Read in the following dictionary:

x_6	17.0	$-1.00x_1$	$-8.00x_2$	$+3.00x_3$	$-7.00x_4$	
x_7	-3.0	$+4.00x_1$	$+7.00x_2$	$+9.00x_3$	$-10.00x_4$	$-4.00x_5$
x_8	31.0	$-7.00x_1$	$-9.00x_2$	$+4.00x_3$		$+6.00x_5$
x_9	5.0	$-9.00x_1$	$+7.00x_2$	$+5.00x_3$		$-1.00x_5$
x_{10}	0.0	$-9.00x_1$	$+8.00x_2$	$+8.00x_3$	$+1.00x_4$	$+8.00x_5$
x_{11}	37.0	$-7.00x_1$	$-8.00x_2$	$+2.00x_3$	$+5.00x_4$	$-5.00x_5$
x_{12}	-2.0	$+3.00x_1$	$+9.00x_2$	$-2.00x_3$	$+1.00x_4$	$+10.00x_5$
x_{13}	-40.0	$+7.00x_1$	$+5.00x_2$	$+10.00x_3$		$+10.00x_5$
x_{14}	10.0	$+3.00x_1$	$-6.00x_2$	$-3.00x_3$	$+5.00x_4$	$-10.00x_5$
z	0.0	$-4.00x_1$	$+3.00x_2$	$+2.00x_3$	$-3.00x_4$	$+2.00x_5$

0.1 Initialization Phase: Dual Problem Solving

New Objective in primal was changed to :

$$\max \sum_{j=1}^{5} -x_j$$

Primal variable x_j corresponds to dual variable y_j for $j = 1, \ldots, 14$ Dual Dictionary (with objective changed is):

y_1	1.0	$+1.00y_6$	$-4.00y_7$	$+7.00y_8$	$+9.00y_9$	$+9.00y_{10}$	$+7.00y_{11}$	$-3.00y_{12}$	$-7.00y_{13}$	$-3.00y_{14}$
y_2	1.0	$+8.00y_6$	$-7.00y_7$	$+9.00y_8$	$-7.00y_9$	$-8.00y_{10}$	$+8.00y_{11}$	$-9.00y_{12}$	$-5.00y_{13}$	$+6.00y_{14}$
y_3	1.0	$-3.00y_6$	$-9.00y_7$	$-4.00y_8$	$-5.00y_9$	$-8.00y_{10}$	$-2.00y_{11}$	$+2.00y_{12}$	$-10.00y_{13}$	$+3.00y_{14}$
y_4	1.0	$+7.00y_6$	$+10.00y_7$			$-1.00y_{10}$	$-5.00y_{11}$	$-1.00y_{12}$		$-5.00y_{14}$
y_5	1.0		$+4.00y_7$	$-6.00y_8$	$+1.00y_9$	$-8.00y_{10}$	$+5.00y_{11}$	$-10.00y_{12}$	$-10.00y_{13}$	$+10.00y_{14}$
z	-0	$-17.00y_6$	$+3.00y_7$	$-31.00y_8$	$-5.00y_9$		$-37.00y_{11}$	$+2.00y_{12}$	$+40.00y_{13}$	$-10.00y_{14}$

Initialization succeeded in finding final dual dictionary with 6 pivots

y_{14}	0.0391304347826	$+0.26y_6$	$+0.04y_3$	$+1.37y_8$	$+1.34y_9$	$+1.90y_{10}$	$+0.76y_{11}$	$-0.32y_7$	$+0.05y_5$	$-0.$
y_{12}	0.0228260869565	$+0.40y_6$	$+0.11y_3$	$+0.63y_8$	$+1.28y_9$	$+1.11y_{10}$	$+1.03y_{11}$	$+0.90y_7$	$-0.06y_5$	$-0.$
y_2	0.447826086957	$+6.65y_6$	$-0.39y_3$	$+10.83y_8$	$-11.29y_9$	$-6.54y_{10}$	$+2.15y_{11}$	$-12.90y_7$	$+0.77y_5$	$+0.$
y_4	0.78152173913	$+5.29y_6$	$-0.33y_3$	$-7.50y_8$	$-8.00y_9$	$-11.63y_{10}$	$-9.83y_{11}$	$+10.71y_7$	$-0.18y_5$	$+0.$
y_{13}	0.116304347826	$-0.14y_6$	$-0.07y_3$	$+0.14y_8$	$+0.16y_9$	$-0.01y_{10}$	$+0.23y_{11}$	$-0.82y_7$	$+0.00y_5$	$-0.$
z	4.30652173913	$-24.46y_6$	$-2.83y_3$	$-37.90y_8$	$-9.48y_9$	$-17.08y_{10}$	$-33.21y_{11}$	$-24.69y_7$	$-0.46y_5$	$-1.$

