Read in the following dictionary:

x_9	11.0	$+6.00x_1$	$-2.00x_2$	$+2.00x_3$	$-6.00x_4$	$-5.00x_5$	$-9.00x_6$	$+10.00x_7$ $-10.00x_8$
x_{10}	-3.0	$+3.00x_1$	$-1.00x_2$	$+8.00x_3$	$-7.00x_4$	$-5.00x_5$	$-8.00x_6$	$+5.00x_7$ $-4.00x_8$
x_{11}	8.0	$+2.00x_1$	$+10.00x_2$	$-1.00x_3$		$-10.00x_5$	$-6.00x_6$	$+8.00x_7$ $-2.00x_8$
x_{12}	-14.0	$+6.00x_1$	$+8.00x_2$	$+2.00x_3$	$+4.00x_4$	$+7.00x_5$	$+4.00x_6$	$-2.00x_7$ $+1.00x_8$
x_{13}	25.0	$+1.00x_1$	$-9.00x_2$	$-10.00x_3$	$+1.00x_4$	$+4.00x_5$	$+2.00x_6$	$-4.00x_7$
z	0.0	$+1.00x_1$	$+1.00x_2$		$-1.00x_4$	$-1.00x_5$	$-3.00x_6$	$-3.00x_7$

0.1 Initialization Phase: Dual Problem Solving

New Objective in primal was changed to :

$$\max \sum_{j=1}^{8} -x_j$$

Primal variable x_j corresponds to dual variable y_j for $j = 1, \ldots, 13$ Dual Dictionary (with objective changed is):

y_1	1.0	$-6.00y_9$	$-3.00y_{10}$	$-2.00y_{11}$	$-6.00y_{12}$	$-1.00y_{13}$
y_2	1.0	$+2.00y_9$	$+1.00y_{10}$	$-10.00y_{11}$	$-8.00y_{12}$	$+9.00y_{13}$
y_3	1.0	$-2.00y_9$	$-8.00y_{10}$	$+1.00y_{11}$	$-2.00y_{12}$	$+10.00y_{13}$
y_4	1.0	$+6.00y_9$	$+7.00y_{10}$		$-4.00y_{12}$	$-1.00y_{13}$
y_5	1.0	$+5.00y_9$	$+5.00y_{10}$	$+10.00y_{11}$	$-7.00y_{12}$	$-4.00y_{13}$
y_6	1.0	$+9.00y_9$	$+8.00y_{10}$	$+6.00y_{11}$	$-4.00y_{12}$	$-2.00y_{13}$
y_7	1.0	$-10.00y_9$	$-5.00y_{10}$	$-8.00y_{11}$	$+2.00y_{12}$	$+4.00y_{13}$
y_8	1.0	$+10.00y_9$	$+4.00y_{10}$	$+2.00y_{11}$	$-1.00y_{12}$	
z	-0	$-11.00y_9$	$+3.00y_{10}$	$-8.00y_{11}$	$+14.00y_{12}$	$-25.00y_{13}$

Initialization succeeded in finding final dual dictionary with 4 pivots

y_{12}	0.133333333333		$-0.10y_2$	$-1.07y_{11}$	$-0.03y_1$	$+0.87y_{13}$
y_3	0.2	$+14.00y_9$	$-1.40y_2$	$-8.60y_{11}$	$+2.20y_1$	$+24.80y_{13}$
y_{10}	0.0666666666667	$-2.00y_9$	$+0.20y_2$	$+1.47y_{11}$	$-0.27y_1$	$-2.07y_{13}$
y_4	0.933333333333	$-8.00y_9$	$+1.80y_2$	$+14.53y_{11}$	$-1.73y_1$	$-18.93y_{13}$
y_5	0.4	$-5.00y_9$	$+1.70y_2$	$+24.80y_{11}$	$-1.10y_1$	$-20.40y_{13}$
y_6	1.0	$-7.00y_9$	$+2.00y_2$	$+22.00y_{11}$	$-2.00y_1$	$-22.00y_{13}$
y_7	0.933333333333		$-1.20y_2$	$-17.47y_{11}$	$+1.27y_1$	$+16.07y_{13}$
y_8	1.13333333333	$+2.00y_9$	$+0.90y_2$	$+8.93y_{11}$	$-1.03y_1$	$-9.13y_{13}$
z	2.06666666667	$-17.00y_9$	$-0.80y_2$	$-18.53y_{11}$	$-1.27y_1$	$-19.07y_{13}$

