + 0.096659x_{22} - 0.472894x_{6}
                        0.447027072618
x_{12}
                            8.9791221561
                                                                                                 -23.194064x_1 + 0.842344x_{13} - 0.528758x_{14} - 1.622899x_{20} + 0.881302x_{22} - 9.547811x_{6}
x_{29}
                        0.983968362648
                                                                                                   -0.645963x_1 + 0.042169x_{13} - 0.060398x_{14} + 0.041659x_{20} + 0.013707x_{22} + 0.283499x_{6}
x_{10}
x_{31}
                          20.4236958342
                                                                                                 -38.418599x_1 + 2.781399x_{13} - 1.874662x_{14} - 0.526413x_{20} + 1.00053x_{22} - 15.261358x_{00} + 1.00053x_{10} - 1.0005x_{10} - 1.0005x_{10} - 1.0005x_{10} - 1.0005x_{10} - 1.0005x_{10} - 1.0005x_{10}
                                                                                                 5.56414617269
```

 $x_{13}$  enters and  $x_{15}$  leaves

```
0.277348966486
                                                                                                                                             +1.766014x_1 +0.078286x_{15} +0.064031x_{14} +0.052454x_{20} -0.110709x_{22} +0.736237x_{6}
  x_2
                                     0.63592366803
                                                                                                                                             -0.595209x_1 -0.044576x_{15} -0.058391x_{14} -0.013045x_{20} +0.087286x_{22} -0.200767x_{6} +0.087286x_{20} 
  x_3
                                                                                                                                          1.3273959582
x_{13}
x_{16}
                                      10.0096851372
                                                                                                                                            -24.282207x_1 - 1.120795x_{15} - 1.512585x_{14} - 1.539741x_{20} + 1.524321x_{22} - 5.060205x_{6} + 1.524321x_{20} + 1.5243
                                     24.1934209222
x_{17}
x_{18}
                                      26.2776043746
                                                                                                                                          10.4944325059
                                                                                                                                            +7.432212x_1 -0.144819x_{15} +0.873433x_{14} -0.89218x_{20} -0.605463x_{22} -2.649207x_6
x_{19}
                                      1.80306406925
 x_4
                                                                                                                                             -3.853173x_1 -0.189364x_{15} -0.111551x_{14} -0.259322x_{20} +0.247164x_{22} -2.076541x_{6}
                                  0.874802734655
                                                                                                                                          +10.797167x_1 + 0.522294x_{15} + 1.056108x_{14} - 0.255276x_{20} - 1.137472x_{22} - 4.919173x_{6}
x_{21}
                                                                                                                                             +0.464524x_1 -0.041501x_{15} -0.059369x_{14} +0.061829x_{20} -0.007519x_{22} +0.542315x_{6}
                               0.0971805029106
  x_5
                                                                                                                                             +13.22779x_1 -0.715779x_{15} -0.266409x_{14} -0.07659x_{20} -0.555569x_{22} -1.248667x_6
                                     13.7916945726
x_{23}
                                     2.33701415788
                                                                                                                                          +19.083965x_1 + 0.478464x_{15} + 0.846099x_{14} + 1.568261x_{20} - 2.227842x_{22} + 13.990028x_{14} + 1.568261x_{20} + 1.56
x_{24}
                                                                                                                                             -5.189333x_1 -0.117446x_{15} -0.194845x_{14} -0.244945x_{20} +0.310601x_{22} -2.022906x_6
x_{11}
                                  0.794157166028
                                     8.85877596441
                                                                                                                                         +17.827147x_1 + 0.332693x_{15} - 0.075879x_{14} + 1.668124x_{20} - 1.041016x_{22} + 14.025378x_{0} + 1.041016x_{22} + 14.025378x_{0} + 1.041016x_{22} + 1.041016x_{23} + 1.041016x_{24} + 1.041016x_{24} + 1.041016x_{25} + 1.04106x_{25} + 1.04106x_{25
x_{26}
                                                                                                                                          x_{27}
                                     15.9699065811
                                  0.521507943339
                                                                                                                                             x_{12}
                                                                                                                                           -34.873165x_1 -0.9315x_{15} -0.809447x_{14} -2.543935x_{20} +2.104641x_{22} -16.560298x_{02}
                                        10.097246179
x_{29}
                                     1.03994282299
                                                                                                                                             -1.230631x_1 -0.046632x_{15} -0.07445x_{14} -0.004449x_{20} +0.074948x_{22} -0.067553x_6
x_{10}
                                        24.115713401
                                                                                                                                          -76.982699x_1 - 3.075789x_{15} - 2.801489x_{14} - 3.567651x_{20} + 5.039968x_{22} - 38.416415x_{00} + 5.039968x_{10} - 3.075789x_{10} - 3.075788x_{10} - 3.07578x_{10} - 3.