Primal Dictionary is:

x_6	24.4565217391	$-0.26x_{14}$	$-0.40x_{12}$	$-6.65x_2$	$-5.29x_4$	$+0.14x_{13}$
x_3	2.82608695652	$-0.04x_{14}$	$-0.11x_{12}$	$+0.39x_2$	$+0.33x_4$	$+0.07x_{13}$
x_8	37.9043478261	$-1.37x_{14}$	$-0.63x_{12}$	$-10.83x_2$	$+7.50x_4$	$-0.14x_{13}$
x_9	9.47608695652	$-1.34x_{14}$	$-1.28x_{12}$	$+11.29x_2$	$+8.00x_4$	$-0.16x_{13}$
x_{10}	17.0826086957	$-1.90x_{14}$	$-1.11x_{12}$	$+6.54x_2$	$+11.63x_4$	$+0.01x_{13}$
x_{11}	33.2065217391	$-0.76x_{14}$	$-1.03x_{12}$	$-2.15x_2$	$+9.83x_4$	$-0.23x_{13}$
x_7	24.6869565217	$+0.32x_{14}$	$-0.90x_{12}$	$+12.90x_2$	$-10.71x_4$	$+0.82x_{13}$
x_5	0.458695652174	$-0.05x_{14}$	$+0.06x_{12}$	$-0.77x_2$	$+0.18x_4$	$-0.00x_{13}$
x_1	1.02173913043	$+0.13x_{14}$	$+0.08x_{12}$	$-0.17x_2$	$-0.73x_4$	$+0.05x_{13}$
z	-4.30652173913	$-0.04x_{14}$	$-0.02x_{12}$	$-0.45x_2$	$-0.78x_4$	$-0.12x_{13}$

Primal Dictionary with original objective is:

x_6	24.4565217391	$-0.26x_{14}$	$-0.40x_{12}$	$-6.65x_2$	$-5.29x_4$	$+0.14x_{13}$
x_3	2.82608695652	$-0.04x_{14}$	$-0.11x_{12}$	$+0.39x_2$	$+0.33x_4$	$+0.07x_{13}$
x_8	37.9043478261	$-1.37x_{14}$	$-0.63x_{12}$	$-10.83x_2$	$+7.50x_4$	$-0.14x_{13}$
x_9	9.47608695652	$-1.34x_{14}$	$-1.28x_{12}$	$+11.29x_2$	$+8.00x_4$	$-0.16x_{13}$
x_{10}	17.0826086957	$-1.90x_{14}$	$-1.11x_{12}$	$+6.54x_2$	$+11.63x_4$	$+0.01x_{13}$
x_{11}	33.2065217391	$-0.76x_{14}$	$-1.03x_{12}$	$-2.15x_2$	$+9.83x_4$	$-0.23x_{13}$
x_7	24.6869565217	$+0.32x_{14}$	$-0.90x_{12}$	$+12.90x_2$	$-10.71x_4$	$+0.82x_{13}$
x_5	0.458695652174	$-0.05x_{14}$	$+0.06x_{12}$	$-0.77x_2$	$+0.18x_4$	$-0.00x_{13}$
x_1	1.02173913043	$+0.13x_{14}$	$+0.08x_{12}$	$-0.17x_2$	$-0.73x_4$	$+0.05x_{13}$
z	2.48260869565	$-0.70x_{14}$	$-0.41x_{12}$	$+2.94x_2$	$+0.93x_4$	$-0.09x_{13}$

1 Optimization Phase Simplex

Starting Dictionary is:

x_6	24.4565217391	$-0.26x_{14}$	$-0.40x_{12}$	$-6.65x_2$	$-5.29x_4$	$+0.14x_{13}$
x_3	2.82608695652	$-0.04x_{14}$	$-0.11x_{12}$	$+0.39x_2$	$+0.33x_4$	$+0.07x_{13}$
x_8	37.9043478261	$-1.37x_{14}$	$-0.63x_{12}$	$-10.83x_2$	$+7.50x_4$	$-0.14x_{13}$
x_9	9.47608695652	$-1.34x_{14}$	$-1.28x_{12}$	$+11.29x_2$	$+8.00x_4$	$-0.16x_{13}$
x_{10}	17.0826086957	$-1.90x_{14}$	$-1.11x_{12}$	$+6.54x_2$	$+11.63x_4$	$+0.01x_{13}$
x_{11}	33.2065217391	$-0.76x_{14}$	$-1.03x_{12}$	$-2.15x_2$	$+9.83x_4$	$-0.23x_{13}$
x_7	24.6869565217	$+0.32x_{14}$	$-0.90x_{12}$	$+12.90x_2$	$-10.71x_4$	$+0.82x_{13}$
x_5	0.458695652174	$-0.05x_{14}$	$+0.06x_{12}$	$-0.77x_2$	$+0.18x_4$	$-0.00x_{13}$
x_1	1.02173913043	$+0.13x_{14}$	$+0.08x_{12}$	$-0.17x_2$	$-0.73x_4$	$+0.05x_{13}$
z	2.48260869565	$-0.70x_{14}$	$-0.41x_{12}$	$+2.94x_2$	$+0.93x_4$	$-0.09x_{13}$