Primal Dictionary is:

x_9	17.0		$-14.00x_3$	$+2.00x_{10}$	$+8.00x_4$	$+5.00x_5$	$+7.00x_6$	$-2.00x_8$
x_2	0.8	$+0.10x_{12}$	$+1.40x_3$	$-0.20x_{10}$	$-1.80x_4$	$-1.70x_5$	$-2.00x_6$	$+1.20x_7$ $-0.90x_8$
x_{11}	18.5333333333	$+1.07x_{12}$	$+8.60x_3$	$-1.47x_{10}$	$-14.53x_4$	$-24.80x_5$	$-22.00x_6$	$+17.47x_7$ $-8.93x_8$
x_1	1.26666666667	$+0.03x_{12}$	$-2.20x_3$	$+0.27x_{10}$	$+1.73x_4$	$+1.10x_5$	$+2.00x_6$	$-1.27x_7$ $+1.03x_8$
x_{13}	19.0666666667	$-0.87x_{12}$	$-24.80x_3$	$+2.07x_{10}$	$+18.93x_4$	$+20.40x_5$	$+22.00x_6$	$-16.07x_7$ $+9.13x_8$
z	-2.06666666667	$-0.13x_{12}$	$-0.20x_3$	$-0.07x_{10}$	$-0.93x_4$	$-0.40x_5$	$-1.00x_6$	$-0.93x_7$ $-1.13x_8$

Primal Dictionary with original objective is:

x_9	17.0		$-14.00x_3$	$+2.00x_{10}$	$+8.00x_4$	$+5.00x_5$	$+7.00x_6$	$-2.00x_8$
x_2	0.8	$+0.10x_{12}$	$+1.40x_3$	$-0.20x_{10}$	$-1.80x_4$	$-1.70x_5$	$-2.00x_6$	$+1.20x_7$ $-0.90x_8$
x_{11}	18.5333333333	$+1.07x_{12}$	$+8.60x_3$	$-1.47x_{10}$	$-14.53x_4$	$-24.80x_5$	$-22.00x_6$	$+17.47x_7$ $-8.93x_8$
x_1	1.26666666667	$+0.03x_{12}$	$-2.20x_3$	$+0.27x_{10}$	$+1.73x_4$	$+1.10x_5$	$+2.00x_6$	$-1.27x_7$ $+1.03x_8$
x_{13}	19.0666666667	$-0.87x_{12}$	$-24.80x_3$	$+2.07x_{10}$	$+18.93x_4$	$+20.40x_5$	$+22.00x_6$	$-16.07x_7$ $+9.13x_8$
z	2.06666666667	$+0.13x_{12}$	$-0.80x_3$	$+0.07x_{10}$	$-1.07x_4$	$-1.60x_5$	$-3.00x_6$	$-3.07x_7$ $+0.13x_8$

