```
13.0
         x_8
     6.0
                     +1.000000x_2 -3.000000x_3
                                                       +2.000000x_5
                                                                             -1.000000x_7
x_9
     6.0
          x_{10}
x_{11}
    14.0
                                +3.000000x_3 - 2.000000x_4 + 1.000000x_5 - 2.000000x_6 - 2.000000x_7
          -1.000000x_1 + 1.000000x_2 + 2.000000x_3 + 2.000000x_4 + 1.000000x_5 - 1.000000x_6
     7.0
x_{12}
     8.0
          -3.000000x_1 + 3.000000x_2
                                           +1.000000x_4 -1.000000x_5
x_{13}
          -1.000000x_1 -3.000000x_2 +3.000000x_3 +1.000000x_4
                                                                             +3.000000x_7
     3.0
x_{14}
                                                       -2.000000x_5 -3.000000x_6 +2.000000x_7
x_{15}
    13.0
          -2.000000x_1 -3.000000x_2 -3.000000x_3
          -1.000000x_1 + 1.000000x_2 + 1.000000x_3 + 3.000000x_4
                                                                  -1.000000x_6 - 2.000000x_7
     8.0
x_{16}
x_{1\underline{7}}
     5.0
                     -2.000000x_2 + 1.000000x_3
                                                       +1.000000x_5 -2.000000x_6 -1.000000x_7
     0.0
          +1.000000x_1 -1.000000x_2 -2.000000x_3
 z
                                                       -1.000000x_5
                                                                              -2.000000x_7
```

No initialization required –; Proceed to Optimize.

```
x_8
     13.0
           +1.000000x_1 - 1.000000x_2 + 3.000000x_3 + 3.000000x_4 + 1.000000x_5 + 1.000000x_6 - 2.000000x_7
     6.0
                       +1.000000x_2 -3.000000x_3
                                                             +2.000000x_5
                                                                                      -1.000000x_7
x_9
     6.0
           x_{10}
     14.0
           +2.000000x_1
                                    +3.000000x_3 -2.000000x_4 +1.000000x_5 -2.000000x_6 -2.000000x_7
x_{11}
x_{12}
     7.0
           -1.000000x_1 + 1.000000x_2 + 2.000000x_3 + 2.000000x_4 + 1.000000x_5 - 1.000000x_6
                                                +1.0000000x_4 -1.0000000x_5
     8.0
           -3.000000x_1 + 3.000000x_2
x_{13}
x_{14}
     3.0
           -1.000000x_1 -3.000000x_2 +3.000000x_3 +1.000000x_4
                                                                                      +3.000000x_7
     13.0
           -2.000000x_1 -3.000000x_2 -3.000000x_3
                                                             -2.000000x_5 -3.000000x_6 +2.000000x_7
x_{15}
     8.0
                                                                         -1.000000x_6 -2.000000x_7
x_{16}
           -1.000000x_1 + 1.000000x_2 + 1.000000x_3 + 3.000000x_4
     5.0
                       -2.000000x_2 + 1.000000x_3
                                                             +1.000000x_5 -2.000000x_6 -1.000000x_7
x_{17}
           +1.000000x_1 -1.000000x_2 -2.000000x_3
     0.0
                                                             -1.000000x_5
                                                                                      -2.000000x_7
z
```

 x_1 enters and x_{13} leaves

```
15.666666667
                -0.333333x_{13}
                                   +3.000000x_3 +3.333333x_4 +0.666667x_5 +1.000000x_6 -2.000000x_7
x_8
        6.0
                         +1.000000x_2 -3.000000x_3
                                                     +2.000000x_5
                                                                       -1.000000x_7
x_9
       14.0
                x_{10}
    19.333333333
                x_{11}
                                   +2.000000x_3 +1.666667x_4 +1.333333x_5 -1.000000x_6
    4.33333333333
                +0.333333x_{13}
x_{12}
    2.6666666667
                -0.3333333x_{13} + 1.000000x_2
                                            +0.3333333x_4 -0.3333333x_5
x_1
   0.3333333333333
                +0.333333x_{13} - 4.000000x_2 + 3.000000x_3 + 0.666667x_4 + 0.333333x_5
                                                                       +3.000000x_7
x_{14}
    7.6666666667
                x_{15}
                +0.333333x_{13}
                                  5.333333333333
x_{16}
        5.0
                          -2.000000x_2 + 1.000000x_3
                                                     +1.000000x_5 -2.000000x_6 -1.000000x_7
x_{17}
    2.66666666667
                                   -2.000000x_3 + 0.333333x_4 - 1.333333x_5
z
                -0.333333x_{13}
                                                                       -2.000000x_7
```

 x_4 enters and x_{15} leaves

```
x_8
x_9
  6.0
          +1.000000x_2 -3.000000x_3
                           +2.000000x_5
                                      -1.000000x_7
  48.5
    x_{10}
x_{11}
  4.0
    -2.0000000x_{13} + 12.000000x_2 + 9.000000x_3 + 2.000000x_{15} + 3.000000x_5 + 4.000000x_6 - 6.000000x_7
  23.5
    x_{12}
  6.5
          x_1
  8.0
    x_{14}
x_4
  11.5
    +1.000000x_{13} -7.500000x_2 -4.500000x_3 -1.500000x_{15} -2.000000x_5 -4.500000x_6 +3.000000x_7
    36.0
  5.0
          -2.000000x_2 +1.000000x_3
                           +1.000000x_5 -2.000000x_6 -1.000000x_7
x_{17}
  6.5
```

 x_{-1} enters and Final Dictionary Solution: 6.5 Num Pivots: 2