1 ilpTest1

Initial Dictionary

$$\begin{array}{r|ll} x_3 & 6 & -3x_1\ -2x_2 \\ x_4 & 0 & +3x_1\ -2x_2 \\ \hline z & 0 & +1x_2 \end{array}$$

No initialization required $\rightarrow$ Proceed to Optimize.

x_2 enters and x_4 leaves

$$\begin{array}{r|lll} x_3 & 6 & -6x_1 & +1x_4 \\ x_2 & 0 & +1.50x_1 & -0.50x_4 \\ \hline z & 0 & +1.50x_1 & -0.50x_4 \end{array}$$

x_1 enters and x_3 leaves

$$\begin{array}{r|lll} x_1 & 1 & -0.166667x_3 & +0.166667x_4 \\ x_2 & 1.5 & -0.250x_3 & -0.250x_4 \\ \hline z & 1.5 & -0.250x_3 & -0.250x_4 \end{array}$$

Final Dictionary Final dictionary after first LP relaxation solve:

$$\begin{array}{r|lll} x_1 & 1 & -0.166667x_3 & +0.166667x_4 \\ x_2 & 1.5 & -0.250x_3 & -0.250x_4 \\ \hline z & 1.5 & -0.250x_3 & -0.250x_4 \end{array}$$

After cutting plane is added

$$\begin{array}{r|lll} x_1 & 1 & -0.166667x_3 & +0.166667x_4 \\ x_2 & 1.5 & -0.250x_3 & -0.250x_4 \\ x_5 & -0.5 & +0.250x_3 & +0.250x_4 \\ \hline z & 1.5 & -0.250x_3 & -0.250x_4 \end{array}$$

Forming the dual dictionary:

$$\begin{array}{r|llll} y_3 & 0.25 & +0.166667y_1 & +0.250y_2 & -0.250y_5 \\ y_4 & 0.25 & -0.166667y_1 & +0.250y_2 & -0.250y_5 \\ \hline z & -1.5 & -1y_1 & -1.50y_2 & +0.50y_5 \end{array}$$

The Final Dual Dictionary is:

$$\begin{array}{r|llll} y_5 & 1 & +0.666667y_1 & +1y_2 & -4y_3 \\ y_4 & 0 & -0.333333y_1 & & +1y_3 \\ \hline z & -1 & -0.666667y_1 & -1y_2 & -2y_3 \end{array}$$

Final primal dictionary obtained:

$$\begin{array}{r|lll} x_1 & 0.666666666667 & -0.666667x_5 & +0.333333x_4 \\ x_2 & 1 & -1x_5 & \\ x_3 & 2 & +4x_5 & -1x_4 \\ \hline z & 1 & -1x_5 & \end{array}$$

After cutting plane is added

x_1	0.666666666667	$-0.666667x_5$	$+0.333333x_4$
x_2	1	$-1x_5$	
x_3	2	$+4x_5$	$-1x_4$
x_6	-0.666666666667	$+0.666667x_5$	$+0.666667x_4$
z	1	$-1x_5$	

Forming the dual dictionary:

y_5	1	$+0.666667y_1$	$+1y_2$	$-4y_3$	$-0.666667y_6$
y_4	0	$-0.333333y_1$		$+1y_3$	$-0.666667y_6$
z	-1	$-0.666667y_1$	$-1y_2$	$-2y_3$	$+0.666667y_6$

The Final Dual Dictionary is:

y_5	1	$+1y_1$	$+1y_2$	$-5y_3$	$+1y_4$
y_6	0	$-0.50y_1$		$+1.50y_3$	$-1.50y_4$
z	-1	$-1y_1$	$-1y_2$	$-1y_3$	$-1y_4$

Final primal dictionary obtained:

x_1	1	$-1x_5$	$+0.50x_6$
x_2	1	$-1x_5$	
x_3	1	$+5x_5$	$-1.50x_6$
x_4	1	$-1x_5$	$+1.50x_6$
z	1	$-1x_5$	

Done.

2 ilpTest2

Initial Dictionary

x_4	10	$-1x_1$		
x_5	10		$-1x_2$	
x_6	10			$-1x_3$
x_7	1	$+2x_1$	$-7x_2$	
x_8	3	$-1x_1$	$+2x_2$	$-5x_3$
x_9	7	$-1x_1$	$-1x_2$	$+3x_3$
z	0	$+1x_1$	$+1x_2$	$-5x_3$

No initialization required $\rightarrow$ Proceed to Optimize.

x_1 enters and x_8 leaves

x_4	7	$+1x_8$	$-2x_2$	$+5x_3$
x_5	10		$-1x_2$	
x_6	10			$-1x_3$
x_7	7	$-2x_8$	$-3x_2$	$-10x_3$
x_1	3	$-1x_8$	$+2x_2$	$-5x_3$
x_9	4	$+1x_8$	$-3x_2$	$+8x_3$
z	3	$-1x_8$	$+3x_2$	$-10x_3$

x_2 enters and x_9 leaves

x_4	4.33333333333	$+0.333333x_8$	$+0.666667x_9$	$-0.333333x_3$
x_5	8.66666666667	$-0.333333x_8$	$+0.333333x_9$	$-2.666667x_3$
x_6	10			$-1x_3$
x_7	3	$-3x_8$	$+1x_9$	$-18x_3$
x_1	5.66666666667	$-0.333333x_8$	$-0.666667x_9$	$+0.333333x_3$
x_2	1.33333333333	$+0.333333x_8$	$-0.333333x_9$	$+2.666667x_3$
z	7		$-1x_9$	$-2x_3$

Final Dictionary Final dictionary after first LP relaxation solve:

x_4	4.33333333333	$+0.333333x_8$	$+0.666667x_9$	$-0.333333x_3$
x_5	8.66666666667	$-0.333333x_8$	$+0.333333x_9$	$-2.666667x_3$
x_6	10			$-1x_3$
x_7	3	$-3x_8$	$+1x_9$	$-18x_3$
x_1	5.66666666667	$-0.333333x_8$	$-0.666667x_9$	$+0.333333x_3$
x_2	1.33333333333	$+0.333333x_8$	$-0.333333x_9$	$+2.666667x_3$
z	7		$-1x_9$	$-2x_3$

After cutting plane is added

x_4	4.33333333333	$+0.333333x_8$	$+0.666667x_9$	$-0.333333x_3$
x_5	8.66666666667	$-0.333333x_8$	$+0.333333x_9$	$-2.666667x_3$
x_6	10			$-1x_3$
x_7	3	$-3x_8$	$+1x_9$	$-18x_3$
x_1	5.66666666667	$-0.333333x_8$	$-0.666667x_9$	$+0.333333x_3$
x_2	1.33333333333	$+0.333333x_8$	$-0.333333x_9$	$+2.666667x_3$
x_{10}	-0.333333333333	$+0.666667x_8$	$+0.333333x_9$	$+0.333333x_3$
x_{11}	-0.666666666667	$+0.333333x_8$	$+0.666667x_9$	$+0.666667x_3$
x_{12}	-0.666666666667	$+0.333333x_8$	$+0.666667x_9$	$+0.666667x_3$
x_{13}	-0.333333333333	$+0.666667x_8$	$+0.333333x_9$	$+0.333333x_3$
z	7		$-1x_9$	$-2x_3$

Forming the dual dictionary:

y_8	-0	$-0.333333y_4$	$+0.333333y_5$		$+3y_7$	$+0.333333y_1$	$-0.333333y_2$	$-0.666667y_{10}$	$-0.333333y_{11}$	-0.33
y_9	1	$-0.666667y_4$	$-0.333333y_5$		$-1y_7$	$+0.666667y_1$	$+0.333333y_2$	$-0.333333y_{10}$	$-0.666667y_{11}$	-0.66
y_3	2	$+0.333333y_4$	$+2.666667y_5$	$+1y_6$	$+18y_7$	$-0.333333y_1$	$-2.666667y_2$	$-0.333333y_{10}$	$-0.666667y_{11}$	-0.66
z	-7	$-4.333333y_4$	$-8.666667y_5$	$-10y_6$	$-3y_7$	$-5.666667y_1$	$-1.333333y_2$	$+0.333333y_{10}$	$+0.666667y_{11}$	$+0.66$

The Final Dual Dictionary is:

y_{11}	1.28571428571	$-1y_4$	$-0.285714y_5$		$-1.285714y_9$	$+1y_1$	$+0.285714y_2$	$-0.428571y_8$	$-0.714286y_{10}$
y_7	0.142857142857	$+0y_4$	$-0.142857y_5$		$-0.142857y_9$	$-0y_1$	$+0.142857y_2$	$+0.285714y_8$	$+0.142857y_{10}$
y_3	3.71428571429	$+1y_4$	$+0.285714y_5$	$+1y_6$	$-1.714286y_9$	$-1y_1$	$-0.285714y_2$	$+5.428571y_8$	$+2.714286y_{10}$
z	-6.57142857143	$-5y_4$	$-8.428571y_5$	$-10y_6$	$-0.428571y_9$	$-5y_1$	$-1.571429y_2$	$-1.142857y_8$	$-0.571429y_{10}$

