```
8.0
                          -1.000000x_2 + 1.000000x_3 - 2.000000x_4 + 1.000000x_5 + 2.000000x_6 - 3.000000x_7
x_8
      12.0
            +3.000000x_1
                                         -3.000000x_3 + 1.000000x_4 - 2.000000x_5 + 1.000000x_6
x_9
            +3.000000x_1-2.000000x_2-1.000000x_3-3.000000x_4-1.000000x_5\\
     12.0
                                                                                                 -1.000000x_7
x_{10}
x_{11}
      14.0
            -2.000000x_1
                                         -2.000000x_3 + 2.000000x_4 - 2.000000x_5 - 2.000000x_6 + 1.000000x_7
      7.0
            -2.000000x_1 + 1.000000x_2
                                                      +1.000000x_4 +1.000000x_5 +1.000000x_6 +2.000000x_7
x_{12}
            +2.000000x_1 +1.000000x_2 -1.000000x_3
                                                                    +1.000000x_5 +2.000000x_6 +2.000000x_7
x_{13}
      6.0
      9.0
            +1.000000x_1
                                        +3.000000x_3
                                                                    -1.000000x_5
x_{14}
                                                      -2.000000x_4 -1.000000x_5 +2.000000x_6 +3.000000x_7
x_{15}
      13.0
            +2.000000x_1 +1.000000x_2
            +3.000000x_1 -1.000000x_2 -2.000000x_3
                                                                    -2.000000x_5 + 2.000000x_6 + 2.000000x_7
      4.0
x_{16}
      14.0
            -3.000000x_1 + 2.000000x_2
                                                      -1.000000x_4 +3.000000x_5 +2.000000x_6 -2.000000x_7
x_{17}
      0.0
            +1.000000x_1
                                                      -2.000000x_4 + 2.000000x_5 + 2.000000x_6 - 2.000000x_7
 z
```

No initialization required –; Proceed to Optimize.

```
x_8
      8.0
                          -1.000000x_2 + 1.000000x_3 - 2.000000x_4 + 1.000000x_5 + 2.000000x_6 - 3.000000x_7
     12.0
            +3.000000x_1
                                         -3.000000x_3 + 1.000000x_4 - 2.000000x_5 + 1.000000x_6
x_9
     12.0
            +3.000000x_1 -2.000000x_2 -1.000000x_3 -3.000000x_4 -1.000000x_5
x_{10}
      14.0
                                         -2.000000x_3 + 2.000000x_4 - 2.000000x_5 - 2.000000x_6 + 1.000000x_7
            -2.000000x_1
x_{11}
x_{12}
      7.0
            -2.000000x_1 + 1.000000x_2
                                                      +1.000000x_4 +1.000000x_5 +1.000000x_6 +2.000000x_7
                                                                    +1.000000x_5 +2.000000x_6 +2.000000x_7
      6.0
            +2.000000x_1 +1.000000x_2 -1.000000x_3
x_{13}
                                        +3.000000x_3
x_{14}
      9.0
            +1.000000x_1
                                                                    -1.000000x_5
      13.0
            +2.000000x_1 +1.000000x_2
                                                      -2.000000x_4 -1.000000x_5 +2.000000x_6 +3.000000x_7
x_{15}
            +3.000000x_1 -1.000000x_2 -2.000000x_3
      4.0
                                                                    -2.000000x_5 + 2.000000x_6 + 2.000000x_7
x_{16}
      14.0
            -3.000000x_1 + 2.000000x_2
                                                      -1.000000x_4 +3.000000x_5 +2.000000x_6 -2.000000x_7
x_{17}
      0.0
            +1.000000x_1
                                                      -2.000000x_4 + 2.000000x_5 + 2.000000x_6 - 2.000000x_7
 z
```

 x_1 enters and x_{12} leaves

```
8.0
             -1.000000x_2 + 1.000000x_3 - 2.000000x_4 + 1.000000x_5 + 2.000000x_6 - 3.000000x_7
x_8
  22.5
     x_9
  22.5
     x_{10}
   7.0
     x_{11}
   3.5
     -0.500000x_{12} + 0.500000x_2
                          +0.500000x_4 +0.500000x_5 +0.500000x_6 +1.000000x_7
x_1
  13.0
     x_{13}
  12.5
     x_{14}
  20.0
                          -1.000000x_4
                                       +3.000000x_6 +5.000000x_7
     -1.000000x_{12} + 2.000000x_2
x_{15}
     14.5
x_{16}
      +1.500000x_{12} +0.500000x_2
                          -2.500000x_4 + 1.500000x_5 + 0.500000x_6 - 5.000000x_7
   3.5
x_{17}
      -0.500000x_{12} + 0.500000x_2
                          -1.500000x_4 + 2.500000x_5 + 2.500000x_6 - 1.000000x_7
   3.5
```

