```
x_8
   11.0
                -3.000000x_2
                                 -3.000000x_4 - 1.000000x_5 + 2.000000x_6 + 3.000000x_7
x_9
   13.0
                +2.000000x_2 -3.000000x_3 -2.000000x_4 -2.000000x_5
x_{10}
x_{11}
    6.0
        -1.000000x_1
                         -1.000000x_3 + 2.000000x_4
                                                   +2.000000x_6 -3.000000x_7
        6.0
x_{12}
    2.0
        -3.000000x_1 - 1.000000x_2
                                 +2.000000x_4 -3.000000x_5 +1.000000x_6 -2.000000x_7
x_{13}
                         -3.000000x_3 + 3.000000x_4
    2.0
       +3.000000x_1
                                                   +2.000000x_6 +2.000000x_7
x_{14}
x_{15}
    9.0
        -2.000000x_1 -3.000000x_2
                                 -2.000000x_4 - 1.000000x_5 - 3.000000x_6 - 1.000000x_7
        +1.000000x_1 -2.000000x_2 -1.000000x_3 -3.000000x_4 -3.000000x_5
    6.0
x_{16}
x_{1\underline{7}}
   15.0
        z
    0.0
```

No initialization required –; Proceed to Optimize.

```
-2.000000x_1 + 2.000000x_2 - 2.000000x_3 + 1.000000x_4 - 3.000000x_5 - 3.000000x_6 - 1.000000x_7
x_8
    11.0
                  -3.000000x_2
                                      -3.000000x_4 - 1.000000x_5 + 2.000000x_6 + 3.000000x_7
x_9
    13.0
                  +2.000000x_2 -3.000000x_3 -2.000000x_4 -2.000000x_5
x_{10}
    6.0
        -1.000000x_1
                            -1.000000x_3 + 2.000000x_4
                                                          +2.000000x_6 -3.000000x_7
x_{11}
x_{12}
    6.0
        -3.000000x_1 -1.000000x_2
                                      +2.000000x_4 -3.000000x_5 +1.000000x_6 -2.000000x_7
    2.0
x_{13}
x_{14}
    2.0
        +3.000000x_1
                            -3.000000x_3 + 3.000000x_4
                                                          +2.000000x_6 +2.000000x_7
    9.0
        -2.000000x_1 -3.000000x_2
                                      -2.000000x_4 - 1.000000x_5 - 3.000000x_6 - 1.000000x_7
x_{15}
    6.0
        +1.000000x_1 -2.000000x_2 -1.000000x_3 -3.000000x_4 -3.000000x_5
x_{16}
    15.0
        x_{17}
        z
```

 x_5 enters and x_{13} leaves

```
8.0
             x_8
   10.3333333333
             +1.000000x_1 - 2.666667x_2
                                     -3.666667x_4 + 0.333333x_{13} + 1.666667x_6 + 3.666667x_7
x_9
   11.666666667
              x_{10}
x_{11}
       6.0
              -1.000000x_1
                             -1.000000x_3 + 2.000000x_4
                                                      +2.000000x_6 -3.000000x_7
              5.33333333333
x_{12}
x_5
   0.666666666667
              -1.000000x_1 - 0.333333x_2
                                     +0.666667x_4 -0.3333333x_{13} +0.3333333x_6 -0.666667x_7
       2.0
              +3.000000x_1
                             -3.000000x_3 + 3.000000x_4
                                                      +2.000000x_6 +2.000000x_7
x_{14}
   8.3333333333
              -1.000000x_1 - 2.666667x_2
                                     -2.666667x_4 + 0.3333333x_{13} - 3.333333x_6 - 0.3333333x_7
x_{15}
             4.0
x_{16}
      13.0
                             +2.000000x_3 -4.000000x_4 +1.000000x_{13} -3.000000x_6
              +5.000000x_1
x_{17}
             z
   1.33333333333
```

 x_7 enters and x_5 leaves

```
-0.500000x_1 + 2.500000x_2 - 2.000000x_3
     9.0
                                                        +0.500000x_{13} -3.500000x_6 -1.500000x_5
x_8
     14.0
          -4.500000x_1 - 4.500000x_2
                                                        -1.500000x_{13} + 3.500000x_6 - 5.500000x_5
x_9
     13.0
                      +2.000000x_2 -3.000000x_3 -2.000000x_4
                                                                                -2.000000x_5
x_{10}
x_{11}
     3.0
          +3.500000x_1 + 1.500000x_2 - 1.000000x_3 - 1.000000x_4 + 1.500000x_{13} + 0.500000x_6 + 4.500000x_5
     7.0
          x_{12}
x_7
     1.0
          -1.500000x_1 - 0.500000x_2
                                            +1.000000x_4 -0.500000x_{13} +0.500000x_6 -1.500000x_5
     4.0
                      x_{14}
     8.0
          -0.500000x_1 - 2.500000x_2
                                             -3.000000x_4 + 0.500000x_{13} - 3.500000x_6 + 0.500000x_5
x_{15}
          +1.000000x_1-2.000000x_2-1.000000x_3-3.000000x_4\\
                                                                                -3.000000x_5
     6.0
x_{16}
     13.0
                                 +2.000000x_3 - 4.000000x_4 + 1.0000000x_{13} - 3.000000x_6 \\
x_{17}
     2.0
          -4.000000x_1 -3.000000x_2 -1.000000x_3
                                                        -1.000000x_{13} - 1.000000x_6 - 1.000000x_5
```

 x_{-1} enters and Final Dictionary Solution: 2.0 Num Pivots: 2