x_{31}
                                     6.19975143951
```

#### $x_{22}$ enters and $x_{21}$ leaves

```
0.192205699807
                                                                                                                         +0.715142x_1 +0.027451x_{15} -0.038758x_{14} +0.0773x_{20} +0.097329x_{21} +1.215013x_6
  x_2
 x_3
                              0.703052876017
                                                                                                                         +0.233326x_1 -0.004497x_{15} +0.022651x_{14} -0.032634x_{20} -0.076736x_{21} -0.578246x_6
                                                                                                                         -0.079371x_1 -0.438987x_{15} + 1.015197x_{14} - 1.419352x_{20} - 1.276782x_{21} - 14.605681x_{01} - 1.419352x_{20} - 1.276782x_{21} - 14.605681x_{02} - 1.419352x_{22} - 1.419352x_{23} - 1.419352x_{24} - 1.419352x_{25} - 1.41936x_{25} - 1.41936x_{2
                                   2.4443285552
x_{13}
                                9.27258137731
                                                                                                                            -3.89801x_1 -0.328994x_{15} -0.75114x_{14} +1.050639x_{20} +0.842594x_{21} +14.94719x_6
x_{16}
                                                                                                                         -9.812975x_1 -0.420871x_{15} -0.0973x_{14} -1.881835x_{20} -1.340095x_{21} -11.652365x_{10}
                                25.3657399284
x_{17}
                                                                                                                        -26.666325x_1 - 0.347022x_{15} + 1.873449x_{14} - 4.5492x_{20} - 4.391427x_{21} - 53.959516x_{00} + 4.391427x_{21} - 53.959616x_{00} + 4.391427x_{21} - 53.958616x_{00} + 4.391427x_{21} - 4.391427x_{21} - 4.391427x_{21} - 4.39147x_{21} - 4.39147x_{21} - 4.39147x_{21} + 4.3914x_{21} + 4.3914x_{21} + 4.3914
                                   30.119236829
x_{18}
                                                                                                                           +1.68501x_1 -0.422829x_{15} +0.311279x_{14} -0.7563x_{20} +0.532288x_{21} -0.030791x_6
x_{19}
                                10.0287855959
                                1.99315237394
                                                                                                                          -1.507026x_1 -0.075873x_{15} +0.117933x_{14} -0.314791x_{20} -0.217293x_{21} -3.145441x_6
  x_4
                                                                                                                         0.769076128287
x_{22}
                           0.0913981139181
                                                                                                                         +0.393156x_1 -0.044953x_{15} -0.06635x_{14} +0.063516x_{20} +0.00661x_{21} +0.57483x_{6}
  x_5
                                                                                                                         +7.954188x_1 -0.97088x_{15} -0.782238x_{14} +0.048093x_{20} +0.488425x_{21} +1.153979x_6
                                13.3644193394
x_{23}
                              0.623634311159
                                                                                                                         -2.063257x_1 -0.544496x_{15} -1.222384x_{14} +2.068242x_{20} +1.95859x_{21} +23.624671x_{02}
x_{24}
x_{11}
                                1.03303331264
                                                                                                                         -2.241028x_1 +0.025173x_{15} +0.093538x_{14} -0.314652x_{20} -0.273063x_{21} -3.36615x_6
                                                                                                                         +7.945568x_1 -0.145311x_{15} -1.04243x_{14} +1.901753x_{20} +0.915201x_{21} +18.527411x_{15} +1.901753x_{20}
                                8.05815553864
x_{26}
x_{27}
                                16.3213360276
                                                                                                                         -7.796053x_1 -0.572881x_{15} + 0.037347x_{14} - 1.094457x_{20} - 0.401724x_{21} -5.850022x_6
                                                                                                                         -0.384899x_1 + 0.019751x_{15} + 0.112158x_{14} - 0.135594x_{20} - 0.156618x_{21} - 1.710443x_{6}
                              0.658517627085
x_{12}
                                 11.7158756215
                                                                                                                          -14.89539x_1 +0.03489x_{15} +1.144648x_{14} -3.016267x_{20} -1.850279x_{21} -25.662143x_{01} +0.03489x_{15} +0.03480x_{15} +
x_{29}
                                                                                                                         -0.519204x_1 -0.012218x_{15} -0.004863x_{14} -0.02127x_{20} -0.06589x_{21} -0.391679x_{6}
x_{10}
                                   1.0975837267
x_{31}
                                27.9918322252
                                                                                                                       -29.142083x_1 - 0.761583x_{15} + 1.877967x_{14} - 4.69874x_{20} - 4.430849x_{21} - 60.212529x_{00} - 60.212528x_{00} - 60.2128x_{00} - 60.2128x_{00} - 60.2128x_{00} - 60.2128x_{00} - 60.2128x_{00} - 60.2128x_
                                6.89192521296
```