Final primal dictionary obtained:

x_4	5	$+1x_{11}$	$-0x_7$	$-1x_3$
x_5	8.42857142857	$+0.285714x_{11}$	$+0.142857x_7$	$-0.285714x_3$
x_6	10			$-1x_3$
x_9	0.428571428571	$+1.285714x_{11}$	$+0.142857x_7$	$+1.714286x_3$
x_1	5	$-1x_{11}$	$+0x_7$	$+1x_3$
x_2	1.57142857143	$-0.285714x_{11}$	$-0.142857x_7$	$+0.285714x_3$
x_8	1.14285714286	$+0.428571x_{11}$	$-0.285714x_7$	$-5.428571x_3$
x_{10}	0.571428571429	$+0.714286x_{11}$	$-0.142857x_7$	$-2.714286x_3$
x_{12}	$1.58603289232e-17$	$+1x_{11}$	$-0x_7$	$-0x_3$
x_{13}	0.571428571429	$+0.714286x_{11}$	$-0.142857x_7$	$-2.714286x_3$
z	6.57142857143	$-1.285714x_{11}$	$-0.142857x_7$	$-3.714286x_3$

After cutting plane is added

x_4	5	$+1x_{11}$	$-0x_7$	$-1x_3$
x_5	8.42857142857	$+0.285714x_{11}$	$+0.142857x_7$	$-0.285714x_3$
x_6	10			$-1x_3$
x_9	0.428571428571	$+1.285714x_{11}$	$+0.142857x_7$	$+1.714286x_3$
x_1	5	$-1x_{11}$	$+0x_7$	$+1x_3$
x_2	1.57142857143	$-0.285714x_{11}$	$-0.142857x_7$	$+0.285714x_3$
x_8	1.14285714286	$+0.428571x_{11}$	$-0.285714x_7$	$-5.428571x_3$
x_{10}	0.571428571429	$+0.714286x_{11}$	$-0.142857x_7$	$-2.714286x_3$
x_{12}	$1.58603289232e-17$	$+1x_{11}$	$-0x_7$	$-0x_3$
x_{13}	0.571428571429	$+0.714286x_{11}$	$-0.142857x_7$	$-2.714286x_3$
x_{14}	-0.428571428571	$+0.714286x_{11}$	$+0.857143x_7$	$+0.285714x_3$
x_{15}	-0.428571428571	$+0.714286x_{11}$	$+0.857143x_7$	$+0.285714x_3$
x_{16}	-0.571428571429	$+0.285714x_{11}$	$+0.142857x_7$	$+0.714286x_3$
x_{17}	-0.142857142857	$+0.571429x_{11}$	$+0.285714x_7$	$+0.428571x_3$
x_{18}	-0.571428571429	$+0.285714x_{11}$	$+0.142857x_7$	$+0.714286x_3$
x_{19}	-0.571428571429	$+0.285714x_{11}$	$+0.142857x_7$	$+0.714286x_3$
z	6.57142857143	$-1.285714x_{11}$	$-0.142857x_7$	$-3.714286x_3$

Forming the dual dictionary:

y_{11}	1.28571428571	$-1y_4$	$-0.285714y_5$		$-1.285714y_9$	$+1y_1$	$+0.285714y_2$	$-0.428571y_8$	$-0.714286y_{10}$	$-$
y_7	0.142857142857	$+0y_4$	$-0.142857y_5$		$-0.142857y_9$	$-0y_1$	$+0.142857y_2$	$+0.285714y_8$	$+0.142857y_{10}$	$+$
y_3	3.71428571429	$+1y_4$	$+0.285714y_5$	$+1y_6$	$-1.714286y_9$	$-1y_1$	$-0.285714y_2$	$+5.428571y_8$	$+2.714286y_{10}$	$+$
z	-6.57142857143	$-5y_4$	$-8.428571y_5$	$-10y_6$	$-0.428571y_9$	$-5y_1$	$-1.571429y_2$	$-1.142857y_8$	$-0.571429y_{10}$	$-$

The Final Dual Dictionary is:

y_{11}	1	$-1y_4$			$-1y_9$	$+1y_1$		$-1y_8$	$-1y_{10}$	$-1y_{12}$	$-1y_{13}$	$+2y_7$	$+1y_{15}$	$+1y_{14}$			$-0y_{19}$
y_{16}	1	$+0y_4$	$-1y_5$		$-1y_9$	$-0y_1$	$+1y_2$	$+2y_8$	$+1y_{10}$	$+0y_{12}$	$+1y_{13}$	$-7y_7$	$-6y_{15}$	$-6y_{14}$	$-2y_{17}$	$-1y_{18}$	$-1y_{19}$
y_3	3	$+1y_4$	$+1y_5$	$+1y_6$	$-1y_9$	$-1y_1$	$-1y_2$	$+4y_8$	$+2y_{10}$	$-0y_{12}$	$+2y_{13}$	$+5y_7$	$+4y_{15}$	$+4y_{14}$	$+1y_{17}$	$-0y_{18}$	$-0y_{19}$
z	-6	$-5y_4$	$-9y_5$	$-10y_6$	$-1y_9$	$-5y_1$	$-1y_2$	$+0y_8$	$+0y_{10}$	$+0y_{12}$	$+0y_{13}$	$-4y_7$	$-3y_{15}$	$-3y_{14}$	$-1y_{17}$	$-0y_{18}$	$-0y_{19}$

Final primal dictionary obtained:

x_4	5	$+1x_{11} -0x_{16} -1x_3$
x_5	9	$+1x_{16} -1x_3$
x_6	10	$-1x_3$
x_9	1	$+1x_{11} +1x_{16} +1x_3$
x_1	5	$-1x_{11} +0x_{16} +1x_3$
x_2	1	$-1x_{16} +1x_3$
x_8	$-4.4408920985e-16$	$+1x_{11} -2x_{16} -4x_3$
x_{10}	$-1.11022302463e-15$	$+1x_{11} -1x_{16} -2x_3$
x_{12}	$-1.11022302463e-16$	$+1x_{11} -0x_{16} +0x_3$
x_{13}	$-7.77156117238e-16$	$+1x_{11} -1x_{16} -2x_3$
x_7	4	$-2x_{11} +7x_{16} -5x_3$
x_{15}	3	$-1x_{11} +6x_{16} -4x_3$
x_{14}	3	$-1x_{11} +6x_{16} -4x_3$
x_{17}	1	$+2x_{16} -1x_3$
x_{18}	$1.11022302463e-15$	$+1x_{16} +0x_3$
x_{19}	$7.77156117238e-16$	$+0x_{11} +1x_{16} +0x_3$
z	6	$-1x_{11} -1x_{16} -3x_3$

Done.

3 ilpTest3

Initial Dictionary

x_4	10	$-1x_1$		
x_5	10		$-1x_2$	
x_6	10			$-1x_3$
x_7	1	$+2x_1$	$+7x_2$	
x_8	3	$+1x_1$	$+2x_2$	$-5x_3$
x_9	7	$+1x_1$	$-1x_2$	$+3x_3$
z	0	$-1x_1$	$-1x_2$	$+5x_3$

No initialization required $\rightarrow$ Proceed to Optimize.

x_3 enters and x_8 leaves

x_4	10	$-1x_1$		
x_5	10		$-1x_2$	
x_6	9.4	$-0.20x_1$	$-0.40x_2$	$+0.20x_8$
x_7	1	$+2x_1$	$+7x_2$	
x_3	0.6	$+0.20x_1$	$+0.40x_2$	$-0.20x_8$
x_9	8.8	$+1.60x_1$	$+0.20x_2$	$-0.60x_8$
z	3		$+1x_2$	$-1x_8$

x_2 enters and x_5 leaves

x_4	10	$-1x_1$		
x_2	10		$-1x_5$	
x_6	5.4	$-0.20x_1$	$+0.40x_5$	$+0.20x_8$
x_7	71	$+2x_1$	$-7x_5$	
x_3	4.6	$+0.20x_1$	$-0.40x_5$	$-0.20x_8$
x_9	10.8	$+1.60x_1$	$-0.20x_5$	$-0.60x_8$
z	13		$-1x_5$	$-1x_8$

Final Dictionary Final dictionary after first LP relaxation solve:

x_4	10	$-1x_1$		
x_2	10		$-1x_5$	
x_6	5.4	$-0.20x_1$	$+0.40x_5$	$+0.20x_8$
x_7	71	$+2x_1$	$-7x_5$	
x_3	4.6	$+0.20x_1$	$-0.40x_5$	$-0.20x_8$
x_9	10.8	$+1.60x_1$	$-0.20x_5$	$-0.60x_8$
z	13		$-1x_5$	$-1x_8$

After cutting plane is added

x_4	10	$-1x_1$		
x_2	10		$-1x_5$	
x_6	5.4	$-0.20x_1$	$+0.40x_5$	$+0.20x_8$
x_7	71	$+2x_1$	$-7x_5$	
x_3	4.6	$+0.20x_1$	$-0.40x_5$	$-0.20x_8$
x_9	10.8	$+1.60x_1$	$-0.20x_5$	$-0.60x_8$
x_{10}	-0.4	$+0.20x_1$	$+0.60x_5$	$+0.80x_8$
x_{11}	-0.6	$+0.80x_1$	$+0.40x_5$	$+0.20x_8$
x_{12}	-0.8	$+0.40x_1$	$+0.20x_5$	$+0.60x_8$
z	13		$-1x_5$	$-1x_8$

