Initial Dictionary

x_6	-15.0	$+4.00x_1$	$+2.00x_2$	$+5.00x_3$	$+4.00x_4$	$-1.00x_5$
x_7	-7.0	$+4.00x_1$	$-2.00x_2$	$+7.00x_3$		$+7.00x_5$
x_8	1.0	$+7.00x_1$	$-1.00x_2$	$-8.00x_3$	$-8.00x_4$	$+2.00x_5$
x_9	32.0	$-10.00x_1$	$-1.00x_2$	$+5.00x_3$	$-3.00x_4$	$-2.00x_5$
x_{10}	38.0	$-7.00x_1$	$-8.00x_2$	$-5.00x_3$	$+2.00x_4$	$+6.00x_5$
x_{11}	0.0	$-6.00x_1$	$+6.00x_2$	$+9.00x_3$	$+7.00x_4$	$-2.00x_5$
x_{12}	-13.0	$+1.00x_1$	$+7.00x_2$	$+9.00x_3$	$-7.00x_4$	$+4.00x_5$
z	0.0	$+5.00x_1$	$-2.00x_2$	$-4.00x_3$	$-3.00x_4$	$+4.00x_5$

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 $j = 1, \ldots, 12$ Dual Dictionary (with objective changed is):

y_1	1.0	$-4.00y_6$	$-4.00y_7$	$-7.00y_8$	$+10.00y_9$	$+7.00y_{10}$	$+6.00y_{11}$	$-1.00y_{12}$
y_2	1.0	$-2.00y_6$	$+2.00y_7$	$+1.00y_8$	$+1.00y_9$	$+8.00y_{10}$	$-6.00y_{11}$	$-7.00y_{12}$
y_3	1.0	$-5.00y_6$	$-7.00y_7$	$+8.00y_8$	$-5.00y_9$	$+5.00y_{10}$	$-9.00y_{11}$	$-9.00y_{12}$
y_4	1.0	$-4.00y_6$		$+8.00y_8$	$+3.00y_9$	$-2.00y_{10}$	$-7.00y_{11}$	$+7.00y_{12}$
y_5	1.0	$+1.00y_6$	$-7.00y_7$	$-2.00y_8$	$+2.00y_9$	$-6.00y_{10}$	$+2.00y_{11}$	$-4.00y_{12}$
z	-0	$+15.00y_6$	$+7.00y_7$	$-1.00y_8$	$-32.00y_9$	$-38.00y_{10}$		$+13.00y_{12}$

Initialization succeeded in finding final dual dictionary with 3 pivots

y_8	0.0149253731343	$+0.06y_3$	$+0.12y_7$	$-0.07y_1$	$+1.04y_9$	$+0.22y_{10}$	$+0.99y_{11}$	$+0.46y_{12}$
y_2	0.567164179104	$+0.27y_3$	$+4.54y_7$	$+0.16y_1$	$+0.70y_9$	$+5.51y_{10}$	$-4.57y_{11}$	$-4.42y_{12}$
y_6	0.223880597015	$-0.10y_3$	$-1.21y_7$	$-0.12y_1$	$+0.67y_9$	$+1.36y_{10}$	$-0.22y_{11}$	$-1.06y_{12}$
y_4	0.223880597015	$+0.90y_3$	$+5.79y_7$	$-0.12y_1$	$+8.67y_9$	$-5.64y_{10}$	$+1.78y_{11}$	$+14.94y_{12}$
y_5	1.19402985075	$-0.22y_3$	$-8.45y_7$	$+0.03y_1$	$+0.58y_9$	$-5.09y_{10}$	$-0.19y_{11}$	$-5.99y_{12}$
z	3.34328358209	$-1.63y_3$	$-11.25y_7$	$-1.72y_1$	$-22.97y_9$	$-17.85y_{10}$	$-4.34y_{11}$	$-3.36y_{12}$

Primal Dictionary is:

x_3	1.62686567164	$-0.06x_8$	$-0.27x_2$	$+0.10x_6$	$-0.90x_4$	$+0.22x_5$
x_7	11.2537313433	$-0.12x_8$	$-4.54x_2$	$+1.21x_6$	$-5.79x_4$	$+8.45x_5$
x_1	1.71641791045	$+0.07x_8$	$-0.16x_2$	$+0.12x_6$	$+0.12x_4$	$-0.03x_5$
x_9	22.9701492537	$-1.04x_8$	$-0.70x_2$	$-0.67x_6$	$-8.67x_4$	$-0.58x_5$
x_{10}	17.8507462687	$-0.22x_8$	$-5.51x_2$	$-1.36x_6$	$+5.64x_4$	$+5.09x_5$
x_{11}	4.34328358209	$-0.99x_8$	$+4.57x_2$	$+0.22x_6$	$-1.78x_4$	$+0.19x_5$
x_{12}	3.35820895522	$-0.46x_8$	$+4.42x_2$	$+1.06x_6$	$-14.94x_4$	$+5.99x_5$
z	-3.34328358209	$-0.01x_8$	$-0.57x_2$	$-0.22x_6$	$-0.22x_4$	$-1.19x_5$

Primal Dictionary with original objective is:

x_3	1.62686567164	$-0.06x_8$	$-0.27x_2$	$+0.10x_6$	$-0.90x_4$	$+0.22x_5$
x_7	11.2537313433	$-0.12x_8$	$-4.54x_2$	$+1.21x_6$	$-5.79x_4$	$+8.45x_5$
x_1	1.71641791045	$+0.07x_8$	$-0.16x_2$	$+0.12x_6$	$+0.12x_4$	$-0.03x_5$
x_9	22.9701492537	$-1.04x_8$	$-0.70x_2$	$-0.67x_6$	$-8.67x_4$	$-0.58x_5$
x_{10}	17.8507462687	$-0.22x_8$	$-5.51x_2$	$-1.36x_6$	$+5.64x_4$	$+5.09x_5$
x_{11}	4.34328358209	$-0.99x_8$	$+4.57x_2$	$+0.22x_6$	$-1.78x_4$	$+0.19x_5$
x_{12}	3.35820895522	$-0.46x_8$	$+4.42x_2$	$+1.06x_6$	$-14.94x_4$	$+5.99x_5$
z	2.07462686567	$+0.61x_8$	$-1.75x_2$	$+0.18x_6$	$+1.18x_4$	$+2.96x_5$

x_4 enters and x_{12} leaves

x_3	1.42557442557	$-0.03x_8$	$-0.53x_2$	$+0.04x_6$	$+0.06x_{12}$	$-0.13x_5$
x_7	9.95204795205	$+0.06x_8$	$-6.25x_2$	$+0.80x_6$	$+0.39x_{12}$	$+6.13x_5$
x_1	1.74325674326	$+0.07x_8$	$-0.13x_2$	$+0.13x_6$	$-0.01x_{12}$	$+0.02x_5$
x_9	21.020979021	$-0.78x_8$	$-3.27x_2$	$-1.29x_6$	$+0.58x_{12}$	$-4.06x_5$
x_{10}	19.1188811189	$-0.40x_8$	$-3.84x_2$	$-0.96x_6$	$-0.38x_{12}$	$+7.35x_5$
x_{11}	3.94405594406	$-0.93x_8$	$+4.04x_2$	$+0.10x_6$	$+0.12x_{12}$	$-0.52x_5$
x_4	0.224775224775	$-0.03x_8$	$+0.30x_2$	$+0.07x_6$	$-0.07x_{12}$	$+0.40x_5$
z	2.33966033966	$+0.58x_8$	$-1.40x_2$	$+0.26x_6$	$-0.08x_{12}$	$+3.43x_5$