 $x_8$  enters and  $x_2$  leaves

```
+1.300975x_1 +0.049939x_{15} -0.070508x_{14} +0.140623x_{20} +0.177059x_{21} +2.210333x_{6}
                                   0.349657745484
  x_8
                                  0.996122941926
                                                                                                                                                 +1.323755x_1 +0.03736x_{15} -0.036446x_{14} +0.085231x_{20} +0.071668x_{21} +1.274373x_{6}
  x_3
                                                                                                                                              +12.913288x_1 +0.05975x_{15} +0.311043x_{14} -0.014974x_{20} +0.491477x_{21} +7.468605x_{6} +0.014974x_{10} +0.014974x_{20} +0.014974x_{21} +0.014874x_{21} 
                                      5.93631127127
x_{13}
x_{16}
                                      9.89794088987
                                                                                                                                                 -1.571228x_1 -0.239678x_{15} -0.877243x_{14} +1.302141x_{20} +1.159262x_{21} +18.90035x_{6}
                                      23.2558106535
                                                                                                                                              -17.663412x_1 - 0.722219x_{15} + 0.328165x_{14} - 2.73039x_{20} - 2.408515x_{21} - 24.990113x_{0}
x_{17}
                                      35.9712293716
                                                                                                                                                 -4.892752x_1 + 0.48878x_{15} + 0.693401x_{14} - 2.195691x_{20} - 1.428113x_{21} - 16.966618x_{01} - 1.428113x_{12} - 1.428113x_{13} - 1.428113x_{14} - 1.428113x_{15} - 1.4281
x_{18}
                                                                                                                                              -17.436712x_{1} - 1.156837x_{15} + 1.347606x_{14} - 2.82317x_{20} - 2.070118x_{21} - 32.518244x_{10} + 2.070118x_{21} - 32.51824x_{10} + 2.070118x_{10} + 2.070118x_{10
                                      4.88951981882
x_{19}
                                                                                                                                                 -1.905488x_1 -0.091168x_{15} + 0.139528x_{14} - 0.357861x_{20} - 0.271522x_{21} -3.822421x_{6}
 x_4
                                         1.8860594536
                                      4.14826566002
                                                                                                                                              +22.065234x_1 + 0.941798x_{15} + 0.24706x_{14} + 1.134592x_{20} + 0.832001x_{21} + 17.03662x_{6}
x_{22}
                                0.0076419971809
                                                                                                                                                 +0.081523x_1 -0.056916x_{15} -0.049461x_{14} +0.029832x_{20} -0.035802x_{21} +0.045373x_{6}
  x_5
                                                                                                                                                 +1.159248x_1 -1.231711x_{15} -0.413978x_{14} -0.686373x_{20} -0.436345x_{21} -10.390499x_{15}
                                      11.5381715828
x_{23}
                                   0.817492872056
                                                                                                                                                 -1.341966x_1 -0.516808x_{15} -1.261475x_{14} +2.146207x_{20} +2.056755x_{21} +24.850132x_{01}
x_{24}
                                                                                                                                                 -1.375791x_1 + 0.058386x_{15} + 0.046646x_{14} - 0.221128x_{20} - 0.155307x_{21} - 1.896129x_{6}
x_{11}
                                      1.26557926054
                                         7.5499588909
                                                                                                                                                x_{26}
                                                                                                                                              15.3671676456
x_{27}
                                   0.779028644739
                                                                                                                                                 +0.063487x_1 +0.036963x_{15} +0.087857x_{14} -0.087128x_{20} -0.095594x_{21} -0.948642x_{6}
x_{12}
                                                                                                                                              -17.845884x_1 - 0.078368x_{15} + 1.304554x_{14} - 3.335186x_{20} - 2.251832x_{21} - 30.674978x_{15} + 1.304554x_{15} + 1.30456x_{15} + 1.30456x_{15} + 1.30456x_{15} + 1.30456x_{15} + 1.30456x_{15} + 1.30456x_{15} + 1.3046x_{15} + 
                                      10.9228836091
x_{29}
                                      1.24481909734
                                                                                                                                                 +0.028616x_1 +0.008811x_{15} -0.034552x_{14} +0.037944x_{20} +0.008666x_{21} +0.539058x_{6}
x_{10}
                                         28.233255073
                                                                                                                                              -28.243818x_1 - 0.727102x_{15} + 1.829285x_{14} - 4.601647x_{20} - 4.308598x_{21} - 58.686394x_{10} - 58.68634x_{10} - 58.68634x_{10} - 58.6864x_{10} - 58.686x_{10} - 58.686x_{10} - 58.686x_{10} - 58.686x_{10} - 58.686x_{10} - 58.