Forming the dual dictionary:

y_1	-0	$+1y_4$		$+0.20y_6$	$-2y_7$	$-0.20y_3$	$-1.60y_9$	$-0.20y_{10}$	$-0.80y_{11}$	$-0.40y_{12}$
y_5	1		$+1y_2$	$-0.40y_6$	$+7y_7$	$+0.40y_3$	$+0.20y_9$	$-0.60y_{10}$	$-0.40y_{11}$	$-0.20y_{12}$
y_8	1			$-0.20y_6$		$+0.20y_3$	$+0.60y_9$	$-0.80y_{10}$	$-0.20y_{11}$	$-0.60y_{12}$
z	-13	$-10y_4$	$-10y_2$	$-5.40y_6$	$-71y_7$	$-4.60y_3$	$-10.80y_9$	$+0.40y_{10}$	$+0.60y_{11}$	$+0.80y_{12}$

The Final Dual Dictionary is:

y_{10}	-0	$+5y_4$		$+1y_6$	$-10y_7$	$-1y_3$	$-8y_9$	$-5y_1$	$-4y_{11}$	$-2y_{12}$
y_5	1	$-3y_4$	$+1y_2$	$-1y_6$	$+13y_7$	$+1y_3$	$+5y_9$	$+3y_1$	$+2y_{11}$	$+1y_{12}$
y_8	1	$-4y_4$		$-1y_6$	$+8y_7$	$+1y_3$	$+7y_9$	$+4y_1$	$+3y_{11}$	$+1y_{12}$
z	-13	$-8y_4$	$-10y_2$	$-5y_6$	$-75y_7$	$-5y_3$	$-14y_9$	$-2y_1$	$-1y_{11}$	$+0y_{12}$

Final primal dictionary obtained:

x_4	8	$-5x_{10}$	$+3x_5$	$+4x_8$
x_2	10		$-1x_5$	
x_6	5	$-1x_{10}$	$+1x_5$	$+1x_8$
x_7	75	$+10x_{10}$	$-13x_5$	$-8x_8$
x_3	5	$+1x_{10}$	$-1x_5$	$-1x_8$
x_9	14	$+8x_{10}$	$-5x_5$	$-7x_8$
x_1	2	$+5x_{10}$	$-3x_5$	$-4x_8$
x_{11}	1	$+4x_{10}$	$-2x_5$	$-3x_8$
x_{12}	$-1.99840144433e-15$	$+2x_{10}$	$-1x_5$	$-1x_8$
z	13		$-1x_5$	$-1x_8$

Done.

4 ilpTest4

Initial Dictionary

x_3	15	$-2x_1$	$-2x_2$
x_4	5	$-2x_1$	$+2x_2$
z	-20	$+3x_1$	$+4x_2$

No initialization required $\rightarrow$ Proceed to Optimize.

x_1 enters and x_4 leaves

x_3	10	$+1x_4$	$-4x_2$
x_1	2.5	$-0.50x_4$	$+1x_2$
z	-12.5	$-1.50x_4$	$+7x_2$

x_2 enters and x_3 leaves

x_2	2.5	$+0.250x_4$	$-0.250x_3$
x_1	5	$-0.250x_4$	$-0.250x_3$
z	5	$+0.250x_4$	$-1.750x_3$

x_4 enters and x_1 leaves

x_2	7.5	$-1x_1$	$-0.50x_3$
x_4	20	$-4x_1$	$-1x_3$
z	10	$-1x_1$	$-2x_3$

Final Dictionary Final dictionary after first LP relaxation solve:

x_2	7.5	$-1x_1$	$-0.50x_3$
x_4	20	$-4x_1$	$-1x_3$
z	10	$-1x_1$	$-2x_3$

After cutting plane is added

x_2	7.5	$-1x_1\ -0.50x_3$
x_4	20	$-4x_1\ \ -1x_3$
x_5	-0.5	$+0.50x_3$
z	10	$-1x_1\ \ -2x_3$

Forming the dual dictionary:

y_1	1	$+1y_2$	$+4y_4$	
y_3	2	$+0.50y_2$	$+1y_4$	$-0.50y_5$
z	-10	$-7.50y_2$	$-20y_4$	$+0.50y_5$

The Final Dual Dictionary is:

y_1	1	$+1y_2$	$+4y_4$	
y_5	4	$+1y_2$	$+2y_4$	$-2y_3$
z	-8	$-7y_2$	$-19y_4$	$-1y_3$

Final primal dictionary obtained:

x_2	7	$-1x_1\ -1x_5$
x_4	19	$-4x_1\ -2x_5$
x_3	1	$+2x_5$
z	8	$-1x_1\ -4x_5$

Done.

5 ilpTest5

Initial Dictionary

x_3	15	$-2x_1\ -5x_2$
x_4	5	$-2x_1\ +2x_2$
z	-20	$+3x_1\ +4x_2$

No initialization required $\rightarrow$ Proceed to Optimize.

x_1 enters and x_4 leaves

x_3	10	$+1x_4$	$-7x_2$
x_1	2.5	$-0.50x_4$	$+1x_2$
z	-12.5	$-1.50x_4$	$+7x_2$

x_2 enters and x_3 leaves

x_2	1.42857142857	$+0.142857x_4$	$-0.142857x_3$
x_1	3.92857142857	$-0.357143x_4$	$-0.142857x_3$
z	-2.5	$-0.50x_4$	$-1x_3$

Final Dictionary Final dictionary after first LP relaxation solve:

x_2	1.42857142857	$+0.142857x_4$	$-0.142857x_3$
x_1	3.92857142857	$-0.357143x_4$	$-0.142857x_3$
z	-2.5	$-0.50x_4$	$-1x_3$

After cutting plane is added

x_2	1.42857142857	$+0.142857x_4$	$-0.142857x_3$
x_1	3.92857142857	$-0.357143x_4$	$-0.142857x_3$
x_5	-0.428571428571	$+0.857143x_4$	$+0.142857x_3$
x_6	-0.928571428571	$+0.357143x_4$	$+0.142857x_3$
z	-2.5	$-0.50x_4$	$-1x_3$

Forming the dual dictionary:

y_4	0.5	$-0.142857y_2$	$+0.357143y_1$	$-0.857143y_5$	$-0.357143y_6$
y_3	1	$+0.142857y_2$	$+0.142857y_1$	$-0.142857y_5$	$-0.142857y_6$
z	2.5	$-1.428571y_2$	$-3.928571y_1$	$+0.428571y_5$	$+0.928571y_6$

The Final Dual Dictionary is:

y_6	1.4	$-0.40y_2$	$+1y_1$	$-2.80y_4$	$-2.40y_5$
y_3	0.8	$+0.20y_2$		$+0.40y_4$	$+0.20y_5$
z	3.8	$-1.80y_2$	$-3y_1$	$-2.60y_4$	$-1.80y_5$

Final primal dictionary obtained:

x_2	1.8	$+0.40x_6$	$-0.20x_3$
x_1	3	$-1x_6$	
x_4	2.6	$+2.80x_6$	$-0.40x_3$
x_5	1.8	$+2.40x_6$	$-0.20x_3$
z	-3.8	$-1.40x_6$	$-0.80x_3$

After cutting plane is added

x_2	1.8	$+0.40x_6$	$-0.20x_3$
x_1	3	$-1x_6$	
x_4	2.6	$+2.80x_6$	$-0.40x_3$
x_5	1.8	$+2.40x_6$	$-0.20x_3$
x_7	-0.8	$+0.60x_6$	$+0.20x_3$
x_8	-0.6	$+0.20x_6$	$+0.40x_3$
x_9	-0.8	$+0.60x_6$	$+0.20x_3$
z	-3.8	$-1.40x_6$	$-0.80x_3$

Forming the dual dictionary:

y_6	1.4	$-0.40y_2$	$+1y_1$	$-2.80y_4$	$-2.40y_5$	$-0.60y_7$	$-0.20y_8$ $-0.60y_9$
y_3	0.8	$+0.20y_2$		$+0.40y_4$	$+0.20y_5$	$-0.20y_7$	$-0.40y_8$ $-0.20y_9$
z	3.8	$-1.80y_2$	$-3y_1$	$-2.60y_4$	$-1.80y_5$	$+0.80y_7$	$+0.60y_8$ $+0.80y_9$

The Final Dual Dictionary is:

y_7	2	$-1y_2 +2y_1 -6y_4 -5y_5 -2y_6 +1y_3 -1y_9$
y_8	1	$+1y_2 -1y_1 +4y_4 +3y_5 +1y_6 -3y_3 -0y_9$
z	6	$-2y_2 -2y_1 -5y_4 -4y_5 -1y_6 -1y_3 +0y_9$

Final primal dictionary obtained:

x_2	2	$+1x_7 -1x_8$
x_1	2	$-2x_7 +1x_8$
x_4	5	$+6x_7 -4x_8$
x_5	4	$+5x_7 -3x_8$
x_6	1	$+2x_7 -1x_8$
x_3	1	$-1x_7 +3x_8$
x_9	$-9.71445146547e-16$	$+1x_7 +0x_8$
z	-6	$-2x_7 -1x_8$

Done.

