```
1.0
                     +2.000000x_2 +3.000000x_3 +2.000000x_4 -2.000000x_5 +3.000000x_6 -1.000000x_7
x_8
     9.0
          +1.000000x_1 +2.000000x_2 +1.000000x_3 +3.000000x_4 +2.000000x_5
                                                                                -3.000000x_7
x_9
     10.0
          x_{10}
x_{11}
     1.0
                      +3.000000x_2 +1.000000x_3 +2.000000x_4 +3.000000x_5 -3.000000x_6 +2.000000x_7
                      -1.000000x_2 + 2.000000x_3
     4.0
                                                        -1.000000x_5 -3.000000x_6
x_{12}
     9.0
          +2.000000x_1 -2.000000x_2
                                             +2.000000x_4 +3.000000x_5 -2.000000x_6 -2.000000x_7
x_{13}
                                 -2.000000x_3
     7.0
          -1.000000x_1
                                                        -2.000000x_5 + 2.000000x_6 - 3.000000x_7
x_{14}
                                 -1.000000x_3 -3.000000x_4 -1.000000x_5 +2.000000x_6 +2.000000x_7
x_{15}
     7.0
          +1.000000x_1
          +3.000000x_1 + 3.000000x_2 - 3.000000x_3 + 1.000000x_4 - 1.000000x_5 - 1.000000x_6 + 1.000000x_7
     2.0
x_{16}
x_{1\underline{7}}
     1.0
          \overline{-1.000000}x_3 + 1.000000x_4
     0.0
 z
          -2.000000x_1
                                                                    +1.000000x_6 -1.000000x_7
```

No initialization required –; Proceed to Optimize.

```
x_8
    1.0
                +2.000000x_2 +3.000000x_3 +2.0000000x_4 -2.0000000x_5 +3.0000000x_6 -1.0000000x_7
   9.0
       +1.000000x_1 +2.000000x_2 +1.000000x_3 +3.000000x_4 +2.000000x_5
                                                            -3.000000x_7
x_9
   10.0
       x_{10}
                1.0
x_{11}
                -1.000000x_2 + 2.000000x_3
x_{12}
    4.0
                                           -1.000000x_5 -3.000000x_6
       +2.000000x_1 -2.000000x_2
                                  +2.000000x_4 +3.000000x_5 -2.000000x_6 -2.000000x_7
    9.0
x_{13}
                         -2.000000x_3
x_{14}
    7.0
       -1.000000x_1
                                           -2.000000x_5 + 2.000000x_6 - 3.000000x_7
   7.0
       +1.000000x_1
                         -1.000000x_3 -3.000000x_4 -1.000000x_5 +2.000000x_6 +2.000000x_7
x_{15}
   2.0
       x_{16}
       1.0
x_{17}
       -2.0000000x_1
   0.0
                         -1.000000x_3 + 1.000000x_4
                                                   +1.000000x_6 -1.000000x_7
z
```

 x_4 enters and x_{17} leaves

```
1.6666666667
                -0.666667x_1
                                  +3.666667x_3 -0.666667x_{17} -2.666667x_5 +3.666667x_6 -3.000000x_7
x_8
       10.0
                         -1.000000x_2 + 2.000000x_3 - 1.000000x_{17} + 1.000000x_5 + 1.000000x_6 - 6.000000x_7
x_9
    9.6666666667
                x_{10}
x_{11}
    1.66666666667
                -0.666667x_1 + 1.000000x_2 + 1.666667x_3 - 0.666667x_{17} + 2.333333x_5 - 2.333333x_6
                         -1.000000x_2 + 2.000000x_3
                                                     -1.000000x_5 -3.000000x_6
x_{12}
        4.0
    9.6666666667
                x_{13}
        7.0
                -1.000000x_1
                                  -2.000000x_3
                                                     -2.000000x_5 + 2.000000x_6 - 3.000000x_7
x_{14}
                +2.000000x_1 +3.0000000x_2 -2.0000000x_3 +1.0000000x_{17}
                                                              +1.000000x_6 +5.000000x_7
        6.0
x_{15}
    2.333333333333
                +2.666667x_1 +2.0000000x_2 -2.666667x_3 -0.333333x_{17} -1.333333x_5 -0.666667x_6
x_{16}
   0.3333333333333
                x_4
               0.333333333333
```