1 Optimization Phase Simplex

Starting Dictionary is:

x_9	17.0		$-14.00x_3$	$+2.00x_{10}$	$+8.00x_4$	$+5.00x_5$	$+7.00x_6$	$-2.00x_8$
x_2	0.8	$+0.10x_{12}$	$+1.40x_3$	$-0.20x_{10}$	$-1.80x_4$	$-1.70x_5$	$-2.00x_6$	$+1.20x_7$ $-0.90x_8$
x_{11}	18.5333333333	$+1.07x_{12}$	$+8.60x_3$	$-1.47x_{10}$	$-14.53x_4$	$-24.80x_5$	$-22.00x_6$	$+17.47x_7$ $-8.93x_8$
x_1	1.26666666667	$+0.03x_{12}$	$-2.20x_3$	$+0.27x_{10}$	$+1.73x_4$	$+1.10x_5$	$+2.00x_6$	$-1.27x_7$ $+1.03x_8$
x_{13}	19.0666666667	$-0.87x_{12}$	$-24.80x_3$	$+2.07x_{10}$	$+18.93x_4$	$+20.40x_5$	$+22.00x_6$	$-16.07x_7$ $+9.13x_8$
z	2.06666666667	$+0.13x_{12}$	$-0.80x_3$	$+0.07x_{10}$	$-1.07x_4$	$-1.60x_5$	$-3.00x_6$	$-3.07x_7$ $+0.13x_8$

x_8 enters and x_2 leaves

x_9	15.2222222222	$-0.22x_{12}$	$-17.11x_3$	$+2.44x_{10}$	$+12.00x_4$	$+8.78x_5$	$+11.44x_6$	$-2.67x_7$ $+2.22x_2$
x_8	0.888888888889	$+0.11x_{12}$	$+1.56x_3$	$-0.22x_{10}$	$-2.00x_4$	$-1.89x_5$	$-2.22x_6$	$+1.33x_7$ $-1.11x_2$
x_{11}	10.5925925926	$+0.07x_{12}$	$-5.30x_3$	$+0.52x_{10}$	$+3.33x_4$	$-7.93x_5$	$-2.15x_6$	$+5.56x_7$ $+9.93x_2$
x_1	2.18518518519	$+0.15x_{12}$	$-0.59x_3$	$+0.04x_{10}$	$-0.33x_4$	$-0.85x_5$	$-0.30x_6$	$+0.11x_7$ $-1.15x_2$
x_{13}	27.1851851852	$+0.15x_{12}$	$-10.59x_3$	$+0.04x_{10}$	$+0.67x_4$	$+3.15x_5$	$+1.70x_6$	$-3.89x_7$ $-10.15x_2$
z	2.18518518519	$+0.15x_{12}$	$-0.59x_3$	$+0.04x_{10}$	$-1.33x_4$	$-1.85x_5$	$-3.30x_6$	$-2.89x_7$ $-0.15x_2$

x_{10} enters and x_8 leaves

x_9	25.0	$+1.00x_{12}$	$+0.00x_3$	$-11.00x_8$	$-10.00x_4$	$-12.00x_5$	$-13.00x_6$	$+12.00x_7$ $-10.00x_2$
x_{10}	4.0	$+0.50x_{12}$	$+7.00x_3$	$-4.50x_8$	$-9.00x_4$	$-8.50x_5$	$-10.00x_6$	$+6.00x_7$ $-5.00x_2$
x_{11}	12.6666666667	$+0.33x_{12}$	$-1.67x_3$	$-2.33x_8$	$-1.33x_4$	$-12.33x_5$	$-7.33x_6$	$+8.67x_7$ $+7.33x_2$
x_1	2.33333333333	$+0.17x_{12}$	$-0.33x_3$	$-0.17x_8$	$-0.67x_4$	$-1.17x_5$	$-0.67x_6$	$+0.33x_7$ $-1.33x_2$
x_{13}	27.3333333333	$+0.17x_{12}$	$-10.33x_3$	$-0.17x_8$	$+0.33x_4$	$+2.83x_5$	$+1.33x_6$	$-3.67x_7$ $-10.33x_2$
z	2.33333333333	$+0.17x_{12}$	$-0.33x_3$	$-0.17x_8$	$-1.67x_4$	$-2.17x_5$	$-3.67x_6$	$-2.67x_7$ $-0.33x_2$

x_{12} enters and Unbounded Dictionary!
x_{12} enters and Unbounded Dictionary!