6 ilpTest6

Initial Dictionary

x_7	-1	$+1x_1$	$+1x_2$				
x_8	-1	$+1x_1$	$+1x_2$				$+1x_6$
x_9	-1			$+1x_3$	$+1x_4$		
x_{10}	-1			$+1x_3$	$+1x_4$	$+1x_5$	
x_{11}	-1				$+1x_4$	$+1x_5$	$+1x_6$
x_{12}	-1		$+1x_2$			$+1x_5$	$+1x_6$
z	0	$-1x_1$	$-1x_2$	$-1x_3$	$-1x_4$	$-1x_5$	$-1x_6$

6.1 Initialization Phase: Aux. Problem Solving

x_7	-1	$+1x_1$	$+1x_2$					$+1x_0$
x_8	-1	$+1x_1$	$+1x_2$				$+1x_6$	$+1x_0$
x_9	-1			$+1x_3$	$+1x_4$			$+1x_0$
x_{10}	-1			$+1x_3$	$+1x_4$	$+1x_5$		$+1x_0$
x_{11}	-1				$+1x_4$	$+1x_5$	$+1x_6$	$+1x_0$
x_{12}	-1		$+1x_2$			$+1x_5$	$+1x_6$	$+1x_0$
z	0							$-1x_0$

x_7 leaves

x_0	1	$-1x_1$	$-1x_2$					$+1x_7$
x_8	0						$+1x_6$	$+1x_7$
x_9	0	$-1x_1$	$-1x_2$	$+1x_3$	$+1x_4$			$+1x_7$
x_{10}	0	$-1x_1$	$-1x_2$	$+1x_3$	$+1x_4$	$+1x_5$		$+1x_7$
x_{11}	0	$-1x_1$	$-1x_2$		$+1x_4$	$+1x_5$	$+1x_6$	$+1x_7$
x_{12}	0	$-1x_1$				$+1x_5$	$+1x_6$	$+1x_7$
z	-1	$+1x_1$	$+1x_2$					$-1x_7$

x_1 enters and x_9 leaves

x_0	1	$+1x_9$		$-1x_3$	$-1x_4$			
x_8	0						$+1x_6$	$+1x_7$
x_1	0	$-1x_9$	$-1x_2$	$+1x_3$	$+1x_4$			$+1x_7$
x_{10}	0	$+1x_9$				$+1x_5$		
x_{11}	0	$+1x_9$		$-1x_3$		$+1x_5$	$+1x_6$	
x_{12}	0	$+1x_9$	$+1x_2$	$-1x_3$	$-1x_4$	$+1x_5$	$+1x_6$	
z	-1	$-1x_9$		$+1x_3$	$+1x_4$			

x_3 enters and x_{11} leaves

x_0	1			$+1x_{11}$	$-1x_4$	$-1x_5$	$-1x_6$	
x_8	0						$+1x_6$	$+1x_7$
x_1	0		$-1x_2$	$-1x_{11}$	$+1x_4$	$+1x_5$	$+1x_6$	$+1x_7$
x_{10}	0	$+1x_9$				$+1x_5$		
x_3	0	$+1x_9$		$-1x_{11}$		$+1x_5$	$+1x_6$	
x_{12}	0		$+1x_2$	$+1x_{11}$	$-1x_4$			
z	-1			$-1x_{11}$	$+1x_4$	$+1x_5$	$+1x_6$	

x_4 enters and x_{12} leaves

x_0	1		$-1x_2$		$+1x_{12}$	$-1x_5$	$-1x_6$	
x_8	0						$+1x_6$	$+1x_7$
x_1	0				$-1x_{12}$	$+1x_5$	$+1x_6$	$+1x_7$
x_{10}	0	$+1x_9$				$+1x_5$		
x_3	0	$+1x_9$		$-1x_{11}$		$+1x_5$	$+1x_6$	
x_4	0		$+1x_2$	$+1x_{11}$	$-1x_{12}$			
z	-1		$+1x_2$		$-1x_{12}$	$+1x_5$	$+1x_6$	

x_2 enters and x_0 leaves

x_2	1		$-1x_0$		$+1x_{12}$	$-1x_5$	$-1x_6$	
x_8	0						$+1x_6$	$+1x_7$
x_1	0				$-1x_{12}$	$+1x_5$	$+1x_6$	$+1x_7$
x_{10}	0	$+1x_9$				$+1x_5$		
x_3	0	$+1x_9$		$-1x_{11}$		$+1x_5$	$+1x_6$	
x_4	1		$-1x_0$	$+1x_{11}$		$-1x_5$	$-1x_6$	
z	0		$-1x_0$					

Final Dictionary Problem is feasible. Initialization phase yields a zero answer. Starting optimization phase with dictionary:

x_2	1			$+1x_{12}$	$-1x_5$	$-1x_6$
x_8	0					$+1x_6$ $+1x_7$
x_1	0			$-1x_{12}$	$+1x_5$	$+1x_6$ $+1x_7$
x_{10}	0	$+1x_9$			$+1x_5$	
x_3	0	$+1x_9$	$-1x_{11}$		$+1x_5$	$+1x_6$
x_4	1		$+1x_{11}$		$-1x_5$	$-1x_6$
z	-2	$-1x_9$			$-1x_5$	$-1x_6$ $-1x_7$

Final Dictionary Final dictionary after first LP relaxation solve:

x_2	1			$+1x_{12}$	$-1x_5$	$-1x_6$
x_8	0					$+1x_6$ $+1x_7$
x_1	0			$-1x_{12}$	$+1x_5$	$+1x_6$ $+1x_7$
x_{10}	0	$+1x_9$			$+1x_5$	
x_3	0	$+1x_9$	$-1x_{11}$		$+1x_5$	$+1x_6$
x_4	1		$+1x_{11}$		$-1x_5$	$-1x_6$
z	-2	$-1x_9$			$-1x_5$	$-1x_6$ $-1x_7$

Done.

7 ilpTest7

Initial Dictionary

x_3	15	$-4x_1$ $-2x_2$
x_4	8	$-1x_1$ $-2x_2$
x_5	5	$-1x_1$ $-1x_2$
z	0	$+3x_1$ $+2x_2$

No initialization required $\rightarrow$ Proceed to Optimize.

x_1 enters and x_3 leaves

x_1	3.75	$-0.250x_3$ $-0.50x_2$
x_4	4.25	$+0.250x_3$ $-1.50x_2$
x_5	1.25	$+0.250x_3$ $-0.50x_2$
z	11.25	$-0.750x_3$ $+0.50x_2$

x_2 enters and x_5 leaves

x_1	2.5	$-0.50x_3$ $+1x_5$
x_4	0.5	$-0.50x_3$ $+3x_5$
x_2	2.5	$+0.50x_3$ $-2x_5$
z	12.5	$-0.50x_3$ $-1x_5$

Final Dictionary Final dictionary after first LP relaxation solve:

x_1	2.5	$-0.50x_3 +1x_5$
x_4	0.5	$-0.50x_3 +3x_5$
x_2	2.5	$+0.50x_3 -2x_5$
z	12.5	$-0.50x_3 -1x_5$

After cutting plane is added

x_1	2.5	$-0.50x_3 +1x_5$
x_4	0.5	$-0.50x_3 +3x_5$
x_2	2.5	$+0.50x_3 -2x_5$
x_6	-0.5	$+0.50x_3$
x_7	-0.5	$+0.50x_3$
x_8	-0.5	$+0.50x_3$
z	12.5	$-0.50x_3 -1x_5$

Forming the dual dictionary:

y_3	0.5	$+0.50y_1$	$+0.50y_4$	$-0.50y_2$	$-0.50y_6$	$-0.50y_7$	$-0.50y_8$
y_5	1	$-1y_1$	$-3y_4$	$+2y_2$			
z	-12.5	$-2.50y_1$	$-0.50y_4$	$-2.50y_2$	$+0.50y_6$	$+0.50y_7$	$+0.50y_8$

The Final Dual Dictionary is:

y_6	1	$+1y_1$	$+1y_4$	$-1y_2$	$-2y_3$	$-1y_7$	$-1y_8$
y_5	1	$-1y_1$	$-3y_4$	$+2y_2$			
z	-12	$-2y_1$		$-3y_2$	$-1y_3$		

Final primal dictionary obtained:

x_1	2	$-1x_6 +1x_5$
x_4	-0	$-1x_6 +3x_5$
x_2	3	$+1x_6 -2x_5$
x_3	1	$+2x_6$
x_7	-0	$+1x_6$
x_8	-0	$+1x_6$
z	12	$-1x_6 -1x_5$

Done.

