Read in the following dictionary:

x_4	6.0	$-7.00x_1 +5.00x_2$
x_5	38.0	$-7.00x_1 -9.00x_2 +10.00x_3$
x_6	-15.0	$-1.00x_1 +10.00x_2 -7.00x_3$
x_7	6.0	$-9.00x_1 +5.00x_2 +8.00x_3$
x_8	-8.0	$-3.00x_1 +6.00x_2 -1.00x_3$
z	0.0	$+3.00x_1 +3.00x_2 +4.00x_3$

0.1 Initialization Phase: Dual Problem Solving

New Objective in primal was changed to :

$$\max \sum_{j=1}^{3} -x_j$$

Primal variable x_j corresponds to dual variable y_j for $j = 1, \ldots, 8$ Dual Dictionary (with objective changed is):

y_1	1.0	$+7.00y_4 +7.00y_5 +1.00y_6 +9.00y_7 +3.00y_8$
y_2	1.0	$-5.00y_4 +9.00y_5 -10.00y_6 -5.00y_7 -6.00y_8$
y_3	1.0	$-10.00y_5 +7.00y_6 -8.00y_7 +1.00y_8$
z	-0	$-6.00y_4 -38.00y_5 +15.00y_6 -6.00y_7 +8.00y_8$

Initialization succeeded in finding final dual dictionary with 2 pivots

y_1	1.1	$+6.50y_4 +7.90y_5 -0.10y_2 +8.50y_7 +2.40y_8$
y_6	0.1	$-0.50y_4 +0.90y_5 -0.10y_2 -0.50y_7 -0.60y_8$
y_3	1.7	$-3.50y_4 -3.70y_5 -0.70y_2 -11.50y_7 -3.20y_8$
z	1.5	$-13.50y_4 -24.50y_5 -1.50y_2 -13.50y_7 -1.00y_8$

Primal Dictionary is:

x_4	13.5	$-6.50x_1 +0.50x_6 +3.50x_3$
x_5	24.5	$-7.90x_1 -0.90x_6 +3.70x_3$
x_2	1.5	$+0.10x_1 +0.10x_6 +0.70x_3$
x_7	13.5	$-8.50x_1 +0.50x_6 +11.50x_3$
x_8	1.0	$-2.40x_1 +0.60x_6 +3.20x_3$
z	-1.5	$-1.10x_1 -0.10x_6 -1.70x_3$

Primal Dictionary with original objective is:

x_4	13.5	$-6.50x_1 +0.50x_6 +3.50x_3$
x_5	24.5	$-7.90x_1 -0.90x_6 +3.70x_3$
x_2	1.5	$+0.10x_1 +0.10x_6 +0.70x_3$
x_7	13.5	$-8.50x_1 +0.50x_6 +11.50x_3$
x_8	1.0	$-2.40x_1 +0.60x_6 +3.20x_3$
z	4.5	$+3.30x_1 +0.30x_6 +6.10x_3$

1 Optimization Phase Simplex

Starting Dictionary is:

x_4	13.5	$-6.50x_1$	$+0.50x_6$	$+3.50x_3$
x_5	24.5	$-7.90x_1$	$-0.90x_6$	$+3.70x_3$
x_2	1.5	$+0.10x_1$	$+0.10x_6$	$+0.70x_3$
x_7	13.5	$-8.50x_1$	$+0.50x_6$	$+11.50x_3$
x_8	1.0	$-2.40x_1$	$+0.60x_6$	$+3.20x_3$
z	4.5	$+3.30x_1$	$+0.30x_6$	$+6.10x_3$

x_1 enters and x_8 leaves

x_4	10.7916666667	$+2.71x_8$	$-1.12x_6$	$-5.17x_3$
x_5	21.2083333333	$+3.29x_8$	$-2.88x_6$	$-6.83x_3$
x_2	1.54166666667	$-0.04x_8$	$+0.12x_6$	$+0.83x_3$
x_7	9.95833333333	$+3.54x_8$	$-1.62x_6$	$+0.17x_3$
x_1	0.416666666667	$-0.42x_8$	$+0.25x_6$	$+1.33x_3$
z	5.875	$-1.38x_8$	$+1.12x_6$	$+10.50x_3$

x_3 enters and x_4 leaves

x_3	2.08870967742	$+0.52x_8$	$-0.22x_6$	$-0.19x_4$
x_5	6.93548387097	$-0.29x_8$	$-1.39x_6$	$+1.32x_4$
x_2	3.28225806452	$+0.40x_8$	$-0.06x_6$	$-0.16x_4$
x_7	10.3064516129	$+3.63x_8$	$-1.66x_6$	$-0.03x_4$
x_1	3.20161290323	$+0.28x_8$	$-0.04x_6$	$-0.26x_4$
z	27.8064516129	$+4.13x_8$	$-1.16x_6$	$-2.03x_4$

x_8 enters and x_5 leaves

x_3	14.6111111111	$-1.81x_5$	$-2.72x_6$	$+2.19x_4$
x_8	23.8888888889	$-3.44x_5$	$-4.78x_6$	$+4.56x_4$
x_2	12.7222222222	$-1.36x_5$	$-1.94x_6$	$+1.64x_4$
x_7	97.0	$-12.50x_5$	$-19.00x_6$	$+16.50x_4$
x_1	9.94444444444	$-0.97x_5$	$-1.39x_6$	$+1.03x_4$
z	126.444444444	$-14.22x_5$	$-20.89x_6$	$+16.78x_4$

x_4 enters and Unbounded Dictionary!
x_4 enters and Unbounded Dictionary!