x_5 enters and x_9 leaves

x_3	0.726600985222	$-0.01x_8$	$-0.42x_2$	$+0.08x_6$	$+0.04x_{12}$	$+0.03x_9$
x_7	41.7113300493	$-1.11x_8$	$-11.18x_2$	$-1.15x_6$	$+1.26x_{12}$	$-1.51x_9$
x_1	1.83645320197	$+0.07x_8$	$-0.14x_2$	$+0.12x_6$	$-0.01x_{12}$	$-0.00x_9$
x_5	5.18275862069	$-0.19x_8$	$-0.81x_2$	$-0.32x_6$	$+0.14x_{12}$	$-0.25x_9$
x_{10}	57.2103448276	$-1.81x_8$	$-9.76x_2$	$-3.29x_6$	$+0.67x_{12}$	$-1.81x_9$
x_{11}	1.26206896552	$-0.83x_8$	$+4.46x_2$	$+0.26x_6$	$+0.04x_{12}$	$+0.13x_9$
x_4	2.30098522167	$-0.11x_8$	$-0.03x_2$	$-0.06x_6$	$-0.01x_{12}$	$-0.10x_9$
z	20.1039408867	$-0.08x_8$	$-4.16x_2$	$-0.82x_6$	$+0.41x_{12}$	$-0.85x_9$

x_{12} enters and x_4 leaves

x_3	10.4615384615	$-0.46x_8$	$-0.54x_2$	$-0.15x_6$	$-4.23x_4$	$-0.38x_9$
x_7	344.615384615	$-15.28x_8$	$-14.72x_2$	$-8.54x_6$	$-131.64x_4$	$-14.51x_9$
x_1	0.538461538462	$+0.13x_8$	$-0.13x_2$	$+0.15x_6$	$+0.56x_4$	$+0.05x_9$
x_5	39.4615384615	$-1.79x_8$	$-1.21x_2$	$-1.15x_6$	$-14.90x_4$	$-1.72x_9$
x_{10}	218.692307692	$-9.36x_8$	$-11.64x_2$	$-7.23x_6$	$-70.18x_4$	$-8.74x_9$
x_{11}	12.0	$-1.33x_8$	$+4.33x_2$	$+0.00x_6$	$-4.67x_4$	$-0.33x_9$
x_{12}	239.538461538	$-11.21x_8$	$-2.79x_2$	$-5.85x_6$	$-104.10x_4$	$-10.28x_9$
z	118.692307692	$-4.69x_8$	$-5.31x_2$	$-3.23x_6$	$-42.85x_4$	$-5.08x_9$

Final Dictionary Final dictionary after first LP relaxation solve:

x_3	10.4615384615	$-0.46x_8$	$-0.54x_2$	$-0.15x_6$	$-4.23x_4$	$-0.38x_9$
x_7	344.615384615	$-15.28x_8$	$-14.72x_2$	$-8.54x_6$	$-131.64x_4$	$-14.51x_9$
x_1	0.538461538462	$+0.13x_8$	$-0.13x_2$	$+0.15x_6$	$+0.56x_4$	$+0.05x_9$
x_5	39.4615384615	$-1.79x_8$	$-1.21x_2$	$-1.15x_6$	$-14.90x_4$	$-1.72x_9$
x_{10}	218.692307692	$-9.36x_8$	$-11.64x_2$	$-7.23x_6$	$-70.18x_4$	$-8.74x_9$
x_{11}	12.0	$-1.33x_8$	$+4.33x_2$	$+0.00x_6$	$-4.67x_4$	$-0.33x_9$
x_{12}	239.538461538	$-11.21x_8$	$-2.79x_2$	$-5.85x_6$	$-104.10x_4$	$-10.28x_9$
z	118.692307692	$-4.69x_8$	$-5.31x_2$	$-3.23x_6$	$-42.85x_4$	$-5.08x_9$

After cutting plane is added

x_3	10.4615384615	$-0.46x_8$	$-0.54x_2$	$-0.15x_6$	$-4.23x_4$	$-0.38x_9$
x_7	344.615384615	$-15.28x_8$	$-14.72x_2$	$-8.54x_6$	$-131.64x_4$	$-14.51x_9$
x_1	0.538461538462	$+0.13x_8$	$-0.13x_2$	$+0.15x_6$	$+0.56x_4$	$+0.05x_9$
x_5	39.4615384615	$-1.79x_8$	$-1.21x_2$	$-1.15x_6$	$-14.90x_4$	$-1.72x_9$
x_{10}	218.692307692	$-9.36x_8$	$-11.64x_2$	$-7.23x_6$	$-70.18x_4$	$-8.74x_9$
x_{11}	12.0	$-1.33x_8$	$+4.33x_2$	$+0.00x_6$	$-4.67x_4$	$-0.33x_9$
x_{12}	239.538461538	$-11.21x_8$	$-2.79x_2$	$-5.85x_6$	$-104.10x_4$	$-10.28x_9$
x_{13}	-0.461538461538	$+0.46x_8$	$+0.54x_2$	$+0.15x_6$	$+0.23x_4$	$+0.38x_9$
x_{14}	-0.615384615384	$+0.28x_8$	$+0.72x_2$	$+0.54x_6$	$+0.64x_4$	$+0.51x_9$
x_{15}	-0.538461538462	$+0.87x_8$	$+0.13x_2$	$+0.85x_6$	$+0.44x_4$	$+0.95x_9$
x_{16}	-0.461538461538	$+0.79x_8$	$+0.21x_2$	$+0.15x_6$	$+0.90x_4$	$+0.72x_9$
x_{17}	-0.692307692307	$+0.36x_8$	$+0.64x_2$	$+0.23x_6$	$+0.18x_4$	$+0.74x_9$
x_{18}	-0.538461538461	$+0.21x_8$	$+0.79x_2$	$+0.85x_6$	$+0.10x_4$	$+0.28x_9$
z	118.692307692	$-4.69x_8$	$-5.31x_2$	$-3.23x_6$	$-42.85x_4$	$-5.08x_9$

Forming the dual dictionary:

The Final Dual Dictionary is:

Final primal dictionary obtained:

x_3	10.0		$-1.00x_{13}$		$-4.00x_4$	
x_7	330.0	$-4.00x_{15}$	$-22.00x_{13}$	$-3.00x_{14}$	$-122.00x_4$	$-1.00x_{16}$
x_1	0.5	$+0.50x_{15}$	$+0.50x_{13}$	$-0.50x_{14}$	$+1.00x_4$	$-0.50x_{16}$
x_5	38.0	$-1.00x_{15}$	$-2.00x_{13}$	$-0.00x_{14}$	$-14.00x_4$	$-0.00x_{16}$
x_{10}	208.5	$-5.50x_{15}$	$-22.50x_{13}$	$-0.50x_{14}$	$-69.00x_4$	$+7.50x_{16}$
x_{11}	14.0	$-4.00x_{15}$	$+1.00x_{13}$	$+6.00x_{14}$	$-7.00x_4$	$+0.00x_{16}$
x_{12}	233.0	$-7.00x_{15}$	$-6.00x_{13}$	$+3.00x_{14}$	$-98.00x_4$	$-4.00x_{16}$
x_2	0.5	$-0.50x_{15}$	$+1.50x_{13}$	$+0.50x_{14}$	$+0.00x_4$	$-0.50x_{16}$
x_6	$4.87554441264e-13$	$+2.00x_{15}$	$+2.00x_{13}$	$-1.00x_{14}$	$+2.00x_4$	$-3.00x_{16}$
x_8	$1.51517687286e-12$	$+2.00x_{15}$	$+6.00x_{13}$	$-4.00x_{14}$	$+3.00x_4$	$-3.00x_{16}$
x_9	0.499999999998	$-2.50x_{15}$	$-7.50x_{13}$	$+4.50x_{14}$	$-5.00x_4$	$+5.50x_{16}$
x_{17}	$-5.60662627436e-13$	$-1.00x_{15}$	$-2.00x_{13}$	$+2.00x_{14}$	$-2.00x_4$	$+2.00x_{16}$
x_{18}	$4.00457444982e-13$	$+1.00x_{15}$	$+2.00x_{13}$	$+0.00x_{14}$	$+1.00x_4$	$-2.00x_{16}$
z	113.5	$-0.50x_{15}$	$-4.50x_{13}$	$-3.50x_{14}$	$-38.00x_4$	$-1.50x_{16}$