8 ilpTest8

Initial Dictionary

x_5	84	$+7x_1$	$-14x_2$	$-59x_3$	$-54x_4$
x_6	44	$-71x_1$	$-32x_2$	$+75x_3$	$+28x_4$
x_7	41	$+74x_1$	$+12x_2$	$+63x_3$	$+33x_4$
x_8	24	$-3x_1$	$-78x_2$	$-9x_3$	$-11x_4$
x_9	97	$-56x_1$	$-32x_2$	$-32x_3$	$+39x_4$
z	0	$-9x_1$	$+49x_2$	$-36x_3$	$+41x_4$

No initialization required $\rightarrow$ Proceed to Optimize.

x_2 enters and x_8 leaves

x_5	79.6923076923	$+7.538462x_1 +0.179487x_8 -57.384615x_3 -52.025641x_4$
x_6	34.1538461538	$-69.769231x_1 +0.410256x_8 +78.692308x_3 +32.512821x_4$
x_7	44.6923076923	$+73.538462x_1 -0.153846x_8 +61.615385x_3 +31.307692x_4$
x_2	0.307692307692	$-0.038462x_1 -0.012821x_8 -0.115385x_3 -0.141026x_4$
x_9	87.1538461538	$-54.769231x_1 +0.410256x_8 -28.307692x_3 +43.512821x_4$
z	15.0769230769	$-10.884615x_1 -0.628205x_8 -41.653846x_3 +34.089744x_4$

x_4 enters and x_5 leaves

x_4	1.53178905865	$+0.144899x_1 +0.003450x_8 -1.103006x_3 -0.019221x_5$
x_6	83.9566288812	$-65.058157x_1 +0.522425x_8 +42.830458x_3 -0.624938x_5$
x_7	92.6490882208	$+78.074914x_1 -0.045835x_8 +27.082799x_3 -0.601774x_5$
x_2	0.0916707737802	$-0.058896x_1 -0.013307x_8 +0.040168x_3 +0.002711x_5$
x_9	153.806308526	$-48.464268x_1 +0.560375x_8 -76.302612x_3 -0.836373x_5$
z	67.2952193199	$-5.945047x_1 -0.510596x_8 -79.255052x_3 -0.655249x_5$

Final Dictionary Final dictionary after first LP relaxation solve:

x_4	1.53178905865	$+0.144899x_1 +0.003450x_8 -1.103006x_3 -0.019221x_5$
x_6	83.9566288812	$-65.058157x_1 +0.522425x_8 +42.830458x_3 -0.624938x_5$
x_7	92.6490882208	$+78.074914x_1 -0.045835x_8 +27.082799x_3 -0.601774x_5$
x_2	0.0916707737802	$-0.058896x_1 -0.013307x_8 +0.040168x_3 +0.002711x_5$
x_9	153.806308526	$-48.464268x_1 +0.560375x_8 -76.302612x_3 -0.836373x_5$
z	67.2952193199	$-5.945047x_1 -0.510596x_8 -79.255052x_3 -0.655249x_5$

After cutting plane is added

x_4	1.53178905865	$+0.144899x_1 +0.003450x_8 -1.103006x_3 -0.019221x_5$
x_6	83.9566288812	$-65.058157x_1 +0.522425x_8 +42.830458x_3 -0.624938x_5$
x_7	92.6490882208	$+78.074914x_1 -0.045835x_8 +27.082799x_3 -0.601774x_5$
x_2	0.0916707737802	$-0.058896x_1 -0.013307x_8 +0.040168x_3 +0.002711x_5$
x_9	153.806308526	$-48.464268x_1 +0.560375x_8 -76.302612x_3 -0.836373x_5$
x_{10}	-0.53178905865	$+0.855101x_1 +0.996550x_8 +0.103006x_3 +0.019221x_5$
x_{11}	-0.956628881222	$+0.058157x_1 +0.477575x_8 +0.169542x_3 +0.624938x_5$
x_{12}	-0.649088220798	$+0.925086x_1 +0.045835x_8 +0.917201x_3 +0.601774x_5$
x_{13}	-0.0916707737802	$+0.058896x_1 +0.013307x_8 +0.959832x_3 +0.997289x_5$
x_{14}	-0.806308526368	$+0.464268x_1 +0.439625x_8 +0.302612x_3 +0.836373x_5$
z	67.2952193199	$-5.945047x_1 -0.510596x_8 -79.255052x_3 -0.655249x_5$

Forming the dual dictionary:

y_1	5.94504682109	$-0.144899y_4 +65.058157y_6 -78.074914y_7 +0.058896y_2 +48.464268y_9 -0.855101y_{10} -0$
y_8	0.510596352883	$-0.003450y_4 -0.522425y_6 +0.045835y_7 +0.013307y_2 -0.560375y_9 -0.996550y_{10} -0$
y_3	79.2550517496	$+1.103006y_4 -42.830458y_6 -27.082799y_7 -0.040168y_2 +76.302612y_9 -0.103006y_{10} -0$
y_5	0.655248891079	$+0.019221y_4 +0.624938y_6 +0.601774y_7 -0.002711y_2 +0.836373y_9 -0.019221y_{10} -0$
z	-67.2952193199	$-1.531789y_4 -83.956629y_6 -92.649088y_7 -0.091671y_2 -153.806309y_9 +0.531789y_{10} +0$

The Final Dual Dictionary is:

y_1	5.87550200803	$-0.130924y_4 +65.869076y_6 -77.771084y_7 +0.045783y_2 +49.428916y_9 +0.869076y_8 -$
y_{10}	0.0100401606426	$-0.018474y_4 -1.018474y_6 -0.421687y_7 +0.015663y_2 -1.221687y_9 -1.018474y_8 +$
y_3	79.0763052209	$+1.099598y_4 -42.900402y_6 -27.204819y_7 -0.040964y_2 +76.195181y_9 +0.099598y_8 +$
y_{11}	1.04819277108	$+0.031325y_4 +1.031325y_6 +0.975904y_7 -0.004819y_2 +1.375904y_9 +0.031325y_8 -$
z	-66.2871485944	$-1.511647y_4 -83.511647y_6 -91.939759y_7 -0.087952y_2 -153.139759y_9 -0.511647y_8 -$

Final primal dictionary obtained:

x_4	1.51164658635	$+0.130924x_1 +0.018474x_{10} -1.099598x_3 -0.031325x_{11}$
x_6	83.5116465863	$-65.869076x_1 +1.018474x_{10} +42.900402x_3 -1.031325x_{11}$
x_7	91.9397590361	$+77.771084x_1 +0.421687x_{10} +27.204819x_3 -0.975904x_{11}$
x_2	0.0879518072289	$-0.045783x_1 -0.015663x_{10} +0.040964x_3 +0.004819x_{11}$
x_9	153.139759036	$-49.428916x_1 +1.221687x_{10} -76.195181x_3 -1.375904x_{11}$
x_8	0.511646586345	$-0.869076x_1 +1.018474x_{10} -0.099598x_3 -0.031325x_{11}$
x_5	1.13975903614	$+0.571084x_1 -0.778313x_{10} -0.195181x_3 +1.624096x_{11}$
x_{12}	0.0602409638554	$+1.228916x_1 -0.421687x_{10} +0.795181x_3 +0.975904x_{11}$
x_{13}	1.05180722892	$+0.616867x_1 -0.762651x_{10} +0.763855x_3 +1.619277x_{11}$
x_{14}	0.371887550201	$+0.559839x_1 -0.203213x_{10} +0.095582x_3 +1.344578x_{11}$
z	66.2871485944	$-5.875502x_1 -0.010040x_{10} -79.076305x_3 -1.048193x_{11}$

After cutting plane is added

x_4	1.51164658635	$+0.130924x_1 +0.018474x_{10} -1.099598x_3 -0.031325x_{11}$
x_6	83.5116465863	$-65.869076x_1 +1.018474x_{10} +42.900402x_3 -1.031325x_{11}$
x_7	91.9397590361	$+77.771084x_1 +0.421687x_{10} +27.204819x_3 -0.975904x_{11}$
x_2	0.0879518072289	$-0.045783x_1 -0.015663x_{10} +0.040964x_3 +0.004819x_{11}$
x_9	153.139759036	$-49.428916x_1 +1.221687x_{10} -76.195181x_3 -1.375904x_{11}$
x_8	0.511646586345	$-0.869076x_1 +1.018474x_{10} -0.099598x_3 -0.031325x_{11}$
x_5	1.13975903614	$+0.571084x_1 -0.778313x_{10} -0.195181x_3 +1.624096x_{11}$
x_{12}	0.0602409638554	$+1.228916x_1 -0.421687x_{10} +0.795181x_3 +0.975904x_{11}$
x_{13}	1.05180722892	$+0.616867x_1 -0.762651x_{10} +0.763855x_3 +1.619277x_{11}$
x_{14}	0.371887550201	$+0.559839x_1 -0.203213x_{10} +0.095582x_3 +1.344578x_{11}$
x_{15}	-0.511646586345	$+0.869076x_1 +0.981526x_{10} +0.099598x_3 +0.031325x_{11}$
x_{16}	-0.511646586345	$+0.869076x_1 +0.981526x_{10} +0.099598x_3 +0.031325x_{11}$
x_{17}	-0.939759036145	$+0.228916x_1 +0.578313x_{10} +0.795181x_3 +0.975904x_{11}$
x_{18}	-0.0879518072289	$+0.045783x_1 +0.015663x_{10} +0.959036x_3 +0.995181x_{11}$
x_{19}	-0.139759036145	$+0.428916x_1 +0.778313x_{10} +0.195181x_3 +0.375904x_{11}$
x_{20}	-0.511646586345	$+0.869076x_1 +0.981526x_{10} +0.099598x_3 +0.031325x_{11}$
x_{21}	-0.139759036145	$+0.428916x_1 +0.778313x_{10} +0.195181x_3 +0.375904x_{11}$
x_{22}	-0.0602409638554	$+0.771084x_1 +0.421687x_{10} +0.204819x_3 +0.024096x_{11}$
x_{23}	-0.0518072289157	$+0.383133x_1 +0.762651x_{10} +0.236145x_3 +0.380723x_{11}$
x_{24}	-0.371887550201	$+0.440161x_1 +0.203213x_{10} +0.904418x_3 +0.655422x_{11}$
z	66.2871485944	$-5.875502x_1 -0.010040x_{10} -79.076305x_3 -1.048193x_{11}$