x_{31}
                                       7.50756330831
```

#### $x_{14}$ enters and $x_5$ leaves

```
0.338763833703
                         +1.184761x_1 +0.131074x_{15} +1.425532x_5 +0.098097x_{20} +0.228096x_{21} +2.145653x_6
x_8
x_3
      0.990491801601
                         +1.263684x_1 +0.079299x_{15} +0.736868x_5 +0.063249x_{20} +0.098049x_{21} +1.240939x_6
                         +13.425961x_1 - 0.298173x_{15} - 6.288663x_5 + 0.172627x_{20} + 0.266329x_{21} + 7.753938x_6
      5.98436921569
x_{13}
      9.76240172573
                         -3.017134x_1 + 0.769783x_{15} + 17.736092x_5 + 0.773044x_{20} + 1.794254x_{21} + 18.095617x_6
x_{16}
                         -17.122518x_1 - 1.099845x_{15} - 6.634837x_5 - 2.532462x_{20} - 2.646057x_{21} - 24.689073x_6
      23.3065140567
x_{17}
                         -3.749861x_1 -0.309132x_{15} -14.019191x_5 -1.777476x_{20} -1.930031x_{21} -16.330531x_6
x_{18}
      36.0783639921
x_{19}
      5.09773285975
                         -15.215536x_1 - 2.707554x_{15} - 27.245893x_5 - 2.01038x_{20} - 3.045582x_{21} - 31.282028x_6
      1.90761742888
                         -1.675512x_1 -0.251727x_{15} -2.820987x_5 -0.273706x_{20} -0.37252x_{21} -3.694425x_6
x_4
                         +22.472448x_1 + 0.657501x_{15} - 4.995059x_5 + 1.283603x_{20} + 0.653167x_{21} + 17.263259x_6
      4.18643788624
x_{22}
      0.154505911139
                         +1.648239x_1 -1.15072x_{15} -20.218002x_5 + 0.603136x_{20} -0.72385x_{21} +0.917343x_6
x_{14}
                         +0.476913x_1 -0.755339x_{15} +8.3698x_5 -0.936058x_{20} -0.136688x_{21} -10.770258x_6
x_{23}
      11.4742095951
     0.622587522331
                         -3.421179x_1 +0.934797x_{15} +25.504504x_5 +1.385366x_{20} +2.969874x_{21} +23.692927x_6
x_{24}
x_{11}
      1.27278632569
                         -1.298908x_1 +0.00471x_{15} -0.943087x_5 -0.192994x_{20} -0.189072x_{21} -1.853339x_6
                         +4.505448x_1 +0.86373x_{15} +19.00397x_5 +1.130451x_{20} +1.338247x_{21} +14.452628x_6
      7.40473060575
x_{26}
x_{27}
      15.4026659782
                         -10.967549x_1 - 0.973541x_{15} - 4.645164x_5 - 1.339624x_{20} - 1.0512x_{21} - 11.670958x_6
                         +0.208297x_1 -0.064136x_{15} -1.776301x_5 -0.034138x_{20} -0.159189x_{21} -0.868047x_6
     0.792603130757
x_{12}
      11.1244449158
                         -15.695667x_1 - 1.579545x_{15} - 26.375475x_5 - 2.548363x_{20} - 3.196133x_{21} - 29.478255x_6
x_{29}
      1.23948054489
                         -0.028334x_1 + 0.048571x_{15} + 0.698581x_5 + 0.017105x_{20} + 0.033677x_{21} + 0.507362x_6
x_{10}
x_{31}
      28.5158903613
                         -25.228719x_1 - 2.832097x_{15} - 36.98448x_5 - 3.498339x_{20} - 5.632725x_{21} - 57.008313x_6
      7.56450562547
                         -7.577374x_1 -0.452425x_{15} -7.451235x_5 -1.269895x_{20} -0.74626x_{21} -12.54085x_6
```

 $x_2$  enters and  $x_{24}$  leaves

```
0.213430982382
                                                 +1.873477x_1 -0.057109x_{15} -3.70877x_5 -0.180791x_{20} -0.369768x_{21} -2.623961x_6
 x_8
           0.895691580863
                                                  +1.78462x_1 -0.06304x_{15} -3.146655x_5 -0.147698x_{20} -0.354168x_{21} -2.366738x_{6}
 x_3
             5.19204045954
                                                +17.779884x_1 - 1.487831x_{15} - 38.746673x_5 - 1.590442x_{20} - 3.513246x_{21} - 22.39859x_{6}
x_{13}
x_{16}
             9.19837203982
                                                 +0.082264x_1 -0.077091x_{15} -5.369571x_5 -0.48202x_{20} -0.896287x_{21} -3.368858x_6
             24.0187804251
                                                 -21.03649x_1 -0.030398x_{15} + 22.543391x_5 - 0.947545x_{20} + 0.751604x_{21} + 2.416634x_{6}
x_{17}
             34.8284418392
                                                 +3.118582x_1 -2.185852x_{15} -65.222667x_5 -4.55877x_{20} -7.892423x_{21} -63.89704x_6
x_{18}
                                                -26.112243x_1 + 0.269842x_{15} + 53.987841x_5 + 2.402112x_{20} + 6.413686x_{21} + 44.1817x_6
             7.08072021315
x_{19}
x_4
             1.99936635313
                                                 -2.179681x_1 -0.113968x_{15} +0.937538x_5 -0.069549x_{20} +0.065142x_{21} -0.202867x_6
                                                +26.819843x_1 - 0.530373x_{15} - 37.404404x_5 - 0.476823x_{20} - 3.120741x_{21} - 12.84406x_{6}
             3.39529709759
x_{22}
                                                  -0.838163x_1 -0.47134x_{15} -1.682148x_5 +1.609975x_{20} +1.434559x_{21} +18.136601x
            0.606982506878
x_{14}
                                                 -1.175263x_1 -0.303901x_{15} +20.68659x_5 -0.267029x_{20} +1.297542x_{21} +0.671674x_6
             11.7748733297
x_{23}
                                                 -0.282217x_1 + 0.077112x_{15} + 2.103895x_5 + 0.11428x_{20} + 0.244988x_{21} + 1.954456x_6
x_2
           0.0513579432279
                                                   -1.07344x_1 -0.056897x_{15} -2.623927x_5 -0.284295x_{20} -0.384797x_{21} -3.41479x_6
x_{11}
             1.23175551818
             7.11521557857
                                                 +6.096361x_1 +0.429031x_{15} +7.143891x_5 +0.486229x_{20} -0.042801x_{21} +3.434967x_{6}
x_{26}
                                                x_{27}