After cutting plane is added

x_3	10.0		$-1.00x_{13}$		$-4.00x_4$	
x_7	330.0	$-4.00x_{15}$	$-22.00x_{13}$	$-3.00x_{14}$	$-122.00x_4$	$-1.00x_{16}$
x_1	0.5	$+0.50x_{15}$	$+0.50x_{13}$	$-0.50x_{14}$	$+1.00x_4$	$-0.50x_{16}$
x_5	38.0	$-1.00x_{15}$	$-2.00x_{13}$	$-0.00x_{14}$	$-14.00x_4$	$-0.00x_{16}$
x_{10}	208.5	$-5.50x_{15}$	$-22.50x_{13}$	$-0.50x_{14}$	$-69.00x_4$	$+7.50x_{16}$
x_{11}	14.0	$-4.00x_{15}$	$+1.00x_{13}$	$+6.00x_{14}$	$-7.00x_4$	$+0.00x_{16}$
x_{12}	233.0	$-7.00x_{15}$	$-6.00x_{13}$	$+3.00x_{14}$	$-98.00x_4$	$-4.00x_{16}$
x_2	0.5	$-0.50x_{15}$	$+1.50x_{13}$	$+0.50x_{14}$	$+0.00x_4$	$-0.50x_{16}$
x_6	$4.87554441264e-13$	$+2.00x_{15}$	$+2.00x_{13}$	$-1.00x_{14}$	$+2.00x_4$	$-3.00x_{16}$
x_8	$1.51517687286e-12$	$+2.00x_{15}$	$+6.00x_{13}$	$-4.00x_{14}$	$+3.00x_4$	$-3.00x_{16}$
x_9	0.499999999998	$-2.50x_{15}$	$-7.50x_{13}$	$+4.50x_{14}$	$-5.00x_4$	$+5.50x_{16}$
x_{17}	$-5.60662627436e-13$	$-1.00x_{15}$	$-2.00x_{13}$	$+2.00x_{14}$	$-2.00x_4$	$+2.00x_{16}$
x_{18}	$4.00457444982e-13$	$+1.00x_{15}$	$+2.00x_{13}$	$+0.00x_{14}$	$+1.00x_4$	$-2.00x_{16}$
x_{19}	-0.5	$+0.50x_{15}$	$+0.50x_{13}$	$+0.50x_{14}$	$+0.00x_4$	$+0.50x_{16}$
x_{20}	-0.5	$+0.50x_{15}$	$+0.50x_{13}$	$+0.50x_{14}$	$+1.00x_4$	$+0.50x_{16}$
x_{21}	-0.5	$+0.50x_{15}$	$+0.50x_{13}$	$+0.50x_{14}$	$+1.00x_4$	$+0.50x_{16}$
x_{22}	-0.499999999998	$+0.50x_{15}$	$+0.50x_{13}$	$+0.50x_{14}$	$+1.00x_4$	$+0.50x_{16}$
z	113.5	$-0.50x_{15}$	$-4.50x_{13}$	$-3.50x_{14}$	$-38.00x_4$	$-1.50x_{16}$

Forming the dual dictionary:

The Final Dual Dictionary is:

Final primal dictionary obtained:

x_3	10.0		$-1.00x_{13}$		$-4.00x_4$	
x_7	327.0	$-6.00x_{19}$	$-17.00x_{13}$	$-2.00x_{14}$	$-120.00x_4$	$+1.00x_{17}$
x_1	0.666666666667	$+0.33x_{19}$	$-0.33x_{13}$	$-0.00x_{14}$	$+0.33x_4$	$-0.33x_{17}$
x_5	37.3333333333	$-1.33x_{19}$	$-0.67x_{13}$	$+0.00x_{14}$	$-13.33x_4$	$+0.33x_{17}$
x_{10}	207.333333333	$-2.33x_{19}$	$-12.67x_{13}$	$-8.00x_{14}$	$-60.33x_4$	$+4.33x_{17}$
x_{11}	11.3333333333	$-5.33x_{19}$	$+6.33x_{13}$	$+6.00x_{14}$	$-4.33x_4$	$+1.33x_{17}$
x_{12}	227.0	$-12.00x_{19}$	$+2.00x_{13}$	$+7.00x_{14}$	$-96.00x_4$	$+1.00x_{17}$
x_2	$-3.61137046193e-13$	$-1.00x_{19}$	$+2.00x_{13}$	$+1.00x_{14}$	$+0.00x_4$	$-0.00x_{17}$
x_6	0.333333333333	$+0.67x_{19}$	$-1.67x_{13}$	$+2.00x_{14}$	$-1.33x_4$	$-1.67x_{17}$
x_8	0.333333333334	$+0.67x_{19}$	$+2.33x_{13}$	$-1.00x_{14}$	$-0.33x_4$	$-1.67x_{17}$
x_{16}	0.333333333334	$+0.67x_{19}$	$+0.33x_{13}$	$-1.00x_{14}$	$+0.67x_4$	$+0.33x_{17}$
x_9	0.666666666666	$+0.33x_{19}$	$-2.33x_{13}$	$-1.00x_{14}$	$+0.33x_4$	$+2.67x_{17}$
x_{18}	$-1.57623913921e-13$	$+0.00x_{19}$	$-0.00x_{13}$	$+2.00x_{14}$	$-1.00x_4$	$-1.00x_{17}$
x_{15}	0.666666666667	$+1.33x_{19}$	$-1.33x_{13}$	$-0.00x_{14}$	$-0.67x_4$	$-0.33x_{17}$
x_{20}	$4.17739916732e-13$	$+1.00x_{19}$	$-0.00x_{13}$	$+0.00x_{14}$	$+1.00x_4$	$+0.00x_{17}$
x_{21}	$3.61137046193e-13$	$+1.00x_{19}$	$+0.00x_{13}$	$-0.00x_{14}$	$+1.00x_4$	$+0.00x_{17}$
x_{22}	$1.95486219804e-12$	$+1.00x_{19}$	$+0.00x_{13}$	$-0.00x_{14}$	$+1.00x_4$	$+0.00x_{17}$
z	112.666666667	$-1.67x_{19}$	$-4.33x_{13}$	$-2.00x_{14}$	$-38.67x_4$	$-0.33x_{17}$