Forming the dual dictionary:

y_1	5.87550200803	$-0.130924y_4$	$+65.869076y_6$	$-77.771084y_7$	$+0.045783y_2$	$+49.428916y_9$	$+0.869076y_8$ −
y_{10}	0.0100401606426	$-0.018474y_4$	$-1.018474y_6$	$-0.421687y_7$	$+0.015663y_2$	$-1.221687y_9$	$-1.018474y_8$ +
y_3	79.0763052209	$+1.099598y_4$	$-42.900402y_6$	$-27.204819y_7$	$-0.040964y_2$	$+76.195181y_9$	$+0.099598y_8$ +
y_{11}	1.04819277108	$+0.031325y_4$	$+1.031325y_6$	$+0.975904y_7$	$-0.004819y_2$	$+1.375904y_9$	$+0.031325y_8$ −
z	-66.2871485944	$-1.511647y_4$	$-83.511647y_6$	$-91.939759y_7$	$-0.087952y_2$	$-153.139759y_9$	$-0.511647y_8$ −

The Final Dual Dictionary is:

y_1	5.01851851852	$-0.175309y_4$	$+63.997531y_6$	$-79y_7$	$+0.065432y_2$	$+47.069136y_9$	$-0.175309y_8$ +1.55061
y_{17}	0.462962962963	$-0.004938y_4$	$-0.572840y_6$		$+0.013580y_2$	$-0.627160y_9$	$-1.004938y_8$ +0.07654
y_3	78.2222222222	$+1.074074y_4$	$-43.740741y_6$	$-28y_7$	$-0.037037y_2$	$+75.074074y_9$	$+0.074074y_8$ +1.51851
y_{12}	0.611111111111	$+0.037037y_4$	$+1.629630y_6$	$+1y_7$	$-0.018519y_2$	$+2.037037y_9$	$+1.037037y_8$ −1.74074
z	-65.8888888889	$-1.518519y_4$	$-84.148148y_6$	$-92y_7$	$-0.074074y_2$	$-153.851852y_9$	$-1.518519y_8$ −0.96296

Final primal dictionary obtained:

x_4	1.51851851852	$+0.175309x_1$	$+0.004938x_{17}$	$-1.074074x_3$	$-0.037037x_{12}$
x_6	84.1481481481	$-63.997531x_1$	$+0.572840x_{17}$	$+43.740741x_3$	$-1.629630x_{12}$
x_7	92	$+79x_1$		$+28x_3$	$-1x_{12}$
x_2	0.0740740740741	$-0.065432x_1$	$-0.013580x_{17}$	$+0.037037x_3$	$+0.018519x_{12}$
x_9	153.851851852	$-47.069136x_1$	$+0.627160x_{17}$	$-75.074074x_3$	$-2.037037x_{12}$
x_8	1.51851851852	$+0.175309x_1$	$+1.004938x_{17}$	$-0.074074x_3$	$-1.037037x_{12}$
x_5	0.962962962963	$-1.550617x_1$	$-0.076543x_{17}$	$-1.518519x_3$	$+1.740741x_{12}$
x_{11}	0.37037037037	$-0.827160x_1$	$+0.432099x_{17}$	$-0.814815x_3$	$+0.592593x_{12}$
x_{13}	0.888888888889	$-1.485185x_1$	$-0.062963x_{17}$	$-0.555556x_3$	$+1.722222x_{12}$
x_{14}	0.666666666667	$-0.755556x_1$	$+0.377778x_{17}$	$-1x_3$	$+1x_{12}$
x_{10}	1	$+1x_1$	$+1x_{17}$	$+0x_3$	$-1x_{12}$
x_{16}	0.481481481481	$+1.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$-0.962963x_{12}$
x_{15}	0.481481481481	$+1.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$-0.962963x_{12}$
x_{18}	0.296296296296	$-0.761728x_1$	$+0.445679x_{17}$	$+0.148148x_3$	$+0.574074x_{12}$
x_{19}	0.777777777778	$+0.896296x_1$	$+0.940741x_{17}$	$-0.111111x_3$	$-0.555556x_{12}$
x_{20}	0.481481481481	$+1.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$-0.962963x_{12}$
x_{21}	0.777777777778	$+0.896296x_1$	$+0.940741x_{17}$	$-0.111111x_3$	$-0.555556x_{12}$
x_{22}	0.37037037037	$+1.172840x_1$	$+0.432099x_{17}$	$+0.185185x_3$	$-0.407407x_{12}$
x_{23}	0.851851851852	$+0.830864x_1$	$+0.927160x_{17}$	$-0.074074x_3$	$-0.537037x_{12}$
x_{24}	0.0740740740741	$+0.101235x_1$	$+0.486420x_{17}$	$+0.370370x_3$	$+0.185185x_{12}$
z	65.8888888889	$-5.018519x_1$	$-0.462963x_{17}$	$-78.222222x_3$	$-0.611111x_{12}$

After cutting plane is added

x_4	1.51851851852	$+0.175309x_1$	$+0.004938x_{17}$	$-1.074074x_3$	$-0.037037x_{12}$
x_6	84.1481481481	$-63.997531x_1$	$+0.572840x_{17}$	$+43.740741x_3$	$-1.629630x_{12}$
x_7	92	$+79x_1$		$+28x_3$	$-1x_{12}$
x_2	0.0740740740741	$-0.065432x_1$	$-0.013580x_{17}$	$+0.037037x_3$	$+0.018519x_{12}$
x_9	153.851851852	$-47.069136x_1$	$+0.627160x_{17}$	$-75.074074x_3$	$-2.037037x_{12}$
x_8	1.51851851852	$+0.175309x_1$	$+1.004938x_{17}$	$-0.074074x_3$	$-1.037037x_{12}$
x_5	0.962962962963	$-1.550617x_1$	$-0.076543x_{17}$	$-1.518519x_3$	$+1.740741x_{12}$
x_{11}	0.37037037037	$-0.827160x_1$	$+0.432099x_{17}$	$-0.814815x_3$	$+0.592593x_{12}$
x_{13}	0.888888888889	$-1.485185x_1$	$-0.062963x_{17}$	$-0.555556x_3$	$+1.722222x_{12}$
x_{14}	0.666666666667	$-0.755556x_1$	$+0.377778x_{17}$	$-1x_3$	$+1x_{12}$
x_{10}	1	$+1x_1$	$+1x_{17}$	$+0x_3$	$-1x_{12}$
x_{16}	0.481481481481	$+1.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$-0.962963x_{12}$
x_{15}	0.481481481481	$+1.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$-0.962963x_{12}$
x_{18}	0.296296296296	$-0.761728x_1$	$+0.445679x_{17}$	$+0.148148x_3$	$+0.574074x_{12}$
x_{19}	0.777777777778	$+0.896296x_1$	$+0.940741x_{17}$	$-0.111111x_3$	$-0.555556x_{12}$
x_{20}	0.481481481481	$+1.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$-0.962963x_{12}$
x_{21}	0.777777777778	$+0.896296x_1$	$+0.940741x_{17}$	$-0.111111x_3$	$-0.555556x_{12}$
x_{22}	0.37037037037	$+1.172840x_1$	$+0.432099x_{17}$	$+0.185185x_3$	$-0.407407x_{12}$
x_{23}	0.851851851852	$+0.830864x_1$	$+0.927160x_{17}$	$-0.074074x_3$	$-0.537037x_{12}$
x_{24}	0.0740740740741	$+0.101235x_1$	$+0.486420x_{17}$	$+0.370370x_3$	$+0.185185x_{12}$
x_{25}	-0.518518518519	$+0.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$+0.037037x_{12}$
x_{26}	-0.148148148148	$+0.997531x_1$	$+0.427160x_{17}$	$+0.259259x_3$	$+0.629630x_{12}$
x_{27}	-0.0740740740741	$+0.065432x_1$	$+0.013580x_{17}$	$+0.962963x_3$	$+0.981481x_{12}$
x_{28}	-0.851851851852	$+0.069136x_1$	$+0.372840x_{17}$	$+0.074074x_3$	$+0.037037x_{12}$
x_{29}	-0.518518518519	$+0.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$+0.037037x_{12}$
x_{30}	-0.962962962963	$+0.550617x_1$	$+0.076543x_{17}$	$+0.518519x_3$	$+0.259259x_{12}$
x_{31}	-0.37037037037	$+0.827160x_1$	$+0.567901x_{17}$	$+0.814815x_3$	$+0.407407x_{12}$
x_{32}	-0.888888888889	$+0.485185x_1$	$+0.062963x_{17}$	$+0.555556x_3$	$+0.277778x_{12}$
x_{33}	-0.666666666667	$+0.755556x_1$	$+0.622222x_{17}$	$+0x_3$	
x_{34}	-0.481481481481	$+0.175309x_1$	$+0.004938x_{17}$	$+0.925926x_3$	$+0.962963x_{12}$
x_{35}	-0.481481481481	$+0.175309x_1$	$+0.004938x_{17}$	$+0.925926x_3$	$+0.962963x_{12}$
x_{36}	-0.296296296296	$+0.761728x_1$	$+0.554321x_{17}$	$+0.851852x_3$	$+0.425926x_{12}$
x_{37}	-0.777777777778	$+0.103704x_1$	$+0.059259x_{17}$	$+0.111111x_3$	$+0.555556x_{12}$
x_{38}	-0.481481481481	$+0.175309x_1$	$+0.004938x_{17}$	$+0.925926x_3$	$+0.962963x_{12}$
x_{39}	-0.777777777778	$+0.103704x_1$	$+0.059259x_{17}$	$+0.111111x_3$	$+0.555556x_{12}$
x_{40}	-0.37037037037	$+0.827160x_1$	$+0.567901x_{17}$	$+0.814815x_3$	$+0.407407x_{12}$
x_{41}	-0.851851851852	$+0.169136x_1$	$+0.072840x_{17}$	$+0.074074x_3$	$+0.537037x_{12}$
x_{42}	-0.0740740740741	$+0.898765x_1$	$+0.513580x_{17}$	$+0.629630x_3$	$+0.814815x_{12}$
z	65.8888888889	$-5.018519x_1$	$-0.462963x_{17}$	$-78.222222x_3$	$-0.611111x_{12}$

