```
6.0
         x_8
    5.0
         -3.000000x_1
                             +1.000000x_3 -1.000000x_4 +1.000000x_5 -2.000000x_6 +1.000000x_7
x_9
                                                  -2.000000x_5
    9.0
         -1.000000x_1 -1.000000x_2
                                                                      -2.000000x_7
x_{10}
x_{11}
    10.0
         +3.000000x_1 - 1.000000x_2 - 2.000000x_3 + 3.000000x_4 - 1.000000x_5 - 1.000000x_6 + 3.000000x_7
    14.0
         -1.000000x_1
                             +1.000000x_3 -1.000000x_4
                                                            +2.000000x_6
x_{12}
    2.0
         +1.000000x_1
                              -2.000000x_3 + 3.0000000x_4 + 3.0000000x_5
                                                                       -1.000000x_7
x_{13}
                   -1.000000x_2 +3.000000x_3
                                                  -2.000000x_5 -3.000000x_6 +3.000000x_7
    1.0
x_{14}
x_{15}
    4.0
         +1.000000x_1 + 1.000000x_2 - 3.000000x_3 + 3.000000x_4 + 2.000000x_5 + 2.000000x_6 + 2.000000x_7
                   +2.000000x_2 +3.000000x_3 +3.000000x_4 -2.000000x_5 -1.000000x_6 +3.000000x_7
    14.0
x_{16}
x_{1\underline{7}}
    5.0
         0.0
         z
```

No initialization required –; Proceed to Optimize.

```
x_8
   6.0
      +2.000000x_1 - 3.000000x_2 + 1.000000x_3 + 3.000000x_4 + 2.000000x_5 - 2.000000x_6 + 3.000000x_7
   5.0
      -3.000000x_1
                     +1.000000x_3 -1.000000x_4 +1.000000x_5 -2.000000x_6 +1.000000x_7
x_9
   9.0
      -1.000000x_1 -1.000000x_2
                                    -2.000000x_5
                                                   -2.000000x_7
x_{10}
      10.0
x_{11}
x_{12}
   14.0
                     +1.000000x_3 -1.000000x_4
                                            +2.000000x_6
      -1.000000x_1
   2.0
                     -2.000000x_3 + 3.000000x_4 + 3.000000x_5
      +1.000000x_1
                                                   -1.000000x_7
x_{13}
x_{14}
   1.0
              -1.000000x_2 +3.000000x_3
                                    -2.000000x_5 -3.000000x_6 +3.000000x_7
   4.0
      x_{15}
   14.0
              x_{16}
      5.0
x_{17}
   0.0
      z
```

 x_1 enters and x_9 leaves

```
9.33333333333
                                                                                                                                            -0.666667x_9 -3.000000x_2 +1.666667x_3 +2.333333x_4 +2.666667x_5 -3.333333x_6 +3.666667x_7 +2.333333x_6 +3.666667x_7 +2.33333x_6 +3.666667x_7 +2.3333x_6 +3.66667x_7 +2.3333x_6 +3.666667x_7 +2.3333x_6 +3.666667x_7 +2.3333x_6 +3.666667x_7 +2.3333x_6 +3.666667x_7 +2.3333x_6 +3.666667x_7 +2.3333x_6 +2.666667x_7 +2.333x_7 +2.33x_7 +2.
  x_8
                                   1.66666666667
                                                                                                                                            -0.333333x_9
                                                                                                                                                                                                                                                                                                                 +0.333333x_3 - 0.333333x_4 + 0.3333333x_5 - 0.666667x_6 + 0.3333333x_7
  x_1
                                  7.33333333333
                                                                                                                                           x_{10}
                                                                    15.0
                                                                                                                                             -1.000000x_9 -1.000000x_2 -1.000000x_3 +2.000000x_4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -3.000000x_6 + 4.000000x_7
x_{11}
                                   12.3333333333
                                                                                                                                            +0.333333x_9
                                                                                                                                                                                                                                                                                                                  +0.666667x_3 -0.666667x_4 -0.333333x_5 +2.666667x_6 -0.333333x_7
 x_{12}
                                   3.6666666667
                                                                                                                                            -0.333333x_9
                                                                                                                                                                                                                                                                                                                  -1.666667x_3 + 2.666667x_4 + 3.333333x_5 - 0.666667x_6 - 0.666667x_7
x_{13}
                                                                        1.0
                                                                                                                                                                                                                                  -1.000000x_2 + 3.000000x_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -2.000000x_5 -3.000000x_6 +3.000000x_7
  x_{14}
                                  5.6666666667
                                                                                                                                             -0.333333x_9 + 1.000000x_2 - 2.666667x_3 + 2.666667x_4 + 2.333333x_5 + 1.333333x_6 + 2.333333x_7 + 2.33333x_7 + 2.3333x_7 + 2.3333x_7 + 2.3333x_7 + 2.3333x_7 + 2.333x_7 + 2.33x_7 
 x_{15}
                                                                                                                                                                                                                               +2.000000x_2 +3.000000x_3 +3.000000x_4 -2.000000x_5 -1.000000x_6 +3.000000x_7
x_{16}
                                                                  14.0
x_{17}
                                   8.33333333333
                                                                                                                                             -0.666667x_9 - 2.000000x_2 + 2.666667x_3 - 2.666667x_4 - 1.333333x_5 - 0.333333x_6 - 0.333333x_7 - 0.33333x_7 - 0.3333x_7 - 0.3333x_7 - 0.3333x_7 - 0.3333x_7 - 0.333x_7 - 0.33x_7 - 0.3x_7 -
                                                                                                                                           3.33333333333
```