x_2 enters and x_5 leaves

x_6	20.4915254237	$+0.15x_{14}$	$-0.88x_{12}$	$+8.64x_5$	$-6.88x_4$	$+0.17x_{13}$
x_3	3.0593220339	$-0.07x_{14}$	$-0.08x_{12}$	$-0.51x_5$	$+0.42x_4$	$+0.06x_{13}$
x_8	31.4463276836	$-0.70x_{14}$	$-1.42x_{12}$	$+14.08x_5$	$+4.92x_4$	$-0.09x_{13}$
x_9	16.2062146893	$-2.05x_{14}$	$-0.47x_{12}$	$-14.67x_5$	$+10.70x_4$	$-0.21x_{13}$
x_{10}	20.9802259887	$-2.31x_{14}$	$-0.64x_{12}$	$-8.50x_5$	$+13.19x_4$	$-0.02x_{13}$
x_{11}	31.9237288136	$-0.63x_{14}$	$-1.18x_{12}$	$+2.80x_5$	$+9.32x_4$	$-0.22x_{13}$
x_7	32.3785310734	$-0.48x_{14}$	$+0.03x_{12}$	$-16.77x_5$	$-7.63x_4$	$+0.76x_{13}$
x_2	0.59604519774	$-0.06x_{14}$	$+0.07x_{12}$	$-1.30x_5$	$+0.24x_4$	$-0.00x_{13}$
x_1	0.918079096045	$+0.14x_{14}$	$+0.06x_{12}$	$+0.23x_5$	$-0.77x_4$	$+0.06x_{13}$
z	4.23446327684	$-0.89x_{14}$	$-0.20x_{12}$	$-3.82x_5$	$+1.63x_4$	$-0.11x_{13}$

x_4 enters and x_1 leaves

x_6	12.2844036697	$-1.11x_{14}$	$-1.45x_{12}$	$+6.62x_5$	$+8.94x_1$	$-0.32x_{13}$
x_3	3.55963302752	$+0.01x_{14}$	$-0.05x_{12}$	$-0.39x_5$	$-0.54x_1$	$+0.09x_{13}$
x_8	37.3119266055	$+0.20x_{14}$	$-1.01x_{12}$	$+15.52x_5$	$-6.39x_1$	$+0.26x_{13}$
x_9	28.9633027523	$-0.08x_{14}$	$+0.41x_{12}$	$-11.53x_5$	$-13.90x_1$	$+0.56x_{13}$
x_{10}	36.7155963303	$+0.11x_{14}$	$+0.45x_{12}$	$-4.62x_5$	$-17.14x_1$	$+0.92x_{13}$
x_{11}	43.0366972477	$+1.08x_{14}$	$-0.41x_{12}$	$+5.53x_5$	$-12.10x_1$	$+0.44x_{13}$
x_7	23.2752293578	$-1.88x_{14}$	$-0.60x_{12}$	$-19.01x_5$	$+9.92x_1$	$+0.22x_{13}$
x_2	0.880733944954	$-0.02x_{14}$	$+0.09x_{12}$	$-1.23x_5$	$-0.31x_1$	$+0.01x_{13}$
x_4	1.19266055046	$+0.18x_{14}$	$+0.08x_{12}$	$+0.29x_5$	$-1.30x_1$	$+0.07x_{13}$
z	6.18348623853	$-0.59x_{14}$	$-0.06x_{12}$	$-3.34x_5$	$-2.12x_1$	$+0.01x_{13}$

x_{13} enters and x_6 leaves

x_{13}	38.0397727273	$-3.44x_{14}$	$-4.49x_{12}$	$+20.51x_5$	$+27.68x_1$	$-3.10x_6$
x_3	7.11931818182	$-0.31x_{14}$	$-0.47x_{12}$	$+1.53x_5$	$+2.05x_1$	$-0.29x_6$
x_8	47.1534090909	$-0.69x_{14}$	$-2.17x_{12}$	$+20.83x_5$	$+0.77x_1$	$-0.80x_6$
x_9	50.1818181818	$-2.00x_{14}$	$-2.09x_{12}$	$-0.09x_5$	$+1.55x_1$	$-1.73x_6$
x_{10}	71.8238636364	$-3.06x_{14}$	$-3.69x_{12}$	$+14.31x_5$	$+8.41x_1$	$-2.86x_6$
x_{11}	59.8579545455	$-0.44x_{14}$	$-2.40x_{12}$	$+14.60x_5$	$+0.14x_1$	$-1.37x_6$
x_7	31.5113636364	$-2.63x_{14}$	$-1.57x_{12}$	$-14.57x_5$	$+15.91x_1$	$-0.67x_6$
x_2	1.36931818182	$-0.06x_{14}$	$+0.03x_{12}$	$-0.97x_5$	$+0.05x_1$	$-0.04x_6$
x_4	3.91477272727	$-0.06x_{14}$	$-0.24x_{12}$	$+1.76x_5$	$+0.68x_1$	$-0.22x_6$
z	6.60227272727	$-0.62x_{14}$	$-0.11x_{12}$	$-3.11x_5$	$-1.82x_1$	$-0.03x_6$

Final Dictionary Solution: 6.60227272727 Num Pivots: 4