```
x_8
          -1.000000x_1 -1.000000x_2
    14.0
                                                                  -2.000000x_6 + 3.000000x_7
x_9
                                -3.000000x_3 + 2.000000x_4 - 1.000000x_5 - 1.000000x_6 - 3.000000x_7
     5.0
          -3.000000x_1
x_{10}
x_{11}
    12.0
          +1.000000x_1 - 3.000000x_2 - 3.000000x_3 - 3.000000x_4 - 3.000000x_5 - 2.000000x_6 + 2.000000x_7
    13.0
          x_{12}
    10.0
          +3.000000x_1 -2.000000x_2
                                           +2.000000x_4 +1.000000x_5 +2.000000x_6 -1.000000x_7
x_{13}
                                +2.000000x_3 -3.000000x_4
     4.0
          +2.000000x_1
                                                                  -2.000000x_6
x_{14}
                     -2.000000x_2
x_{15}
     6.0
                                                       -2.000000x_5 -3.000000x_6 -3.000000x_7
                                -2.000000x_3 + 3.000000x_4 - 1.000000x_5 - 2.000000x_6 + 2.000000x_7
     5.0
          -1.000000x_1
x_{16}
     13.0
                                +3.000000x_3 -3.000000x_4 +1.0000000x_5 -3.000000x_6 -2.000000x_7
x_{17}
          +1.000000x_1
     0.0
          -1.000000x_1 + 1.000000x_2
                                            -1.000000x_4
                                                                  +2.000000x_6 -2.000000x_7
 z
```

No initialization required –; Proceed to Optimize.

```
x_8
        -1.000000x_1 -1.000000x_2
    14.0
                                                         -2.000000x_6 + 3.000000x_7
x_9
    5.0
        -3.000000x_1
                             -3.000000x_3 + 2.000000x_4 - 1.000000x_5 - 1.000000x_6 - 3.000000x_7
x_{10}
    12.0
        x_{11}
    13.0
        x_{12}
        +3.000000x_1 - 2.000000x_2
                                      +2.000000x_4 +1.000000x_5 +2.000000x_6 -1.000000x_7
    10.0
x_{13}
x_{14}
    4.0
        +2.000000x_1
                            +2.000000x_3 -3.000000x_4
                                                         -2.000000x_6
    6.0
                  -2.000000x_2
                                                -2.000000x_5 -3.000000x_6 -3.000000x_7
x_{15}
    5.0
                            -2.000000x_3 + 3.000000x_4 - 1.000000x_5 - 2.000000x_6 + 2.000000x_7
        -1.000000x_1
x_{16}
    13.0
        +1.000000x_1
                            +3.000000x_3 -3.000000x_4 +1.0000000x_5 -3.000000x_6 -2.000000x_7
x_{17}
    0.0
        -1.000000x_1 + 1.000000x_2
                                      -1.000000x_4
                                                         +2.000000x_6 -2.000000x_7
z
```

 $x_2$  enters and  $x_{15}$  leaves

```
x_8
     11.0
     11.0
          -1.000000x_1 + 0.500000x_{15}
                                                        +1.000000x_5 -0.500000x_6 +4.500000x_7
x_9
     5.0
                                 -3.000000x_3 + 2.000000x_4 - 1.000000x_5 - 1.000000x_6 - 3.000000x_7
          -3.000000x_1
x_{10}
x_{11}
     3.0
          +1.000000x_1 + 1.500000x_{15} - 3.000000x_3 - 3.000000x_4
                                                                   +2.500000x_6 +6.500000x_7
     10.0
          x_{12}
          +3.000000x_1 +1.000000x_{15}
     4.0
                                             +2.000000x_4 +3.000000x_5 +5.000000x_6 +2.000000x_7
x_{13}
     4.0
          +2.000000x_1
                                 +2.000000x_3 -3.000000x_4
                                                                    -2.000000x_6
x_{14}
     3.0
                                                        -1.000000x_5 -1.500000x_6 -1.500000x_7
                      -0.500000x_{15}
x_2
                                  -2.000000x_3 + 3.000000x_4 - 1.000000x_5 - 2.000000x_6 + 2.000000x_7
     5.0
          -1.000000x_1
x_{16}
     13.0
                                 +3.000000x_3 -3.000000x_4 +1.0000000x_5 -3.000000x_6 -2.000000x_7
          +1.0000000x_1
x_{17}
          -1.000000x_1 - 0.500000x_{15}
                                             -1.000000x_4 - 1.000000x_5 + 0.500000x_6 - 3.500000x_7
     3.0
```

 $x_6$  enters and  $x_2$  leaves

```
-1.000000x_1 + 1.000000x_{15} - 3.000000x_3 - 3.000000x_4
                                      +1.000000x_2 +4.000000x_7
x_8
  10.0
     -1.000000x_1 + 0.666667x_{15}
                               +1.333333x_5 +0.333333x_2 +5.000000x_7
x_9
     3.0
x_{10}
x_{11}
  8.0
     17.0
     x_{12}
  14.0
     +3.000000x_1 - 0.666667x_{15}
                         +2.000000x_4 - 0.333333x_5 - 3.333333x_2 - 3.000000x_7
x_{13}
  0.0
     x_{14}
x_6
  2.0
                               -0.666667x_5 -0.666667x_2 -1.000000x_7
            -0.333333x_{15}
     1.0
x_{16}
  7.0
     x_{17}
  4.0
     -1.000000x_1 - 0.666667x_{15}
                         -1.000000x_4 - 1.333333x_5 - 0.333333x_2 - 4.000000x_7
```

 $x_{-1}$  enters and Final Dictionary Solution: 4.0 Num Pivots: 2