              15.761580904
            0.800155635553
                                                 +0.166795x_1 -0.052796x_{15} -1.46691x_5 -0.017332x_{20} -0.123162x_{21} -0.580632x_{6}
x_{12}
                                                 -20.103669x_1 -0.37511x_{15} +6.485686x_5 -0.763395x_{20} +0.630387x_{21} +1.048788x_6
             11.9266149352
x_{29}
                                                 +0.273764x_1 -0.033974x_{15} -1.553525x_5 -0.105226x_{20} -0.228569x_{21} -1.584778x_{6}
x_{10}
             1.18450464998
             29.2790899291
                                                -29.422574x_1 - 1.686176x_{15} - 5.719756x_5 - 1.800087x_{20} - 1.992102x_{21} - 27.964313x_{20} - 1.800087x_{20} - 1.80008
x_{31}
             7.56676306784
                                                  -7.589779x_1 -0.449035x_{15} -7.358758x_5 -1.264871x_{20} -0.735492x_{21} -12.454942x
```

 $x_{25}$  enters and  $x_2$  leaves

```
0.321150998724
                                                    +1.281545x_1 +0.104629x_{15} +0.704016x_5 +0.058905x_{20} +0.144079x_{21} +1.475387x_6
 x_8
             1.00453749955
x_3
                                                    +1.186501x_1 +0.100388x_{15} +1.312254x_5 +0.094503x_{20} +0.16505x_{21} +1.775456x_6
                                                   +11.272297x_1 +0.29029x_{15} +9.766657x_5 +1.044728x_{20} +2.135892x_{21} +22.668854x_6
             6.37629379463
x_{13}
             9.46647221353
                                                    -1.390973x_1 + 0.325454x_{15} + 5.613241x_5 + 0.114549x_{20} + 0.382607x_{21} + 6.833849x_6
x_{16}
                                                   -18.226785x_1 - 0.798117x_{15} + 1.597355x_5 - 2.085302x_{20} - 1.687459x_{21} - 17.041612x_6
             23.5074691426
x_{17}
             36.6229114707
                                                    -6.742202x_1 + 0.50849x_{15} + 8.288377x_5 - 0.565763x_{20} + 0.667575x_{21} + 4.392537x_6
x_{18}
                                                   -16.918034x_1 - 2.242367x_{15} - 14.55396x_5 - 1.320974x_{20} - 1.567668x_{21} - 19.491598x_6
x_{19}
             5.40755419914
             1.97455954001
                                                    -2.043365x_1 -0.151215x_{15} -0.078681x_5 -0.124749x_{20} -0.053192x_{21} -1.146904x_6
 x_4
             4.31250862361
                                                   +21.779677x_1 + 0.846793x_{15} + 0.169471x_5 + 1.564133x_{20} + 1.254551x_{21} + 22.060954x_6
x_{22}
            0.418045816161
                                                    +0.200062x_1 -0.755023x_{15} -9.422002x_5 +1.189558x_{20} +0.533291x_{21} +10.946506x_6
x_{14}
                                                    +0.429266x_1 -0.74232x_{15} +8.725006x_5 -0.916764x_{20} -0.095326x_{21} -10.440282x_6
x_{23}
            11.4828805005
           0.193021203431
                                                     -1.06067x_1 +0.289816x_{15} +7.907178x_5 +0.429506x_{20} +0.920752x_{21} +7.345533x_6
x_{25}
x_{11}
             1.29501522281
                                                    -1.421058x_1 +0.038086x_{15} -0.032472x_5 -0.143531x_{20} -0.083035x_{21} -1.007406x_6
                                                    +5.452241x_1 +0.60503x_{15} +11.945733x_5 +0.747058x_{20} +0.51635x_{21} +7.895735x_6
             7.23243278579
x_{26}
x_{27}
             15.6569307354
                                                   -12.364758x_1 -0.59177x_{15} +5.770876x_5 -0.77384x_{20} +0.161696x_{21} -1.994765x_6
             0.83267896252
                                                    -0.011923x_1 -0.003964x_{15} -0.134581x_5 +0.055038x_{20} +0.031981x_{21} +0.657062x_6
x_{12}
             11.3752435818
                                                    -17.07383x_1 -1.202978x_{15} -16.101425x_5 -1.990292x_{20} -1.999771x_{21} -19.933967x_6
x_{29}
             1.23110872377
                                                     +0.01767x_1 +0.036001x_{15} +0.355626x_5 -0.001524x_{20} -0.006258x_{21} +0.188767x_6
x_{10}
x_{31}
             29.5630191975
                                                   -30.982793x_1 - 1.259864x_{15} + 5.9115x_5 - 1.168295x_{20} - 0.6377x_{21} - 17.159221x_6
                                                       -8.7579x_1 \quad -0.12986x_{15} \quad +1.349451x_5 \quad -0.791855x_{20} \\ +0.278536x_{21} \quad -4.365274x_6 \quad -0.791855x_{20} \\ +0.278536x_{21} \quad -0.365274x_6 \quad -0.791855x_{20} \\ +0.278536x_{21} \quad -0.791855x_{20} \\ +0.278536x_{20} \quad -0.791855x_{20} \\ +0.278536x_{20} \quad -0.791855x_{20} \\ +0.278536x_{20} \quad -0.79185x_{20} \\ +0.278536x_{20} \quad -0.79186x_{20} \\ +0.27866x_{20} \quad -0.79186x_{20} \\ +0.2786x_{20} \quad -0.79186x_{20} \\ +0.27866x_{20} \quad -0.79186x_{20} \\ +0.2786x_{20} \quad -0.79186x_{20} \\ +0.2786x_{20} \quad -0.79186x_{20} \\ +0.2786x_{20} \quad -0.7918x
             7.77933816102
```

 $x_5$  enters and  $x_{14}$  leaves

```
+1.296494x_1 +0.048214x_{15} -0.07472x_{14} +0.147789x_{20} +0.183927x_{21} +2.293315x_{6}
                              0.352387578194
  x_8
                                1.06276105115
                                                                                                                           +1.214365x_1 -0.004768x_{15} -0.139276x_{14} +0.26018x_{20} +0.239324x_{21} +3.300037x_{6}
  x_3
                                                                                                                        +11.479678x_1 - 0.492351x_{15} - 1.03658x_{14} + 2.2778x_{20} + 2.688691x_{21} + 34.015782x_{10} + 2.688691x_{21} + 34.015782x_{21} + 34.015782x_{21} + 34.01578x_{21} + 