After cutting plane is added

x_3	10.0		$-1.00x_{13}$		$-4.00x_4$	
x_7	327.0	$-6.00x_{19}$	$-17.00x_{13}$	$-2.00x_{14}$	$-120.00x_4$	$+1.00x_{17}$
x_1	0.666666666667	$+0.33x_{19}$	$-0.33x_{13}$	$-0.00x_{14}$	$+0.33x_4$	$-0.33x_{17}$
x_5	37.3333333333	$-1.33x_{19}$	$-0.67x_{13}$	$+0.00x_{14}$	$-13.33x_4$	$+0.33x_{17}$
x_{10}	207.333333333	$-2.33x_{19}$	$-12.67x_{13}$	$-8.00x_{14}$	$-60.33x_4$	$+4.33x_{17}$
x_{11}	11.3333333333	$-5.33x_{19}$	$+6.33x_{13}$	$+6.00x_{14}$	$-4.33x_4$	$+1.33x_{17}$
x_{12}	227.0	$-12.00x_{19}$	$+2.00x_{13}$	$+7.00x_{14}$	$-96.00x_4$	$+1.00x_{17}$
x_2	$-3.61137046193e-13$	$-1.00x_{19}$	$+2.00x_{13}$	$+1.00x_{14}$	$+0.00x_4$	$-0.00x_{17}$
x_6	0.333333333333	$+0.67x_{19}$	$-1.67x_{13}$	$+2.00x_{14}$	$-1.33x_4$	$-1.67x_{17}$
x_8	0.333333333334	$+0.67x_{19}$	$+2.33x_{13}$	$-1.00x_{14}$	$-0.33x_4$	$-1.67x_{17}$
x_{16}	0.333333333334	$+0.67x_{19}$	$+0.33x_{13}$	$-1.00x_{14}$	$+0.67x_4$	$+0.33x_{17}$
x_9	0.666666666666	$+0.33x_{19}$	$-2.33x_{13}$	$-1.00x_{14}$	$+0.33x_4$	$+2.67x_{17}$
x_{18}	$-1.57623913921e-13$	$+0.00x_{19}$	$-0.00x_{13}$	$+2.00x_{14}$	$-1.00x_4$	$-1.00x_{17}$
x_{15}	0.666666666667	$+1.33x_{19}$	$-1.33x_{13}$	$-0.00x_{14}$	$-0.67x_4$	$-0.33x_{17}$
x_{20}	$4.17739916732e-13$	$+1.00x_{19}$	$-0.00x_{13}$	$+0.00x_{14}$	$+1.00x_4$	$+0.00x_{17}$
x_{21}	$3.61137046193e-13$	$+1.00x_{19}$	$+0.00x_{13}$	$-0.00x_{14}$	$+1.00x_4$	$+0.00x_{17}$
x_{22}	$1.95486219804e-12$	$+1.00x_{19}$	$+0.00x_{13}$	$-0.00x_{14}$	$+1.00x_4$	$+0.00x_{17}$
x_{23}	-0.666666666667	$+0.67x_{19}$	$+0.33x_{13}$	$+0.00x_{14}$	$+0.67x_4$	$+0.33x_{17}$
x_{24}	-0.333333333333	$+0.33x_{19}$	$+0.67x_{13}$	$+1.00x_{14}$	$+0.33x_4$	$+0.67x_{17}$
x_{25}	-0.333333333335	$+0.33x_{19}$	$+0.67x_{13}$	$+0.00x_{14}$	$+0.33x_4$	$+0.67x_{17}$
x_{26}	-0.333333333331	$+0.33x_{19}$	$+0.67x_{13}$	$+1.00x_{14}$	$+0.33x_4$	$+0.67x_{17}$
x_{27}	-0.333333333333	$+0.33x_{19}$	$+0.67x_{13}$	$+1.00x_{14}$	$+0.33x_4$	$+0.67x_{17}$
x_{28}	-0.333333333334	$+0.33x_{19}$	$+0.67x_{13}$	$+0.00x_{14}$	$+0.33x_4$	$+0.67x_{17}$
x_{29}	-0.333333333334	$+0.33x_{19}$	$+0.67x_{13}$	$+0.00x_{14}$	$+0.33x_4$	$+0.67x_{17}$
x_{30}	-0.666666666666	$+0.67x_{19}$	$+0.33x_{13}$	$+0.00x_{14}$	$+0.67x_4$	$+0.33x_{17}$
x_{31}	-0.666666666667	$+0.67x_{19}$	$+0.33x_{13}$	$+0.00x_{14}$	$+0.67x_4$	$+0.33x_{17}$
z	112.666666667	$-1.67x_{19}$	$-4.33x_{13}$	$-2.00x_{14}$	$-38.67x_4$	$-0.33x_{17}$

Forming the dual dictionary:

The Final Dual Dictionary is:

Final primal dictionary obtained:

x_3	9.81818181818	$+0.09x_{18}$	$-0.12x_8$	$-0.30x_2$	$-3.73x_4$ $-0.33x_{23}$
x_7	320.090909091	$-0.55x_{18}$	$-2.61x_8$	$-3.52x_2$	$-113.64x_4$ $-11.67x_{23}$
x_1	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$ $+0.00x_{23}$
x_5	36.5454545455	$-0.27x_{18}$	$-0.30x_8$	$+0.24x_2$	$-12.82x_4$ $-1.33x_{23}$
x_{10}	203.727272727	$-3.36x_{18}$	$-1.85x_8$	$-3.12x_2$	$-60.09x_4$ $-6.33x_{23}$
x_{11}	11.4545454545	$+0.27x_{18}$	$-1.03x_8$	$+4.42x_2$	$-4.18x_4$ $-0.33x_{23}$
x_{12}	222.181818182	$-0.09x_{18}$	$-2.21x_8$	$+4.97x_2$	$-91.27x_4$ $-8.33x_{23}$
x_{14}	0.272727272727	$+0.36x_{18}$	$-0.15x_8$	$+0.12x_2$	$+0.09x_4$ $+0.33x_{23}$
x_{19}	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$-0.45x_4$ $+1.00x_{23}$
x_{13}	0.181818181818	$-0.09x_{18}$	$+0.12x_8$	$+0.30x_2$	$-0.27x_4$ $+0.33x_{23}$
x_{16}	0.727272727273	$-0.36x_{18}$	$+0.15x_8$	$-0.12x_2$	$-0.09x_4$ $+0.67x_{23}$
x_9	1.63636363636	$-0.82x_{18}$	$-0.91x_8$	$-0.27x_2$	$-1.45x_4$ $+1.00x_{23}$
x_6	0.0909090909086	$+1.45x_{18}$	$+0.06x_8$	$-0.85x_2$	$+0.36x_4$ $-0.33x_{23}$
x_{15}	1.09090909091	$+0.45x_{18}$	$+0.06x_8$	$-0.85x_2$	$-0.64x_4$ $+0.67x_{23}$
x_{20}	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$ $+1.00x_{23}$
x_{21}	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$ $+1.00x_{23}$
x_{22}	0.636363636365	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$ $+1.00x_{23}$
x_{17}	0.545454545455	$-0.27x_{18}$	$-0.30x_8$	$+0.24x_2$	$-0.82x_4$ $+0.67x_{23}$
x_{24}	0.636363636364	$+0.18x_{18}$	$-0.24x_8$	$+0.39x_2$	$-0.45x_4$ $+1.33x_{23}$
x_{25}	0.363636363635	$-0.18x_{18}$	$-0.09x_8$	$+0.27x_2$	$-0.55x_4$ $+1.00x_{23}$
x_{26}	0.636363636366	$+0.18x_{18}$	$-0.24x_8$	$+0.39x_2$	$-0.45x_4$ $+1.33x_{23}$
x_{27}	0.636363636364	$+0.18x_{18}$	$-0.24x_8$	$+0.39x_2$	$-0.45x_4$ $+1.33x_{23}$
x_{28}	0.363636363636	$-0.18x_{18}$	$-0.09x_8$	$+0.27x_2$	$-0.55x_4$ $+1.00x_{23}$
x_{29}	0.363636363636	$-0.18x_{18}$	$-0.09x_8$	$+0.27x_2$	$-0.55x_4$ $+1.00x_{23}$
x_{30}	$3.06695325701e-13$	$-0.00x_{18}$	$-0.00x_8$	$+0.00x_2$	$-0.00x_4$ $+1.00x_{23}$
x_{31}	$-3.02788097625e-17$	$+0.00x_{18}$	$-0.00x_8$	$-0.00x_2$	$+0.00x_4$ $+1.00x_{23}$
z	110.090909091	$-0.55x_{18}$	$-0.27x_8$	$-1.18x_2$	$-36.64x_4$ $-4.00x_{23}$