 x_2 enters and x_{14} leaves

```
-0.666667x_9 + 3.000000x_{14} - 7.3333333x_3 + 2.333333x_4 + 8.666667x_5 + 5.666667x_6 - 5.3333333x_7 + 2.3333333x_7 + 2.333333x_7 + 2.33333x_7 + 2.3333x_7 + 2.3333x_7 + 2.3333x_7 + 2.3333x_7 + 2.333x_7 + 2.333x_7 + 2.333x_7 + 2.33x_7 + 2.
                                   6.33333333333
  x_8
                                   1.66666666667
                                                                                                                                            -0.333333x_9
                                                                                                                                                                                                                                                                                                                       +0.333333x_3 -0.333333x_4 +0.3333333x_5 -0.666667x_6 +0.333333x_7
  x_1
                                                                                                                                           +0.333333x_9 + 1.000000x_{14} - 3.333333x_3 + 0.333333x_4 - 0.333333x_5 + 3.666667x_6 - 5.333333x_7 + 0.333333x_7 + 0.33333x_7 + 0.3333x_7 + 0.3333x_7 + 0.3333x_7 + 0.333x_7 + 0.33x_7 + 0.3
                                  6.33333333333
 x_{10}
                                                                   14.0
                                                                                                                                            -1.000000x_9 + 1.000000x_{14} - 4.000000x_3 + 2.000000x_4 + 2.000000x_5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +1.000000x_7
 x_{11}
                                   12.3333333333
                                                                                                                                                                                                                                                                                                                     +0.666667x_3 -0.666667x_4 -0.333333x_5 +2.666667x_6 -0.333333x_7
                                                                                                                                          +0.333333x_9
 x_{12}
                                  3.6666666667
                                                                                                                                            -0.333333x_9
                                                                                                                                                                                                                                                                                                                       -1.666667x_3 + 2.666667x_4 + 3.333333x_5 - 0.666667x_6 - 0.666667x_7
x_{13}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -2.000000x_5 -3.000000x_6 +3.000000x_7
                                                                                                                                                                                                                               -1.000000x_{14} + 3.000000x_3
  x_2
                                                                       1.0
x_{15}
                                   6.6666666667
                                                                                                                                            -2.000000x_{14} + 9.000000x_3 + 3.000000x_4 - 6.000000x_5 - 7.000000x_6 + 9.000000x_7
                                                                   16.0
 x_{16}
                                   6.33333333333
                                                                                                                                            -0.666667x_9 + 2.000000x_{14} - 3.333333x_3 - 2.666667x_4 + 2.666667x_5 + 5.666667x_6 - 6.333333x_7 - 2.666667x_6 - 6.333333x_7 - 2.666667x_6 - 6.3333333x_7 - 2.666667x_6 - 6.333333x_7 - 2.666667x_6 - 6.3333333x_7 - 2.666667x_6 - 6.333333x_7 - 2.666667x_6 - 6.33333x_7 - 2.666667x_6 - 6.33333x_7 - 2.666667x_6 - 6.3333x_7 - 2.666667x_6 - 6.0000x_7 - 6.00000x_7 - 6.0000x_7 - 6.0000x_7 - 6.0000x_7 - 6.0000x_7 - 6.0000x
x_{17}
                                                                                                                                           4.33333333333
```

 x_3 enters and x_8 leaves

```
0.863636363636
 x_3
            1.95454545455
                                               -0.363636x_9 + 0.136364x_{14} - 0.045455x_8 - 0.227273x_4 + 0.727273x_5 - 0.409091x_6 + 0.090909x_7
x_1
                                               x_{10}
            3.45454545455
            10.5454545455
                                               x_{11}
                                               12.9090909091
x_{12}
            2.22727272727
                                               -0.181818x_9 - 0.681818x_{14} + 0.227273x_8 + 2.136364x_4 + 1.363636x_5 - 1.954545x_6 + 0.545455x_7 + 0.54545x_7 + 0.5454x_7 + 0.5454
x_{13}
                                               x_2
            3.59090909091
                                               x_{15}
            6.95454545455
x_{16}
            23.7727272727
                                               -0.818182x_9 + 1.681818x_{14} - 1.227273x_8 + 5.8636363x_4 + 4.636364x_5 - 0.045455x_6 + 2.454545x_7
            3.45454545455
                                               x_{17}
            5.77272727273
                                               z
```