                                6.80963166229
x_{13}
x_{16}
                                9.71552671789
                                                                                                                           -1.271784x_1 -0.124358x_{15} -0.595759x_{14} +0.823239x_{20} +0.70032x_{21} +13.355327x_{02}
                                                                                                                        23.5783423599
x_{17}
                                   36.990659344
                                                                                                                              -6.56621x_1 -0.155691x_{15} -0.879683x_{14} +0.480672x_{20} +1.136702x_{21} +14.021994x_{15}
x_{18}
                                                                                                                        -17.227065x_{1} - 1.076099x_{15} + 1.544678x_{14} - 3.158458x_{20} - 2.391432x_{21} - 36.400426x_{20} + 3.158458x_{20} + 3.15846x_{20} + 3.15846
                                 4.76180800837
x_{19}
                                                                                                                           -2.045036x_1 -0.14491x_{15} +0.008351x_{14} -0.134682x_{20} -0.057645x_{21} -1.238317x_6
 x_4
                                 1.97106852108
                                4.32002788416
                                                                                                                        +21.783276x_1 + 0.833213x_{15} - 0.017987x_{14} + 1.585529x_{20} + 1.264143x_{21} + 22.257845x_{01} + 22.257845x_{02} + 1.264143x_{21} + 22.257845x_{02} + 1.264143x_{22} + 22.257845x_{03} + 1.264143x_{23} + 22.257845x_{03} + 1.264143x_{03} + 1.26414x_{03} 
x_{22}
                                                                                                                           +0.021234x_1 -0.080134x_{15} -0.106135x_{14} +0.126253x_{20} +0.056601x_{21} +1.161803x_{6}
                           0.0443691071204
  x_5
                                                                                                                           +0.614529x_1 -1.441489x_{15} -0.926025x_{14} +0.184796x_{20} +0.398515x_{21} -0.303547x_6
                                   11.870001247
x_{23}
                              0.543855613123
                                                                                                                           -0.892773x_1 -0.343818x_{15} -0.839225x_{14} +1.427813x_{20} +1.368303x_{21} +16.532112x_{0}
x_{25}
                                                                                                                           -1.421747x_1 + 0.040688x_{15} + 0.003446x_{14} - 0.147631x_{20} - 0.084873x_{21} - 1.045132x_{6}
x_{11}
                                 1.29357444873
                                   7.7624542786
                                                                                                                          +5.705891x_1 -0.35223x_{15} -1.267855x_{14} +2.255245x_{20} +1.192486x_{21} +21.774318x_{0}
x_{26}
                                 15.9129793403
                                                                                                                        -12.242222x_1 - 1.054213x_{15} - 0.612489x_{14} - 0.045249x_{20} + 0.488331x_{21} + 4.709853x_{6}
x_{27}
                              0.826707719032
                                                                                                                           -0.014781x_1 + 0.006821x_{15} + 0.014284x_{14} + 0.038046x_{20} + 0.024363x_{21} + 0.500706x_{6}
x_{12}
                                10.6608377467
                                                                                                                            -17.41572x_1 + 0.087294x_{15} + 1.708918x_{14} - 4.023149x_{20} - 2.911121x_{21} - 38.640643x_{15} + 1.708918x_{15} + 1.708818x_{15} +
x_{29}
                                                                                                                           +0.025221x_1 +0.007503x_{15} -0.037744x_{14} +0.043375x_{20} +0.013871x_{21} +0.601935x_{6}
x_{10}
                                   1.2468875481
                                29.8253071925
                                                                                                                        -30.857271x_1 - 1.733577x_{15} - 0.627414x_{14} - 0.421949x_{20} - 0.303105x_{21} - 10.291225x_{0}
x_{31}
                                   7.8392120973
                                                                                                                            -8.729246x_1 -0.237997x_{15} -0.143223x_{14} -0.621482x_{20} +0.354916x_{21} -2.797479x_6
```

#### $x_{21}$ enters and $x_{19}$ leaves

```
0.718621549457
                         -0.028451x_1 -0.03455x_{15} +0.044082x_{14} -0.09513x_{20} -0.076911x_{19} -0.506267x_6
x_8
x_3
      1.53930268279
                         -0.509647x_1 -0.112459x_{15} + 0.015309x_{14} - 0.055906x_{20} - 0.100076x_{19} -0.342764x_6
                         -7.888741x_1 -1.702212x_{15} +0.700104x_{14} -1.27326x_{20} -1.124302x_{19} -6.909279x_6
      12.1633405595
x_{13}
      11.1100015977
                         -6.316655x_1 - 0.439489x_{15} - 0.143407x_{14} - 0.101702x_{20} - 0.292846x_{19} + 2.69562x_{6}
x_{16}
                         -6.688279x_1 -0.207478x_{15} -1.201102x_{14} +0.225653x_{20} +0.667821x_{19} +9.123152x_{6}