After cutting plane is added

x_3	9.81818181818	$+0.09x_{18}$	$-0.12x_8$	$-0.30x_2$	$-3.73x_4$	$-0.33x_{23}$
x_7	320.090909091	$-0.55x_{18}$	$-2.61x_8$	$-3.52x_2$	$-113.64x_4$	$-11.67x_{23}$
x_1	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$	$+0.00x_{23}$
x_5	36.5454545455	$-0.27x_{18}$	$-0.30x_8$	$+0.24x_2$	$-12.82x_4$	$-1.33x_{23}$
x_{10}	203.727272727	$-3.36x_{18}$	$-1.85x_8$	$-3.12x_2$	$-60.09x_4$	$-6.33x_{23}$
x_{11}	11.4545454545	$+0.27x_{18}$	$-1.03x_8$	$+4.42x_2$	$-4.18x_4$	$-0.33x_{23}$
x_{12}	222.181818182	$-0.09x_{18}$	$-2.21x_8$	$+4.97x_2$	$-91.27x_4$	$-8.33x_{23}$
x_{14}	0.272727272727	$+0.36x_{18}$	$-0.15x_8$	$+0.12x_2$	$+0.09x_4$	$+0.33x_{23}$
x_{19}	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$-0.45x_4$	$+1.00x_{23}$
x_{13}	0.181818181818	$-0.09x_{18}$	$+0.12x_8$	$+0.30x_2$	$-0.27x_4$	$+0.33x_{23}$
x_{16}	0.727272727273	$-0.36x_{18}$	$+0.15x_8$	$-0.12x_2$	$-0.09x_4$	$+0.67x_{23}$
x_9	1.63636363636	$-0.82x_{18}$	$-0.91x_8$	$-0.27x_2$	$-1.45x_4$	$+1.00x_{23}$
x_6	0.0909090909086	$+1.45x_{18}$	$+0.06x_8$	$-0.85x_2$	$+0.36x_4$	$-0.33x_{23}$
x_{15}	1.09090909091	$+0.45x_{18}$	$+0.06x_8$	$-0.85x_2$	$-0.64x_4$	$+0.67x_{23}$
x_{20}	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$	$+1.00x_{23}$
x_{21}	0.636363636364	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$	$+1.00x_{23}$
x_{22}	0.636363636365	$+0.18x_{18}$	$+0.09x_8$	$-0.27x_2$	$+0.55x_4$	$+1.00x_{23}$
x_{17}	0.545454545455	$-0.27x_{18}$	$-0.30x_8$	$+0.24x_2$	$-0.82x_4$	$+0.67x_{23}$
x_{24}	0.636363636364	$+0.18x_{18}$	$-0.24x_8$	$+0.39x_2$	$-0.45x_4$	$+1.33x_{23}$
x_{25}	0.363636363635	$-0.18x_{18}$	$-0.09x_8$	$+0.27x_2$	$-0.55x_4$	$+1.00x_{23}$
x_{26}	0.636363636366	$+0.18x_{18}$	$-0.24x_8$	$+0.39x_2$	$-0.45x_4$	$+1.33x_{23}$
x_{27}	0.636363636364	$+0.18x_{18}$	$-0.24x_8$	$+0.39x_2$	$-0.45x_4$	$+1.33x_{23}$
x_{28}	0.363636363636	$-0.18x_{18}$	$-0.09x_8$	$+0.27x_2$	$-0.55x_4$	$+1.00x_{23}$
x_{29}	0.363636363636	$-0.18x_{18}$	$-0.09x_8$	$+0.27x_2$	$-0.55x_4$	$+1.00x_{23}$
x_{30}	$3.06695325701e-13$	$-0.00x_{18}$	$-0.00x_8$	$+0.00x_2$	$-0.00x_4$	$+1.00x_{23}$
x_{31}	$-3.02788097625e-17$	$+0.00x_{18}$	$-0.00x_8$	$-0.00x_2$	$+0.00x_4$	$+1.00x_{23}$
x_{32}	-0.818181818182	$+0.91x_{18}$	$+0.12x_8$	$+0.30x_2$	$+0.73x_4$	$+0.33x_{23}$
x_{33}	-0.090909090909	$+0.55x_{18}$	$+0.61x_8$	$+0.52x_2$	$+0.64x_4$	$+0.67x_{23}$
x_{34}	-0.636363636364	$+0.82x_{18}$	$+0.91x_8$	$+0.27x_2$	$+0.45x_4$	$+1.00x_{23}$
x_{35}	-0.545454545455	$+0.27x_{18}$	$+0.30x_8$	$+0.76x_2$	$+0.82x_4$	$+0.33x_{23}$
x_{36}	-0.727272727273	$+0.36x_{18}$	$+0.85x_8$	$+0.12x_2$	$+0.09x_4$	$+0.33x_{23}$
x_{37}	-0.454545454545	$+0.73x_{18}$	$+0.03x_8$	$+0.58x_2$	$+0.18x_4$	$+0.33x_{23}$
x_{38}	-0.181818181818	$+0.09x_{18}$	$+0.21x_8$	$+0.03x_2$	$+0.27x_4$	$+0.33x_{23}$
x_{39}	-0.272727272727	$+0.64x_{18}$	$+0.15x_8$	$+0.88x_2$	$+0.91x_4$	$+0.67x_{23}$
x_{40}	-0.636363636364	$+0.82x_{18}$	$+0.91x_8$	$+0.27x_2$	$+0.45x_4$	$+1.00x_{23}$
x_{41}	-0.181818181818	$+0.09x_{18}$	$+0.88x_8$	$+0.70x_2$	$+0.27x_4$	$+0.67x_{23}$
x_{42}	-0.727272727273	$+0.36x_{18}$	$+0.85x_8$	$+0.12x_2$	$+0.09x_4$	$+0.33x_{23}$
x_{43}	-0.636363636364	$+0.82x_{18}$	$+0.91x_8$	$+0.27x_2$	$+0.45x_4$	$+0.00x_{23}$
x_{44}	-0.0909090909086	$+0.55x_{18}$	$+0.94x_8$	$+0.85x_2$	$+0.64x_4$	$+0.33x_{23}$
x_{45}	-0.0909090909089	$+0.55x_{18}$	$+0.94x_8$	$+0.85x_2$	$+0.64x_4$	$+0.33x_{23}$
x_{46}	-0.636363636364	$+0.82x_{18}$	$+0.91x_8$	$+0.27x_2$	$+0.45x_4$	$+0.00x_{23}$
x_{47}	-0.636363636364	$+0.82x_{18}$	$+0.91x_8$	$+0.27x_2$	$+0.45x_4$	$+0.00x_{23}$
x_{48}	-0.636363636365	$+0.82x_{18}$	$+0.91x_8$	$+0.27x_2$	$+0.45x_4$	$+0.00x_{23}$
x_{49}	-0.545454545455	$+0.27x_{18}$	$+0.30x_8$	$+0.76x_2$	$+0.82x_4$	$+0.33x_{23}$
x_{50}	-0.636363636364	$+0.82x_{18}$	$+0.24x_8$	$+0.61x_2$	$+0.45x_4$	$+0.67x_{23}$
x_{51}	-0.363636363635	$+0.18x_{18}$	$+0.09x_8$	$+0.73x_2$	$+0.55x_4$	$+1.00x_{23}$
x_{52}	-0.636363636366	$+0.82x_{18}$	$+0.24x_8$	$+0.61x_2$	$+0.45x_4$	$+0.67x_{23}$
x_{53}	-0.636363636364	$+0.82x_{18}$	$+0.24x_8$	$+0.61x_2$	$+0.45x_4$	$+0.67x_{23}$
x_{54}	-0.363636363636	$+0.18x_{18}$	$+0.09x_8$	$+0.73x_2$	$+0.55x_4$	$+1.00x_{23}$
x_{55}	-0.363636363636	$+0.18x_{18}$	$+0.09x_8$	$+0.73x_2$	$+0.55x_4$	$+1.00x_{23}$
z	110.090909091	$-0.55x_{18}$	$-0.27x_8$	$-1.18x_2$	$-36.64x_4$	$-4.00x_{23}$