 x_2 enters and x_{11} leaves

```
1.0
x_8
    33.0
                     -1.500000x_{11} - 6.000000x_3 + 4.000000x_4 - 5.000000x_5 - 2.000000x_6 + 1.500000x_7
x_9
    19.0
         -2.000000x_{12} + 0.500000x_{11}
                                           -2.000000x_4 + 2.000000x_5 + 3.000000x_6 + 2.500000x_7
x_{10}
     7.0
         +1.000000x_{12} - 1.000000x_{11} - 2.000000x_3 + 1.000000x_4 - 3.000000x_5 - 3.000000x_6 - 1.000000x_7
x_2
     7.0
                     -0.500000x_{11} - 1.000000x_3 + 1.000000x_4 - 1.000000x_5 - 1.000000x_6 + 0.500000x_7
x_1
    27.0
         x_{13}
    16.0
                     -0.500000x_{11} + 2.000000x_3 + 1.000000x_4 - 2.000000x_5 - 1.000000x_6 + 0.500000x_7
x_{14}
x_{15}
    34.0
         +1.000000x_{12} - 2.000000x_{11} - 4.000000x_3 + 1.000000x_4 - 6.000000x_5 - 3.000000x_6 + 3.000000x_7
    18.0
         x_{16}
         +2.000000x_{12} - 0.500000x_{11} - 1.0000000x_3 - 2.0000000x_4
     7.0
                                                                 -1.000000x_6 -5.500000x_7
x_{17}
     7.0
 z
                     -0.500000x_{11} - 1.000000x_3 - 1.000000x_4 + 1.000000x_5 + 1.000000x_6 - 1.500000x_7
```

 x_5 enters and x_2 leaves

```
10.3333333333
                                                  +0.333333x_{12} - 0.333333x_{11} + 0.333333x_3 - 1.666667x_4 - 1.333333x_2 + 1.000000x_6 - 3.333333x_7 + 0.333333x_7 + 0.33333x_7 + 0.3333x_7 + 0.3333x_7 + 0.3333x_7 + 0.3333x_7 + 0.3333x_7 + 0.333x_7 + 0.33x_7 + 
 x_8
            21.3333333333
                                                  x_9
x_{10}
            23.6666666667
                                                  2.33333333333
                                                  x_5
            4.66666666667
                                                  -0.333333x_{12} -0.166667x_{11} -0.3333333x_3 +0.666667x_4 +0.3333333x_2
                                                                                                                                                                                                                                         +0.833333x_7
x_1
                                                  17.6666666667
x_{13}
            11.3333333333
                                                  x_{14}
x_{15}
                        20.0
                                                  -1.000000x_{12}
                                                                                                                                                -1.000000x_4 + 2.000000x_2 + 3.000000x_6 + 5.000000x_7
x_{16}
            13.3333333333
                                                  +2.000000x_{12} -0.500000x_{11} -1.000000x_3 -2.000000x_4
                                                                                                                                                                                                           -1.000000x_6 -5.500000x_7
                         7.0
x_{17}
            9.33333333333
                                                  +0.333333x_{12} - 0.833333x_{11} - 1.666667x_3 - 0.666667x_4 - 0.333333x_2
                                                                                                                                                                                                                                          -1.833333x_7
  z
```

 x_{12} enters and x_{16} leaves

```
13.0
      x_8
      x_9
   8.0
x_{10}
   13.0
      -0.200000x_{16} - 0.300000x_{11} - 1.000000x_3 + 0.600000x_4 - 0.200000x_2 - 0.200000x_6 + 0.700000x_7
   5.0
x_5
   2.0
      +0.200000x_{16} -0.200000x_{11}
                             +0.400000x_4 +0.2000000x_2 -0.8000000x_6 -0.2000000x_7
x_1
x_{13}
   15.0
      +0.200000x_{16} - 0.700000x_{11} - 2.000000x_3 + 1.400000x_4 + 1.200000x_2 + 0.200000x_6 + 2.300000x_7
   6.0
      x_{14}
x_{15}
   12.0
      8.0
      x_{12}
x_{17}
   23.0
      -1.200000x_{16} - 0.300000x_{11} - 3.000000x_3 - 0.400000x_4 + 0.800000x_2 + 3.800000x_6 + 0.700000x_7
      -0.200000x_{16} - 0.800000x_{11} - 2.000000x_3 - 0.400000x_4 - 0.200000x_2 + 0.800000x_6 - 0.800000x_7
   12.0
```

 x_6 enters and x_1 leaves

```
17.5
  x_8
x_9
 5.5
  7.5
  x_{10}
x_5
 4.5
  2.5
  +0.250000x_{16} -0.250000x_{11}
            +0.500000x_4+0.250000x_2-1.250000x_1-0.250000x_7
x_6
  15.5
x_{13}
 4.5
  x_{14}
x_{15}
 13.5
  14.0
      x_{12}
 32.5
  x_{17}
                  -1.000000x_1 - 1.000000x_7
 14.0
      -1.000000x_{11} - 2.000000x_3
```

 x_{-1} enters and Final Dictionary Solution: 14.0 Num Pivots: 5