      20.3983090445
x_{17}
                         -14.754628x_1 - 0.667185x_{15} - 0.145462x_{14} - 1.020616x_{20} - 0.475323x_{19} - 3.279959x_6
x_{18}
      39.2540553927
      1.99119539088
                         -7.203662x_1 -0.449981x_{15} + 0.645922x_{14} - 1.320739x_{20} -0.41816x_{19} -15.221185x_{6}
x_{21}
      1.85628562048
                         -1.629779x_1 -0.118971x_{15} -0.028884x_{14} -0.058548x_{20} +0.024105x_{19} -0.360888x_{6}
x_4
                         +12.676816x_1 + 0.264372x_{15} + 0.798551x_{14} - 0.084075x_{20} - 0.528614x_{19} + 3.016088x_{6}
      6.8371838938
x_{22}
      0.157072029728
                         -0.386498x_1 -0.105603x_{15} -0.069575x_{14} +0.051499x_{20} -0.023668x_{19} +0.300274x_{6}
x_5
                         -2.256241x_1 -1.620814x_{15} -0.668615x_{14} -0.341539x_{20} -0.166643x_{19} -6.369423x_{6}
      12.6635232424
x_{23}
      3.26841436283
                         -10.749565x_1 - 0.959529x_{15} + 0.044592x_{14} - 0.379359x_{20} - 0.572169x_{19} - 4.295082x_{6}
x_{25}
x_{11}
                         -0.810351x_1 + 0.078879x_{15} - 0.051375x_{14} - 0.035536x_{20} + 0.03549x_{19} + 0.246735x_{6}
      1.12457569731
      10.1369263507
                         -2.884373x_1 -0.888826x_{15} -0.497602x_{14} +0.680282x_{20} -0.498649x_{19} +3.623272x_6
x_{26}
x_{27}
      16.8853424699
                         -15.759996x_1 - 1.273953x_{15} - 0.297065x_{14} - 0.690207x_{20} - 0.2042x_{19} - 2.723129x_6
      0.875220096828
                         -0.190287x_1 -0.004142x_{15} +0.030021x_{14} +0.005869x_{20} -0.010188x_{19} +0.129865x_{6}
x_{12}
      4.86422610284
                         +3.555014x_1 +1.397244x_{15} -0.171439x_{14} -0.178316x_{20} +1.217313x_{19} +5.670075x_{6}
x_{29}
      1.27450642603
                         -0.074698x_1 + 0.001262x_{15} - 0.028785x_{14} + 0.025055x_{20} - 0.0058x_{19} + 0.390809x_6
x_{10}
x_{31}
      29.2217656045
                         -28.673804x_1 - 1.597185x_{15} - 0.823197x_{14} - 0.021626x_{20} + 0.126746x_{19} - 5.677605x_6
      8.54591959101
```

 $x_2$  enters and  $x_{29}$  leaves

```
0.760922037547
                       +0.002464x_1 -0.022399x_{15} +0.042591x_{14} -0.096681x_{20} -0.066325x_{19} -0.456959x_{6}
x_8
     1.72578634129
                       -0.373356x_1 -0.058892x_{15} + 0.008737x_{14} - 0.062742x_{20} - 0.053407x_{19} -0.125386x_6
x_3
                       14.0535022907
x_{13}
x_{16}
      11.943492441
                                     -0.20007x_{15} -0.172783x_{14} -0.132256x_{20} -0.084258x_{19} +3.667194x_{6}
      19.1290911213
                       -7.615886x_1 -0.572059x_{15} -1.156369x_{14} +0.272181x_{20} +0.350188x_{19} +7.643665x_{6}
x_{17}
      36.001118653
                      -17.132033x_1 - 1.601588x_{15} - 0.030813x_{14} - 0.901367x_{20} - 1.289397x_{19} - 7.071805x_6
x_{18}
      3.92486817539
                       -5.790439x_1 + 0.105464x_{15} + 0.57777x_{14} - 1.391625x_{20} + 0.065758x_{19} - 12.967163x_{6}
x_{21}
x_4
      1.82258252668
                       -1.654411x_1 -0.128652x_{15} -0.027696x_{14} -0.057313x_{20} +0.01567x_{19} -0.400175x_{6}
                      +12.227538x_1 +0.08779x_{15} +0.820217x_{14} -0.06154x_{20} -0.682456x_{19} +2.299511x_6
     6.22244885853
x_{22}
                       -0.257447x_1 -0.054882x_{15} -0.075798x_{14} +0.045025x_{20} +0.020522x_{19} +0.506105x_6
     0.333649640249
x_5
                       -0.550574x_1 -0.950427x_{15} -0.75087x_{14} -0.427093x_{20} +0.417414x_{19} -3.648966x_6
     14.9973406614
x_{23}
      5.7989000967
                       -8.900163x_1 -0.23265x_{15} -0.044595x_{14} -0.472124x_{20} +0.061106x_{19} -1.345374x_6
x_{25}
                       -1.086664x_1 \ -0.029721x_{15} \ -0.03805x_{14} \ -0.021676x_{20} \ -0.059125x_{19} \ \ -0.19397x_{6}
x_{11}
     0.746504528703
     12.8523183084
                       -0.899832x_1 - 0.108833x_{15} - 0.593306x_{14} + 0.58074x_{20} + 0.1809x_{19} + 6.788519x_{6}
x_{26}
                      18.567354887
x_{27}
     0.804418120762
                       -0.242033x_1 -0.02448x_{15} +0.032516x_{14} +0.008464x_{20} -0.027907x_{19} +0.047334x_6
x_{12}
                       +0.125656x_1 +0.049387x_{15} -0.00606x_{14} -0.006303x_{20} +0.043027x_{19} +0.200415x_{6}
     0.171931090657
x_2
     1.16918426143
                       x_{10}
      28.0819908295
                      -29.506807x_1 - 1.924584x_{15} - 0.783025x_{14} + 0.020157x_{20} - 0.158492x_{19} - 7.006205x_{6}
x_{31}
     8.61116263583
                      -11.238259x_1 - 0.378962x_{15} + 0.083725x_{14} - 1.092626x_{20} - 0.132084x_{19} - 8.123672x_{6}
```

#### $x_{14}$ enters and $x_5$ leaves

```
-0.142195x_1 -0.053237x_{15} -0.561897x_5 -0.071381x_{20} -0.054793x_{19} -0.17258x_6
     0.948398776724
x_8
      1.76424364262
x_3
                         -0.40303x_1 -0.065218x_{15} -0.115263x_5 -0.057552x_{20} -0.051041x_{19} -0.067051x_6
      16.8419801584
                         -8.658931x_1 - 1.617937x_{15} - 8.357503x_5 - 0.966251x_{20} - 0.479761x_{19} - 0.476205x_6
x_{13}
      11.1829363732
                         -5.120648x_1 -0.074967x_{15} +2.279505x_5 -0.234892x_{20} -0.131037x_{19} +2.513525x_6
x_{16}
                         -3.688319x_1 + 0.265204x_{15} + 15.25584x_5 -0.41472x_{20} +0.037109x_{19} -0.077388x_6
      14.0389857169
x_{17}
                         -17.027378x_1 - 1.579278x_{15} + 0.406511x_5 - 0.91967x_{20} - 1.29774x_{19} - 7.277542x_6
x_{18}
       35.865486504