Forming the dual dictionary:

y_1	5.01851851852	$-0.175309y_4$	$+63.997531y_6$	$-79y_7$	$+0.065432y_2$	$+47.069136y_9$	$-0.175309y_8$ $+1.55061$
y_{17}	0.462962962963	$-0.004938y_4$	$-0.572840y_6$		$+0.013580y_2$	$-0.627160y_9$	$-1.004938y_8$ $+0.07654$
y_3	78.2222222222	$+1.074074y_4$	$-43.740741y_6$	$-28y_7$	$-0.037037y_2$	$+75.074074y_9$	$+0.074074y_8$ $+1.51851$
y_{12}	0.611111111111	$+0.037037y_4$	$+1.629630y_6$	$+1y_7$	$-0.018519y_2$	$+2.037037y_9$	$+1.037037y_8$ -1.74074
z	-65.8888888889	$-1.518519y_4$	$-84.148148y_6$	$-92y_7$	$-0.074074y_2$	$-153.851852y_9$	$-1.518519y_8$ -0.96296

The Final Dual Dictionary is:

y_1	2.86600496278	$-0.205955y_4$	$+63.724566y_6$	$-80.230769y_7$	$+0.047146y_2$	$+46.459057y_9$	$+1.588089y_8$ $+3$
y_{15}	0.220843672457	$-0.012407y_4$	$-0.823821y_6$	$-0.230769y_7$	$+0.014888y_2$	$-0.960298y_9$	$-1.024814y_8$ $+0$
y_3	76.5583126551	$+1.024814y_4$	$-45.352357y_6$	$-29.538462y_7$	$-0.029777y_2$	$+72.920596y_9$	$+0.049628y_8$ $+4$
y_{30}	3.17741935484	$+0.096774y_4$	$+3.225806y_6$	$+3y_7$	$-0.016129y_2$	$+4.290323y_9$	$+0.193548y_8$
z	-62.935483871	$-1.419355y_4$	$-80.645161y_6$	$-89y_7$	$-0.096774y_2$	$-149.258065y_9$	$-0.838710y_8$

Final primal dictionary obtained:

x_4	1.41935483871	$+0.205955x_1$	$+0.012407x_{15}$	$-1.024814x_3$	$-0.096774x_{30}$
x_6	80.6451612903	$-63.724566x_1$	$+0.823821x_{15}$	$+45.352357x_3$	$-3.225806x_{30}$
x_7	89	$+80.230769x_1$	$+0.230769x_{15}$	$+29.538462x_3$	$-3x_{30}$
x_2	0.0967741935484	$-0.047146x_1$	$-0.014888x_{15}$	$+0.029777x_3$	$+0.016129x_{30}$
x_9	149.258064516	$-46.459057x_1$	$+0.960298x_{15}$	$-72.920596x_3$	$-4.290323x_{30}$
x_8	0.838709677419	$-1.588089x_1$	$+1.024814x_{15}$	$-0.049628x_3$	$-0.193548x_{30}$
x_5	6	$-3.461538x_1$	$-0.461538x_{15}$	$-4.076923x_3$	$+5x_{30}$
x_{11}	3.1935483871	$-2.863524x_1$	$+0.200993x_{15}$	$-2.401985x_3$	$+3.032258x_{30}$
x_{13}	5.90322580645	$-3.414392x_1$	$-0.446650x_{15}$	$-3.106700x_3$	$+4.983871x_{30}$
x_{14}	4.58064516129	$-3.129032x_1$	$+0.064516x_{15}$	$-3.129032x_3$	$+4.096774x_{30}$
x_{28}	0.161290322581	$-1.104218x_1$	$+0.282878x_{15}$	$-0.565757x_3$	$+1.193548x_{30}$
x_{16}	$2.6645352591e-15$	$+0x_1$	$+1x_{15}$	$-0x_3$	
x_{10}	0.41935483871	$-0.794045x_1$	$+1.012407x_{15}$	$-0.024814x_3$	$-0.096774x_{30}$
x_{18}	3.09677419355	$-2.816377x_1$	$+0.215881x_{15}$	$-1.431762x_3$	$+3.016129x_{30}$
x_{19}	1.38709677419	$-1.265509x_1$	$+0.863524x_{15}$	$-0.727047x_3$	$+1.064516x_{30}$
x_{20}	$1.11022302463e-16$	$-0x_1$	$+1x_{15}$	$+0x_3$	$-0x_{30}$
x_{21}	1.38709677419	$-1.265509x_1$	$+0.863524x_{15}$	$-0.727047x_3$	$+1.064516x_{30}$
x_{22}	0.193548387097	$+0.367246x_1$	$+0.431762x_{15}$	$+0.136476x_3$	$+0.032258x_{30}$
x_{23}	1.48387096774	$-1.312655x_1$	$+0.848635x_{15}$	$-0.697270x_3$	$+1.080645x_{30}$
x_{24}	1.8064516129	$-1.598015x_1$	$+0.337469x_{15}$	$-0.674938x_3$	$+1.967742x_{30}$
x_{17}	2.41935483871	$-3.024814x_1$	$+0.781638x_{15}$	$-1.563275x_3$	$+2.903226x_{30}$
x_{26}	2.77419354839	$-1.069479x_1$	$+0.188586x_{15}$	$-1.377171x_3$	$+3.129032x_{30}$
x_{12}	3	$-1.230769x_1$	$-0.230769x_{15}$	$-1.538462x_3$	$+3x_{30}$
x_{25}	2	$-2.230769x_1$	$+0.769231x_{15}$	$-1.538462x_3$	$+3x_{30}$
x_{29}	2	$-2.230769x_1$	$+0.769231x_{15}$	$-1.538462x_3$	$+3x_{30}$
x_{27}	2.90322580645	$-1.183623x_1$	$-0.215881x_{15}$	$-0.568238x_3$	$+2.983871x_{30}$
x_{31}	2.22580645161	$-1.392060x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
x_{32}	0.0967741935484	$-0.047146x_1$	$-0.014888x_{15}$	$+0.029777x_3$	$+1.016129x_{30}$
x_{33}	0.838709677419	$-1.126551x_1$	$+0.486352x_{15}$	$-0.972705x_3$	$+1.806452x_{30}$
x_{34}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{35}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{36}	2.32258064516	$-1.439206x_1$	$+0.334988x_{15}$	$-0.669975x_3$	$+2.887097x_{30}$
x_{37}	1.03225806452	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.838710x_{30}$
x_{38}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{39}	1.03225806452	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.838710x_{30}$
x_{40}	2.22580645161	$-1.392060x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
x_{41}	0.935483870968	$-0.712159x_1$	$-0.066998x_{15}$	$-0.866005x_3$	$+1.822581x_{30}$
x_{42}	3.61290322581	$-1.657568x_1$	$+0.213400x_{15}$	$-1.426799x_3$	$+3.935484x_{30}$
z	62.935483871	$-2.866005x_1$	$-0.220844x_{15}$	$-76.558313x_3$	$-3.177419x_{30}$