 x_6 enters and x_{11} leaves

```
4.28571428571
x_8
                 10.7142857143
x_9
    11.5714285714
                 +1.571429x_1 + 0.142857x_2 - 0.428571x_3 - 0.428571x_{17} + 2.000000x_5 - 1.142857x_{11} - 1.000000x_7
x_{10}
x_6
    0.714285714286
                 -0.285714x_1 + 0.428571x_2 + 0.714286x_3 - 0.285714x_{17} + 1.000000x_5 - 0.428571x_{11}
                 +0.857143x_1 - 2.285714x_2 - 0.142857x_3 + 0.857143x_{17} - 4.000000x_5 + 1.285714x_{11}
    1.85714285714
x_{12}
    8.71428571429
                 x_{13}
                 -1.571429x_1 + 0.857143x_2 - 0.571429x_3 - 0.571429x_{17}
                                                                  -0.857143x_{11} - 3.0000000x_7
    8.42857142857
x_{14}
x_{15}
    6.71428571429
                 +2.857143x_1+1.714286x_2-3.142857x_3-0.142857x_{17}-2.000000x_5+0.285714x_{11}
    1.85714285714
x_{16}
x_4
    0.571428571429
                 -0.428571x_1 - 0.857143x_2 + 0.571429x_3 - 0.428571x_{17}
                                                                  -0.142857x_{11} - 1.000000x_7
    1.28571428571
                 -2.714286x_1 - 0.428571x_2 + 0.285714x_3 - 0.714286x_{17} + 1.000000x_5 - 0.571429x_{11} - 2.000000x_7
```

 x_3 enters and x_{16} leaves

```
+4.000000x_1 +5.000000x_2 -2.000000x_{16} -2.000000x_{17} -3.000000x_5 -1.000000x_{11} -3.000000x_7
       8.0
x_8
   12.3181818182
             x_9
             x_{10}
   11.3181818182
   1.13636363636
             x_6
             +0.727273x_1 - 2.363636x_2 + 0.045455x_{16} + 0.863636x_{17} - 3.909091x_5 + 1.272727x_{11}
x_{12}
   1.77272727273
             +1.454545x_1 - 4.727273x_2 + 0.090909x_{16} - 0.272727x_{17} + 1.181818x_5 + 0.545455x_{11} - 4.000000x_7
   8.54545454545
x_{13}
   8.09090909091
             -2.090909x_1 + 0.545455x_2 + 0.181818x_{16} - 0.545455x_{17} + 0.363636x_5 - 0.909091x_{11} - 3.000000x_7
x_{14}
             x_{15}
   5.95454545455
x_3
   0.590909090909
             +0.909091x_1 + 0.545455x_2 - 0.318182x_{16} - 0.045455x_{17} - 0.636364x_5 + 0.090909x_{11}
   0.909090909091
             x_4
   1.45454545455
```

 x_5 enters and x_{12} leaves

```
6.63953488372
                                                     x_8
                                                     x_9
              12.4418604651
              12.3488372093
                                                     x_{10}
                                                     +0.465116x_1 +0.488372x_2 -0.220930x_{16} -0.197674x_{17} -0.139535x_{12} -0.186047x_{11}
              1.38372093023
x_6
            0.453488372093
                                                     +0.186047x_1 - 0.604651x_2 + 0.011628x_{16} + 0.220930x_{17} - 0.255814x_{12} + 0.325581x_{11}
x_5
                                                     +1.674419x_1 - 5.441860x_2 + 0.104651x_{16} - 0.011628x_{17} - 0.302326x_{12} + 0.930233x_{11} - 4.000000x_7
x_{13}
              9.08139534884
              8.25581395349
                                                     x_{14}
              6.77906976744
                                                     +0.883721x_1+1.627907x_2+0.430233x_{16}+1.174419x_{17}-0.465116x_{12}+0.046512x_{11}+5.000000x_{7}
x_{15}
            0.302325581395
                                                     +0.790698x_1 +0.930233x_2 -0.325581x_{16} -0.186047x_{17} +0.162791x_{12} -0.116279x_{11} +0.162791x_{12} +0.162791x_{13} +0.162791x_{14} +0.162791x_{15} +0.162778x_{15} +0.16278x_{15} +0.16278x_{15} +0.16278x_{15} +0.16278x_{15} +0.162
 x_3
                                                     +0.023256x_1 -0.325581x_2 -0.186047x_{16} -0.534884x_{17} +0.093023x_{12} -0.209302x_{11} -1.000000x_{7}
            0.744186046512
 x_4
                                                     1.82558139535
```

 x_{-1} enters and Final Dictionary Solution: 1.82558139535 Num Pivots: 4