Forming the dual dictionary:

The Final Dual Dictionary is:

Final primal dictionary obtained:

x_3	9.75	$+0.25x_{32}$	$-0.50x_{35}$	$-0.00x_{51}$	$-3.50x_4$	$-0.25x_{23}$
x_7	317.5	$+1.50x_{32}$	$-11.00x_{35}$	$+6.00x_{51}$	$-109.00x_4$	$-14.50x_{23}$
x_1	0.750000000001	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+0.75x_{23}$
x_5	36.25	$-0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-12.50x_4$	$-2.75x_{23}$
x_{10}	199.5	$-2.50x_{32}$	$-6.00x_{35}$	$+3.00x_{51}$	$-55.00x_4$	$-6.50x_{23}$
x_{11}	12.25	$-0.25x_{32}$	$-7.50x_{35}$	$+14.00x_{51}$	$-5.50x_4$	$-11.75x_{23}$
x_{12}	222.25	$-0.25x_{32}$	$-13.50x_{35}$	$+21.00x_{51}$	$-91.50x_4$	$-24.75x_{23}$
x_{14}	0.499999999999	$+0.50x_{32}$	$-1.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$-0.50x_{23}$
x_{19}	0.750000000001	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$-0.50x_4$	$+1.75x_{23}$
x_{13}	0.25	$-0.25x_{32}$	$+0.50x_{35}$	$+0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{16}	0.500000000002	$-0.50x_{32}$	$+1.00x_{35}$	$-1.00x_{51}$	$-0.00x_4$	$+1.50x_{23}$
x_9	0.499999999994	$-0.50x_{32}$	$-4.00x_{35}$	$+4.00x_{51}$	$+0.00x_4$	$-1.50x_{23}$
x_6	1.0	$+2.00x_{32}$	$+0.00x_{35}$	$-2.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{15}	1.25	$+0.75x_{32}$	$+0.50x_{35}$	$-2.00x_{51}$	$-0.50x_4$	$+2.25x_{23}$
x_{20}	0.750000000002	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+1.75x_{23}$
x_{21}	0.750000000002	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+1.75x_{23}$
x_{22}	0.750000000003	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+1.75x_{23}$
x_{17}	0.249999999997	$-0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.75x_{23}$
x_{24}	0.749999999998	$+0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{25}	0.249999999997	$-0.25x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{26}	0.75	$+0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{27}	0.749999999998	$+0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{28}	0.249999999998	$-0.25x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{29}	0.249999999998	$-0.25x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{30}	$2.97796509674e-13$	$-0.00x_{32}$	$-0.00x_{35}$	$+0.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{31}	$-4.16333634235e-17$	$+0.00x_{32}$	$-0.00x_{35}$	$-0.00x_{51}$	$+0.00x_4$	$+1.00x_{23}$
x_{18}	0.75	$+1.25x_{32}$	$-0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{33}	0.750000000003	$+0.25x_{32}$	$+2.50x_{35}$	$-2.00x_{51}$	$-0.50x_4$	$+1.75x_{23}$
x_{34}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.50x_{23}$
x_8	0.500000000007	$-0.50x_{32}$	$+5.00x_{35}$	$-5.00x_{51}$	$-1.00x_4$	$+3.50x_{23}$
x_{36}	$5.17502707353e-12$	$-0.00x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.00x_{23}$
x_{37}	0.249999999999	$+0.75x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$-0.75x_{23}$
x_{38}	$1.70138902966e-12$	$-0.00x_{32}$	$+1.00x_{35}$	$-1.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{39}	0.499999999998	$+0.50x_{32}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$-0.50x_{23}$
x_{40}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.50x_{23}$
x_{41}	0.500000000004	$-0.50x_{32}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{42}	$5.77193848272e-12$	$-0.00x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.00x_{23}$
x_{43}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{44}	1.0	$-0.00x_{32}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.00x_{23}$
x_{45}	1.0	$-0.00x_{32}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.00x_{23}$
x_{46}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{47}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{48}	0.500000000004	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{49}	$-2.38836728172e-13$	$+0.00x_{32}$	$+1.00x_{35}$	$-0.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{50}	0.249999999999	$+0.75x_{32}$	$+0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_2	0.249999999997	$-0.25x_{32}$	$-0.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-1.75x_{23}$
x_{52}	0.249999999997	$+0.75x_{32}$	$+0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{53}	0.249999999999	$+0.75x_{32}$	$+0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{54}	$-9.57164902893e-13$	$+0.00x_{32}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{55}	$-1.32507893547e-12$	$+0.00x_{32}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
z	109.25	$-0.25x_{32}$	$-0.50x_{35}$	$-1.00x_{51}$	$-35.50x_4$	$-2.75x_{23}$