 x_4 enters and x_{17} leaves

```
1.15853658537
                                                                                        -0.121951x_9 + 0.463415x_{14} - 0.097561x_8 - 0.085366x_{17} + 1.073171x_5 + 1.036585x_6 - 1.060976x_7
 x_3
                                                                                      1.74390243902
 x_1
                      2.78048780488
                                                                                      x_{10}
                                                                                       11.2195121951
x_{11}
                         12.487804878
                                                                                       x_{12}
x_{13}
                                                                                       -0.390244x_9 - 0.317073x_{14} + 0.487805x_8 - 0.573171x_{17} + 0.634146x_5 - 0.182927x_6 - 1.695122x_7 + 0.034146x_5 - 0.03414
                        4.20731707317
                         4.4756097561
                                                                                        x_2
                                                                                        x_{15}
                         9.5243902439
                       29.2073170732
                                                                                       -1.390244x_9 + 2.682927x_{14} - 0.512195x_8 - 1.573171x_{17} + 2.634146x_5 + 4.817073x_6 - 3.695122x_7 + 2.634146x_5 + 4.817073x_6 - 3.69512x_7 + 2.634146x_5 +
x_{16}
                                                                                      -0.097561x_9 + 0.170732x_{14} + 0.121951x_8 - 0.268293x_{17} - 0.341463x_5 + 0.829268x_6 - 1.048780x_7
                     0.926829268293
  x_4
                                                                                       7.5
```

 x_5 enters and x_{10} leaves

```
1.9
                                                    +0.066667x_9 +0.3333333x_{14}
                                                                                                                                             -0.033333x_{17} -0.266667x_{10} +1.166667x_6 -1.633333x_7
x_3
                          2.3
                                                    -0.200000x_9 -0.000000x_{14}
                                                                                                                                             +0.100000x_{17} -0.2000000x_{10} -0.5000000x_6 -0.1000000x_7
x_1
            0.690909090909
                                                   x_5
x_{11}
             9.16363636364
                                                    -1.230303x_9 - 0.151515x_{14} + 0.363636x_8 - 0.339394x_{17} + 0.739394x_{10} - 2.848485x_6 + 4.733333x_7
                                                    12.9090909091
x_{12}
             4.64545454545
                                                    x_{13}
                                                   x_2
             5.31818181818
                                                    9.37272727273
x_{15}
                                                    -0.927273x_9 + 2.363636x_{14} - 0.272727x_8 - 1.445455x_{17} - 0.654545x_{10} + 5.136364x_6 - 5.100000x_7
             31.0272727273
x_{16}
x_4
            0.690909090909
                                                    -0.157576x_9 + 0.212121x_{14} + 0.090909x_8 - 0.284848x_{17} + 0.084848x_{10} + 0.787879x_6 - 0.866667x_7 + 0.084848x_{10} + 0.08484x_{10} + 0.0848x_{10} + 0.0848x_{10} + 0.0848x_{10} + 0.0848x_{10} + 0.0848x_{10} + 0.0848x_{10
                                                    8.19090909091
```

 x_8 enters and x_2 leaves

```
+0.066667x_9 +0.3333333x_{14}
                                                                                                                 -0.033333x_{17} -0.266667x_{10} +1.166667x_6 -1.633333x_7
              1.9
 x_3
              2.3
                            -0.200000x_9 -0.000000x_{14}
                                                                                                                 +0.100000x_{17} -0.200000x_{10} -0.500000x_6 -0.100000x_7
x_1
 x_5
             3.35
                           19.8
x_{11}
            10.25
                           x_{12}
             20.6
                            x_{13}
                            -0.833333x_9 + 1.333333x_{14} - 5.500000x_2 - 1.083333x_{17} - 1.666667x_{10} + 1.416667x_6 - 4.583333x_{7} + 1.416667x_{10} + 1.41667x_{10} + 1.41667x_{10} + 1.41667x_{10} + 1.416667x_{10} + 1.41667x_{10} + 1.41667x_
x_8
            29.25
x_{15}
            17.35
                           x_{16}
           23.05
                           3.35
                            10.85
                            z
```

 x_{-1} enters and Final Dictionary Solution: 10.85 Num Pivots: 6