Read in the following dictionary:

x_6	38.0	$-9.00x_1$		$-3.00x_3$	$+4.00x_4$	$-5.00x_5$
x_7	18.0	$-10.00x_1$	$-9.00x_2$	$-6.00x_3$	$-2.00x_4$	$+3.00x_5$
x_8	1.0	$+6.00x_1$	$+7.00x_2$	$-2.00x_3$	$+8.00x_4$	$+6.00x_5$
x_9	13.0	$-2.00x_1$	$-1.00x_2$			$-3.00x_5$
x_{10}	-11.0	$+9.00x_1$	$-4.00x_2$	$+8.00x_3$	$+1.00x_4$	$-3.00x_5$
z	0.0	$-1.00x_1$	$+5.00x_2$	$-5.00x_3$	$-4.00x_4$	$-3.00x_5$

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 $j = 1, \ldots, 10$ Dual Dictionary (with objective changed is):

y_1	1.0	$+9.00y_6$	$+10.00y_7$	$-6.00y_8$	$+2.00y_9$	$-9.00y_{10}$
y_2	1.0		$+9.00y_7$	$-7.00y_8$	$+1.00y_9$	$+4.00y_{10}$
y_3	1.0	$+3.00y_6$	$+6.00y_7$	$+2.00y_8$		$-8.00y_{10}$
y_4	1.0	$-4.00y_6$	$+2.00y_7$	$-8.00y_8$		$-1.00y_{10}$
y_5	1.0	$+5.00y_6$	$-3.00y_7$	$-6.00y_8$	$+3.00y_9$	$+3.00y_{10}$
z	-0	$-38.00y_6$	$-18.00y_7$	$-1.00y_8$	$-13.00y_9$	$+11.00y_{10}$

Initialization succeeded in finding final dual dictionary with 2 pivots

y_{10}	0.111111111111	$+1.00y_6$	$+1.11y_7$	$-0.67y_8$	$+0.22y_9$	$-0.11y_1$
y_2	1.44444444444	$+4.00y_6$	$+13.44y_7$	$-9.67y_8$	$+1.89y_9$	$-0.44y_1$
y_3	0.111111111111	$-5.00y_6$	$-2.89y_7$	$+7.33y_8$	$-1.78y_9$	$+0.89y_1$
y_4	0.888888888889	$-5.00y_6$	$+0.89y_7$	$-7.33y_8$	$-0.22y_9$	$+0.11y_1$
y_5	1.33333333333	$+8.00y_6$	$+0.33y_7$	$-8.00y_8$	$+3.67y_9$	$-0.33y_1$
z	1.22222222222	$-27.00y_6$	$-5.78y_7$	$-8.33y_8$	$-10.56y_9$	$-1.22y_1$

Primal Dictionary is:

x_6	27.0	$-1.00x_{10}$	$-4.00x_2$	$+5.00x_3$	$+5.00x_4$	$-8.00x_5$
x_7	5.77777777778	$-1.11x_{10}$	$-13.44x_2$	$+2.89x_3$	$-0.89x_4$	$-0.33x_5$
x_8	8.33333333333	$+0.67x_{10}$	$+9.67x_2$	$-7.33x_3$	$+7.33x_4$	$+8.00x_5$
x_9	10.5555555556	$-0.22x_{10}$	$-1.89x_2$	$+1.78x_3$	$+0.22x_4$	$-3.67x_5$
x_1	1.22222222222	$+0.11x_{10}$	$+0.44x_2$	$-0.89x_3$	$-0.11x_4$	$+0.33x_5$
z	-1.22222222222	$-0.11x_{10}$	$-1.44x_2$	$-0.11x_3$	$-0.89x_4$	$-1.33x_5$

Primal Dictionary with original objective is:

x_6	27.0	$-1.00x_{10}\ -4.00x_2\ +5.00x_3\ +5.00x_4\ -8.00x_5$
x_7	5.77777777778	$-1.11x_{10}\ -13.44x_2\ +2.89x_3\ -0.89x_4\ -0.33x_5$
x_8	8.33333333333	$+0.67x_{10}\ +9.67x_2\ -7.33x_3\ +7.33x_4\ +8.00x_5$
x_9	10.5555555556	$-0.22x_{10}\ -1.89x_2\ +1.78x_3\ +0.22x_4\ -3.67x_5$
x_1	1.22222222222	$+0.11x_{10}\ +0.44x_2\ -0.89x_3\ -0.11x_4\ +0.33x_5$
z	-1.22222222222	$-0.11x_{10}\ +4.56x_2\ -4.11x_3\ -3.89x_4\ -3.33x_5$

1 Optimization Phase Simplex

Starting Dictionary is:

x_6	27.0	$-1.00x_{10}\ -4.00x_2\ +5.00x_3\ +5.00x_4\ -8.00x_5$
x_7	5.77777777778	$-1.11x_{10}\ -13.44x_2\ +2.89x_3\ -0.89x_4\ -0.33x_5$
x_8	8.33333333333	$+0.67x_{10}\ +9.67x_2\ -7.33x_3\ +7.33x_4\ +8.00x_5$
x_9	10.5555555556	$-0.22x_{10}\ -1.89x_2\ +1.78x_3\ +0.22x_4\ -3.67x_5$
x_1	1.22222222222	$+0.11x_{10}\ +0.44x_2\ -0.89x_3\ -0.11x_4\ +0.33x_5$
z	-1.22222222222	$-0.11x_{10}\ +4.56x_2\ -4.11x_3\ -3.89x_4\ -3.33x_5$

x_2 enters and x_7 leaves

x_6	25.2809917355	$-0.67x_{10}\ +0.30x_7\ +4.14x_3\ +5.26x_4\ -7.90x_5$
x_2	0.429752066116	$-0.08x_{10}\ -0.07x_7\ +0.21x_3\ -0.07x_4\ -0.02x_5$
x_8	12.4876033058	$-0.13x_{10}\ -0.72x_7\ -5.26x_3\ +6.69x_4\ +7.76x_5$
x_9	9.74380165289	$-0.07x_{10}\ +0.14x_7\ +1.37x_3\ +0.35x_4\ -3.62x_5$
x_1	1.4132231405	$+0.07x_{10}\ -0.03x_7\ -0.79x_3\ -0.14x_4\ +0.32x_5$
z	0.735537190083	$-0.49x_{10}\ -0.34x_7\ -3.13x_3\ -4.19x_4\ -3.45x_5$

Final Dictionary Solution: 0.735537190083 Num Pivots: 2