After cutting plane is added

x_3	9.75	$+0.25x_{32}$	$-0.50x_{35}$	$-0.00x_{51}$	$-3.50x_4$	$-0.25x_{23}$
x_7	317.5	$+1.50x_{32}$	$-11.00x_{35}$	$+6.00x_{51}$	$-109.00x_4$	$-14.50x_{23}$
x_1	0.750000000001	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+0.75x_{23}$
x_5	36.25	$-0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-12.50x_4$	$-2.75x_{23}$
x_{10}	199.5	$-2.50x_{32}$	$-6.00x_{35}$	$+3.00x_{51}$	$-55.00x_4$	$-6.50x_{23}$
x_{11}	12.25	$-0.25x_{32}$	$-7.50x_{35}$	$+14.00x_{51}$	$-5.50x_4$	$-11.75x_{23}$
x_{12}	222.25	$-0.25x_{32}$	$-13.50x_{35}$	$+21.00x_{51}$	$-91.50x_4$	$-24.75x_{23}$
x_{14}	0.499999999999	$+0.50x_{32}$	$-1.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$-0.50x_{23}$
x_{19}	0.750000000001	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$-0.50x_4$	$+1.75x_{23}$
x_{13}	0.25	$-0.25x_{32}$	$+0.50x_{35}$	$+0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{16}	0.500000000002	$-0.50x_{32}$	$+1.00x_{35}$	$-1.00x_{51}$	$-0.00x_4$	$+1.50x_{23}$
x_9	0.499999999994	$-0.50x_{32}$	$-4.00x_{35}$	$+4.00x_{51}$	$+0.00x_4$	$-1.50x_{23}$
x_6	1.0	$+2.00x_{32}$	$+0.00x_{35}$	$-2.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{15}	1.25	$+0.75x_{32}$	$+0.50x_{35}$	$-2.00x_{51}$	$-0.50x_4$	$+2.25x_{23}$
x_{20}	0.750000000002	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+1.75x_{23}$
x_{21}	0.750000000002	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+1.75x_{23}$
x_{22}	0.750000000003	$+0.25x_{32}$	$+0.50x_{35}$	$-1.00x_{51}$	$+0.50x_4$	$+1.75x_{23}$
x_{17}	0.249999999997	$-0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.75x_{23}$
x_{24}	0.749999999998	$+0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{25}	0.249999999997	$-0.25x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{26}	0.75	$+0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{27}	0.749999999998	$+0.25x_{32}$	$-1.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{28}	0.249999999998	$-0.25x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{29}	0.249999999998	$-0.25x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{30}	$2.97796509674e-13$	$-0.00x_{32}$	$-0.00x_{35}$	$+0.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{31}	$-4.16333634235e-17$	$+0.00x_{32}$	$-0.00x_{35}$	$-0.00x_{51}$	$+0.00x_4$	$+1.00x_{23}$
x_{18}	0.75	$+1.25x_{32}$	$-0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$-0.25x_{23}$
x_{33}	0.750000000003	$+0.25x_{32}$	$+2.50x_{35}$	$-2.00x_{51}$	$-0.50x_4$	$+1.75x_{23}$
x_{34}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.50x_{23}$
x_8	0.500000000007	$-0.50x_{32}$	$+5.00x_{35}$	$-5.00x_{51}$	$-1.00x_4$	$+3.50x_{23}$
x_{36}	$5.17502707353e-12$	$-0.00x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.00x_{23}$
x_{37}	0.249999999999	$+0.75x_{32}$	$-0.50x_{35}$	$+1.00x_{51}$	$-0.50x_4$	$-0.75x_{23}$
x_{38}	$1.70138902966e-12$	$-0.00x_{32}$	$+1.00x_{35}$	$-1.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{39}	0.499999999998	$+0.50x_{32}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$-0.50x_{23}$
x_{40}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.50x_{23}$
x_{41}	0.500000000004	$-0.50x_{32}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{42}	$5.77193848272e-12$	$-0.00x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.00x_{23}$
x_{43}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{44}	1.0	$-0.00x_{32}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.00x_{23}$
x_{45}	1.0	$-0.00x_{32}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.00x_{23}$
x_{46}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{47}	0.500000000006	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{48}	0.500000000004	$+0.50x_{32}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+2.50x_{23}$
x_{49}	$-2.38836728172e-13$	$+0.00x_{32}$	$+1.00x_{35}$	$-0.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{50}	0.249999999999	$+0.75x_{32}$	$+0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_2	0.249999999997	$-0.25x_{32}$	$-0.50x_{35}$	$+2.00x_{51}$	$-0.50x_4$	$-1.75x_{23}$
x_{52}	0.249999999997	$+0.75x_{32}$	$+0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{53}	0.249999999999	$+0.75x_{32}$	$+0.50x_{35}$	$-0.00x_{51}$	$-0.50x_4$	$+0.25x_{23}$
x_{54}	$-9.57164902893e-13$	$+0.00x_{32}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{55}	$-1.32507893547e-12$	$+0.00x_{32}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{56}	-0.75	$+0.75x_{32}$	$+0.50x_{35}$	$+0.00x_{51}$	$+0.50x_4$	$+0.25x_{23}$
x_{57}	-0.499999999991	$+0.50x_{32}$	$+0.00x_{35}$	$+0.00x_{51}$	$+1.00x_4$	$+0.50x_{23}$
x_{58}	-0.750000000001	$+0.75x_{32}$	$+0.50x_{35}$	$+0.00x_{51}$	$+0.50x_4$	$+0.25x_{23}$
x_{59}	-0.249999999997	$+0.25x_{32}$	$+0.50x_{35}$	$+1.00x_{51}$	$+0.50x_4$	$+0.75x_{23}$
x_{60}	-0.499999999996	$+0.50x_{32}$	$+0.00x_{35}$	$+1.00x_{51}$	$+1.00x_4$	$+0.50x_{23}$
x_{61}	-0.24999999998	$+0.25x_{32}$	$+0.50x_{35}$	$+1.00x_{51}$	$+0.50x_4$	$+0.75x_{23}$
x_{62}	-0.249999999969	$+0.25x_{32}$	$+0.50x_{35}$	$+1.00x_{51}$	$+0.50x_4$	$+0.75x_{23}$
x_{63}	-0.499999999999	$+0.50x_{32}$	$+0.00x_{35}$	$+1.00x_{51}$	$+1.00x_4$	$+0.50x_{23}$
x_{64}	-0.750000000001	$+0.75x_{32}$	$+0.50x_{35}$	$+0.00x_{51}$	$+0.50x_4$	$+0.25x_{23}$

Forming the dual dictionary:

The Final Dual Dictionary is:

Final primal dictionary obtained:

x_3	10.0	$+0.33x_{56}$	$-0.67x_{35}$	$-0.00x_{51}$	$-3.67x_4$	$-0.33x_{23}$
x_7	319.0	$+2.00x_{56}$	$-12.00x_{35}$	$+6.00x_{51}$	$-110.00x_4$	$-15.00x_{23}$
x_1	1.0	$+0.33x_{56}$	$+0.33x_{35}$	$-1.00x_{51}$	$+0.33x_4$	$+0.67x_{23}$
x_5	36.0	$-0.33x_{56}$	$-1.33x_{35}$	$+2.00x_{51}$	$-12.33x_4$	$-2.67x_{23}$
x_{10}	197.0	$-3.33x_{56}$	$-4.33x_{35}$	$+3.00x_{51}$	$-53.33x_4$	$-5.67x_{23}$
x_{11}	12.0	$-0.33x_{56}$	$-7.33x_{35}$	$+14.00x_{51}$	$-5.33x_4$	$-11.67x_{23}$
x_{12}	222.0	$-0.33x_{56}$	$-13.33x_{35}$	$+21.00x_{51}$	$-91.33x_4$	$-24.67x_{23}$
x_{14}	0.999999999999	$+0.67x_{56}$	$-1.33x_{35}$	$+1.00x_{51}$	$-0.33x_4$	$-0.67x_{23}$
x_{19}	1.0	$+0.33x_{56}$	$+0.33x_{35}$	$-1.00x_{51}$	$-0.67x_4$	$+1.67x_{23}$
x_{13}	$9.67559365961e-14$	$-0.33x_{56}$	$+0.67x_{35}$	$+0.00x_{51}$	$-0.33x_4$	$+0.33x_{23}$
x_{16}	$1.6748269438e-12$	$-0.67x_{56}$	$+1.33x_{35}$	$-1.00x_{51}$	$+0.33x_4$	$+1.67x_{23}$
x_9	$-5.52352608096e-12$	$-0.67x_{56}$	$-3.67x_{35}$	$+4.00x_{51}$	$+0.33x_4$	$-1.33x_{23}$
x_6	3.0	$+2.67x_{56}$	$-1.33x_{35}$	$-2.00x_{51}$	$-1.33x_4$	$+0.33x_{23}$
x_{15}	2.0	$+1.00x_{56}$	$+0.00x_{35}$	$-2.00x_{51}$	$-1.00x_4$	$+2.00x_{23}$
x_{20}	1.0	$+0.33x_{56}$	$+0.33x_{35}$	$-1.00x_{51}$	$+0.33x_4$	$+1.67x_{23}$
x_{21}	1.0	$+0.33x_{56}$	$+0.33x_{35}$	$-1.00x_{51}$	$+0.33x_4$	$+1.67x_{23}$
x_{22}	1.0	$+0.33x_{56}$	$+0.33x_{35}$	$-1.00x_{51}$	$+0.33x_4$	$+1.67x_{23}$
x_{17}	$-2.56270005217e-12$	$-0.33x_{56}$	$-1.33x_{35}$	$+2.00x_{51}$	$-0.33x_4$	$-0.67x_{23}$
x_{24}	0.999999999998	$+0.33x_{56}$	$-1.67x_{35}$	$+2.00x_{51}$	$-0.67x_4$	$-0.33x_{23}$
x_{25}	$-2.79568035388e-12$	$-0.33x_{56}$	$-0.33x_{35}$	$+1.00x_{51}$	$-0.33x_4$	$+0.33x_{23}$
x_{26}	1.0	$+0.33x_{56}$	$-1.67x_{35}$	$+2.00x_{51}$	$-0.67x_4$	$-0.33x_{23}$
x_{27}	0.999999999998	$+0.33x_{56}$	$-1.67x_{35}$	$+2.00x_{51}$	$-0.67x_4$	$-0.33x_{23}$
x_{28}	$-1.85232384986e-12$	$-0.33x_{56}$	$-0.33x_{35}$	$+1.00x_{51}$	$-0.33x_4$	$+0.33x_{23}$
x_{29}	$-1.49333323485e-12$	$-0.33x_{56}$	$-0.33x_{35}$	$+1.00x_{51}$	$-0.33x_4$	$+0.33x_{23}$
x_{30}	$2.88588597463e-13$	$-0.00x_{56}$	$-0.00x_{35}$	$+0.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{31}	$-1.61161817746e-29$	$+0.00x_{56}$	$-0.00x_{35}$	$-0.00x_{51}$	$+0.00x_4$	$+1.00x_{23}$
x_{18}	2.0	$+1.67x_{56}$	$-1.33x_{35}$	$-0.00x_{51}$	$-1.33x_4$	$-0.67x_{23}$
x_{33}	1.0	$+0.33x_{56}$	$+2.33x_{35}$	$-2.00x_{51}$	$-0.67x_4$	$+1.67x_{23}$
x_{34}	1.00000000001	$+0.67x_{56}$	$+3.67x_{35}$	$-4.00x_{51}$	$-1.33x_4$	$+3.33x_{23}$
x_8	$7.353340159e-12$	$-0.67x_{56}$	$+5.33x_{35}$	$-5.00x_{51}$	$-0.67x_4$	$+3.67x_{23}$
x_{36}	$5.09214892475e-12$	$-0.00x_{56}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.00x_{23}$
x_{37}	0.999999999999	$+1.00x_{56}$	$-1.00x_{35}$	$+1.00x_{51}$	$-1.00x_4$	$-1.00x_{23}$
x_{38}	$1.67331426493e-12$	$-0.00x_{56}$	$+1.00x_{35}$	$-1.00x_{51}$	$-0.00x_4$	$+1.00x_{23}$
x_{39}	0.999999999998	$+0.67x_{56}$	$-0.33x_{35}$	$+1.00x_{51}$	$-0.33x_4$	$-0.67x_{23}$
x_{40}	1.00000000001	$+0.67x_{56}$	$+3.67x_{35}$	$-4.00x_{51}$	$-1.33x_4$	$+3.33x_{23}$
x_{41}	$4.46087611294e-12$	$-0.67x_{56}$	$+4.33x_{35}$	$-3.00x_{51}$	$-0.67x_4$	$+2.67x_{23}$
x_{42}	$5.67867974866e-12$	$-0.00x_{56}$	$+4.00x_{35}$	$-4.00x_{51}$	$-1.00x_4$	$+3.00x_{23}$
x_{43}	1.00000000001	$+0.67x_{56}$	$+3.67x_{35}$	$-4.00x_{51}$	$-1.33x_4$	$+2.33x_{23}$
x_{44}	1.0	$-0.00x_{56}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.00x_{23}$
x_{45}	1.0	$-0.00x_{56}$	$+4.00x_{35}$	$-3.00x_{51}$	$-1.00x_4$	$+2.00x_{23}$
x_{46}	1.00000000001	$+0.67x_{56}$	$+3.67x_{35}$	$-4.00x_{51}$	$-1.33x_4$	$+2.33x_{23}$
x_{47}	1.00000000001	$+0.67x_{56}$	$+3.67x_{35}$	$-4.00x_{51}$	$-1.33x_4$	$+2.33x_{23}$
x_{48}	1.0	$+0.67x_{56}$	$+3.67x_{35}$	$-4.00x_{51}$	$-1.33x_4$	$+2.33x_{23}$
x_{49}	$-2.32980301718e-13$	$+0.00x_{56}$	$+1.00x_{35}$	$-0.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{50}	0.999999999999	$+1.00x_{56}$	$+0.00x_{35}$	$-0.00x_{51}$	$-1.00x_4$	$+0.00x_{23}$
x_2	$-2.79568035388e-12$	$-0.33x_{56}$	$-0.33x_{35}$	$+2.00x_{51}$	$-0.33x_4$	$-1.67x_{23}$
x_{52}	0.999999999997	$+1.00x_{56}$	$+0.00x_{35}$	$-0.00x_{51}$	$-1.00x_4$	$+0.00x_{23}$
x_{53}	0.999999999999	$+1.00x_{56}$	$-0.00x_{35}$	$-0.00x_{51}$	$-1.00x_4$	$+0.00x_{23}$
x_{54}	$-9.433842596e-13$	$+0.00x_{56}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{55}	$-1.30237487461e-12$	$+0.00x_{56}$	$-0.00x_{35}$	$+1.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{32}	1.0	$+1.33x_{56}$	$-0.67x_{35}$	$-0.00x_{51}$	$-0.67x_4$	$-0.33x_{23}$
x_{57}	$9.11987152463e-12$	$+0.67x_{56}$	$-0.33x_{35}$	$+0.00x_{51}$	$+0.67x_4$	$+0.33x_{23}$
x_{58}	$-1.44106948596e-12$	$+1.00x_{56}$	$-0.00x_{35}$	$+0.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$
x_{59}	$2.79917755641e-12$	$+0.33x_{56}$	$+0.33x_{35}$	$+1.00x_{51}$	$+0.33x_4$	$+0.67x_{23}$
x_{60}	$3.64419605603e-12$	$+0.67x_{56}$	$-0.33x_{35}$	$+1.00x_{51}$	$+0.67x_4$	$+0.33x_{23}$
x_{61}	$2.00837402264e-11$	$+0.33x_{56}$	$+0.33x_{35}$	$+1.00x_{51}$	$+0.33x_4$	$+0.67x_{23}$
x_{62}	$3.03370939481e-11$	$+0.33x_{56}$	$+0.33x_{35}$	$+1.00x_{51}$	$+0.33x_4$	$+0.67x_{23}$
x_{63}	$1.20653487201e-12$	$+0.67x_{56}$	$-0.33x_{35}$	$+1.00x_{51}$	$+0.67x_4$	$+0.33x_{23}$
x_{64}	$-1.44106948596e-12$	$+1.00x_{56}$	$-0.00x_{35}$	$+0.00x_{51}$	$+0.00x_4$	$+0.00x_{23}$

Final answer: 109.000000 Done.Added 82 cuts