                         -7.752814x_1 -0.312867x_{15} -7.622448x_5 -1.048421x_{20} +0.222186x_{19} -9.109406x_6
      6.46809520428
x_{21}
      1.70067183238
                         -1.560344x_1 -0.108599x_{15} +0.365385x_5 -0.073764x_{20} +0.008172x_{19} -0.585098x_6
x_4
      9.83288209727
                         +9.441699x_1 -0.506085x_{15} -10.821031x_5 +0.425682x_{20} -0.460388x_{19} +7.776087x_6
x_{22}
      4.40180099956
                         -3.396465x_1 -0.724045x_{15} -13.192884x_5 +0.594015x_{20} +0.270743x_{19} +6.676981x_6
x_{14}
                         +1.999731x_1 -0.406763x_{15} +9.906143x_5 -0.873122x_{20} +0.214121x_{19} -8.662512x_6
x_{23}
      11.6921596343
      5.60260274918
                         -8.748698x_1 -0.200361x_{15} +0.588334x_5 -0.498614x_{20} +0.049032x_{19} -1.643133x_6
x_{25}
                         -0.957429x_1 -0.002172x_{15} +0.501986x_5 -0.044278x_{20} -0.069427x_{19} -0.448028x_6
x_{11}
      0.579016946102
                         +1.115313x_1 +0.320748x_{15} +7.827421x_5 +0.228307x_{20} +0.020266x_{19} +2.827024x_6
      10.2407020425
x_{26}
x_{27}
      16.9987824003
                         -13.320376x_1 - 0.532785x_{15} + 4.701256x_5 - 0.963544x_{20} + 0.120258x_{19} - 3.141789x_6
     0.947547074304
                         -0.352472x_1 -0.048023x_{15} -0.42898x_5 +0.027779x_{20} -0.019103x_{19} +0.264442x_6
x_{12}
     0.145257490165
                         +0.146237x_1 +0.053775x_{15} +0.079945x_5 -0.009902x_{20} +0.041387x_{19} +0.159954x_6
x_2
      1.05881828733
                         -0.066513x_1 -0.010838x_{15} +0.330784x_5 +0.014023x_{20} -0.038946x_{19} +0.100627x_6
x_{10}
x_{31}
      24.6352687803
                         -26.847289x_1 - 1.357638x_{15} + 10.330363x_5 - 0.444973x_{20} - 0.370491x_{19} - 12.234451x_6
      8.97970453031
                         -11.522629x_1 - 0.439583x_{15} - 1.104578x_5 - 1.042892x_{20} - 0.109416x_{19} - 7.56464x_6
```

 $x_{28}$  enters and  $x_2$  leaves

```
0.934508961581
                                                 -0.156178x_1 -0.058379x_{15} -0.569542x_5 -0.070434x_{20} -0.058751x_{19} -0.187876x_6
 x_8
                                                 -0.356385x_1 \ -0.048066x_{15} \ -0.089763x_5 \ -0.060711x_{20} \ -0.03784x_{19} \ -0.016031x_6
             1.8105760677
 x_3
                                                  -6.73602x_{1} \quad -0.910842x_{15} \quad -7.306286x_{5} \quad -1.096459x_{20} \\ +0.064442x_{19} \\ +1.627073x_{6} \\ +0.064442x_{19} \\ +0.06442x_{19} \\ +0.064442x_{19} \\ +0.06442x_{19} \\ +0.0644x_{19} \\ +0.0644x_{19} \\ +0.064x_{19} \\ +0.064x_{19
            18.7520085493
x_{13}
            10.4666109412
                                                 -5.841805x_1 -0.340152x_{15} +1.885263x_5 -0.186059x_{20} -0.335132x_{19} +1.724725x_6
x_{16}
            12.8829776471
                                                 -4.852124x_1 -0.162752x_{15} + 14.619611x_5 - 0.335914x_{20} - 0.292259x_{19} - 1.350357x_6
x_{17}
            37.1142825429
                                                -15.770159x_1 - 1.116972x_{15} + 1.093807x_5 - 1.004802x_{20} - 0.941935x_{19} - 5.902397x_6
x_{18}
                                                 -7.552003x_1 -0.239025x_{15} -7.512669x_5 -1.062019x_{20} +0.279017x_{19} -8.88976x_6
            6.66756071077
x_{21}
x_4
            1.73474562394
                                                  -1.52604x_1 -0.095985x_{15} +0.384138x_5 -0.076087x_{20} +0.01788x_{19} -0.547577x_6
                                                +10.374621x_1 - 0.163029x_{15} - 10.311021x_5 + 0.36251x_{20} - 0.196361x_{19} + 8.796517x_6
             10.759554712
x_{22}
            4.81990266677
                                                 x_{14}
                                                 +2.272034x_1 -0.306631x_{15} +10.055006x_5 -0.891561x_{20} +0.291186x_{19} -8.364667x_6
            11.9626387796
x_{23}
                                                  -8.31144x_1 -0.039572x_{15} +0.827374x_5 -0.528222x_{20} +0.172781x_{19} -1.16486x_6
            6.03693133782
x_{25}
                                                                              +0.0069x_{15} +0.515473x_5 -0.045949x_{20} -0.062445x_{19} -0.421044x_6
x_{11}
           0.603521067745
                                                  -0.93276x_1
             9.9536677832
                                                 +0.826342x_1 +0.214487x_{15} +7.669447x_5 +0.247874x_{20} -0.061515x_{19} +2.510948x_6
x_{26}
                                                -12.660205x_1 - 0.290026x_{15} + 5.062158x_5 - 1.008247x_{20} + 0.307093x_{19} - 2.419695x_6
            17.6545301226
x_{27}
           0.908911420525
                                                 -0.391368x_1 -0.062326x_{15} -0.450244x_5 +0.030413x_{20} -0.030111x_{19} +0.221898x_6
x_{12}
                                                 +1.919582x_1 +0.705871x_{15} +1.049397x_5 -0.129983x_{20} +0.543261x_{19} +2.099637x_6
            1.90672167964
x_{28}
           0.978753639232
                                                 -0.147118x_1 -0.040478x_{15} +0.286719x_5 +0.019481x_{20} -0.061758x_{19} +0.012462x_6
x_{10}
x_{31}
            26.6864250578
                                                -24.782298x_1 - 0.598297x_{15} + 11.459252x_5 - 0.584802x_{20} + 0.213922x_{19} - 9.975766x_6
            9.33226964666
                                                -11.167686x_1 - 0.309062x_{15} - 0.910537x_5 - 1.066926x_{20} - 0.008964x_{19} - 7.176404x_6
```

Final Dictionary

**Solution:** : 9.33226964666 #Pivots: 18