After cutting plane is added

x_4	1.41935483871	$+0.205955x_1$	$+0.012407x_{15}$	$-1.024814x_3$	$-0.096774x_{30}$
x_6	80.6451612903	$-63.724566x_1$	$+0.823821x_{15}$	$+45.352357x_3$	$-3.225806x_{30}$
x_7	89	$+80.230769x_1$	$+0.230769x_{15}$	$+29.538462x_3$	$-3x_{30}$
x_2	0.0967741935484	$-0.047146x_1$	$-0.014888x_{15}$	$+0.029777x_3$	$+0.016129x_{30}$
x_9	149.258064516	$-46.459057x_1$	$+0.960298x_{15}$	$-72.920596x_3$	$-4.290323x_{30}$
x_8	0.838709677419	$-1.588089x_1$	$+1.024814x_{15}$	$-0.049628x_3$	$-0.193548x_{30}$
x_5	6	$-3.461538x_1$	$-0.461538x_{15}$	$-4.076923x_3$	$+5x_{30}$
x_{11}	3.1935483871	$-2.863524x_1$	$+0.200993x_{15}$	$-2.401985x_3$	$+3.032258x_{30}$
x_{13}	5.90322580645	$-3.414392x_1$	$-0.446650x_{15}$	$-3.106700x_3$	$+4.983871x_{30}$
x_{14}	4.58064516129	$-3.129032x_1$	$+0.064516x_{15}$	$-3.129032x_3$	$+4.096774x_{30}$
x_{28}	0.161290322581	$-1.104218x_1$	$+0.282878x_{15}$	$-0.565757x_3$	$+1.193548x_{30}$
x_{16}	$2.6645352591e-15$	$+0x_1$	$+1x_{15}$	$-0x_3$	
x_{10}	0.41935483871	$-0.794045x_1$	$+1.012407x_{15}$	$-0.024814x_3$	$-0.096774x_{30}$
x_{18}	3.09677419355	$-2.816377x_1$	$+0.215881x_{15}$	$-1.431762x_3$	$+3.016129x_{30}$
x_{19}	1.38709677419	$-1.265509x_1$	$+0.863524x_{15}$	$-0.727047x_3$	$+1.064516x_{30}$
x_{20}	$1.11022302463e-16$	$-0x_1$	$+1x_{15}$	$+0x_3$	$-0x_{30}$
x_{21}	1.38709677419	$-1.265509x_1$	$+0.863524x_{15}$	$-0.727047x_3$	$+1.064516x_{30}$
x_{22}	0.193548387097	$+0.367246x_1$	$+0.431762x_{15}$	$+0.136476x_3$	$+0.032258x_{30}$
x_{23}	1.48387096774	$-1.312655x_1$	$+0.848635x_{15}$	$-0.697270x_3$	$+1.080645x_{30}$
x_{24}	1.8064516129	$-1.598015x_1$	$+0.337469x_{15}$	$-0.674938x_3$	$+1.967742x_{30}$
x_{17}	2.41935483871	$-3.024814x_1$	$+0.781638x_{15}$	$-1.563275x_3$	$+2.903226x_{30}$
x_{26}	2.77419354839	$-1.069479x_1$	$+0.188586x_{15}$	$-1.377171x_3$	$+3.129032x_{30}$
x_{12}	3	$-1.230769x_1$	$-0.230769x_{15}$	$-1.538462x_3$	$+3x_{30}$
x_{25}	2	$-2.230769x_1$	$+0.769231x_{15}$	$-1.538462x_3$	$+3x_{30}$
x_{29}	2	$-2.230769x_1$	$+0.769231x_{15}$	$-1.538462x_3$	$+3x_{30}$
x_{27}	2.90322580645	$-1.183623x_1$	$-0.215881x_{15}$	$-0.568238x_3$	$+2.983871x_{30}$
x_{31}	2.22580645161	$-1.392060x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
x_{32}	0.0967741935484	$-0.047146x_1$	$-0.014888x_{15}$	$+0.029777x_3$	$+1.016129x_{30}$
x_{33}	0.838709677419	$-1.126551x_1$	$+0.486352x_{15}$	$-0.972705x_3$	$+1.806452x_{30}$
x_{34}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{35}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{36}	2.32258064516	$-1.439206x_1$	$+0.334988x_{15}$	$-0.669975x_3$	$+2.887097x_{30}$
x_{37}	1.03225806452	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.838710x_{30}$
x_{38}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{39}	1.03225806452	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.838710x_{30}$
x_{40}	2.22580645161	$-1.392060x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
x_{41}	0.935483870968	$-0.712159x_1$	$-0.066998x_{15}$	$-0.866005x_3$	$+1.822581x_{30}$
x_{42}	3.61290322581	$-1.657568x_1$	$+0.213400x_{15}$	$-1.426799x_3$	$+3.935484x_{30}$
x_{43}	-0.41935483871	$+0.794045x_1$	$+0.987593x_{15}$	$+0.024814x_3$	$+0.096774x_{30}$
x_{44}	-0.645161290323	$+0.724566x_1$	$+0.176179x_{15}$	$+0.647643x_3$	$+0.225806x_{30}$
x_{45}	-0.0967741935484	$+0.047146x_1$	$+0.014888x_{15}$	$+0.970223x_3$	$+0.983871x_{30}$
x_{46}	-0.258064516129	$+0.459057x_1$	$+0.039702x_{15}$	$+0.920596x_3$	$+0.290323x_{30}$
x_{47}	-0.838709677419	$+0.588089x_1$	$+0.975186x_{15}$	$+0.049628x_3$	$+0.193548x_{30}$
x_{48}	-0.193548387097	$+0.863524x_1$	$+0.799007x_{15}$	$+0.401985x_3$	$+0.967742x_{30}$
x_{49}	-0.903225806452	$+0.414392x_1$	$+0.446650x_{15}$	$+0.106700x_3$	$+0.016129x_{30}$
x_{50}	-0.58064516129	$+0.129032x_1$	$+0.935484x_{15}$	$+0.129032x_3$	$+0.903226x_{30}$
x_{51}	-0.161290322581	$+0.104218x_1$	$+0.717122x_{15}$	$+0.565757x_3$	$+0.806452x_{30}$
x_{52}	-0.41935483871	$+0.794045x_1$	$+0.987593x_{15}$	$+0.024814x_3$	$+0.096774x_{30}$
x_{53}	-0.0967741935484	$+0.816377x_1$	$+0.784119x_{15}$	$+0.431762x_3$	$+0.983871x_{30}$
x_{54}	-0.387096774194	$+0.265509x_1$	$+0.136476x_{15}$	$+0.727047x_3$	$+0.935484x_{30}$
x_{55}	-0.387096774194	$+0.265509x_1$	$+0.136476x_{15}$	$+0.727047x_3$	$+0.935484x_{30}$
x_{56}	-0.193548387097	$+0.632754x_1$	$+0.568238x_{15}$	$+0.863524x_3$	$+0.967742x_{30}$
x_{57}	-0.483870967742	$+0.312655x_1$	$+0.151365x_{15}$	$+0.697270x_3$	$+0.919355x_{30}$
x_{58}	-0.806451612903	$+0.598015x_1$	$+0.662531x_{15}$	$+0.674938x_3$	$+0.032258x_{30}$

Forming the dual dictionary:

y_1	2.86600496278	$-0.205955y_4$	$+63.724566y_6$	$-80.230769y_7$	$+0.047146y_2$	$+46.459057y_9$	$+1.588089y_8$ $+3$
y_{15}	0.220843672457	$-0.012407y_4$	$-0.823821y_6$	$-0.230769y_7$	$+0.014888y_2$	$-0.960298y_9$	$-1.024814y_8$ $+0$
y_3	76.5583126551	$+1.024814y_4$	$-45.352357y_6$	$-29.538462y_7$	$-0.029777y_2$	$+72.920596y_9$	$+0.049628y_8$ $+4$
y_{30}	3.17741935484	$+0.096774y_4$	$+3.225806y_6$	$+3y_7$	$-0.016129y_2$	$+4.290323y_9$	$+0.193548y_8$
z	-62.935483871	$-1.419355y_4$	$-80.645161y_6$	$-89y_7$	$-0.096774y_2$	$-149.258065y_9$	$-0.838710y_8$

The Final Dual Dictionary is:

y_2	7	$-0.50y_4$	$+621.50y_6$	$-657.50y_7$	$-8.50y_1$	$+488.50y_9$	$+109y_8$	$-18.50y_5$	$+40$
y_{72}	4.33333333333	$-0.333333y_4$	$+132.666667y_6$	$-159y_7$	$-2y_1$	$+99y_9$	$+9.666667y_8$	$+4y_5$	$+7y$
y_3	70.3333333333	$+1.166667y_4$	$-148.833333y_6$	$+86.50y_7$	$+1.50y_1$	$-6.50y_9$	$-8.333333y_8$	$+6.50y_5$	$-0y$
y_{45}	2.33333333333	$+0.166667y_4$	$-30.833333y_6$	$+42.50y_7$	$+0.50y_1$	$-21.50y_9$	$-3.333333y_8$	$-5.50y_5$	$-5y$
z	-59.3333333333	$-1.666667y_4$	$-19.666667y_6$	$-170y_7$	$-1y_1$	$-106y_9$	$-2.666667y_8$	$-1y_5$	$-1y$

Final primal dictionary obtained:

x_4	1.66666666667	$+0.50x_2$	$+0.333333x_{72}$	$-1.166667x_3$	$-0.166667x_{45}$
x_6	19.6666666667	$-621.50x_2$	$-132.666667x_{72}$	$+148.833333x_3$	$+30.833333x_{45}$
x_7	170	$+657.50x_2$	$+159x_{72}$	$-86.50x_3$	$-42.50x_{45}$
x_1	1	$+8.50x_2$	$+2x_{72}$	$-1.50x_3$	$-0.50x_{45}$
x_9	106	$-488.50x_2$	$-99x_{72}$	$+6.50x_3$	$+21.50x_{45}$
x_8	2.66666666667	$-109x_2$	$-9.666667x_{72}$	$+8.333333x_3$	$+3.333333x_{45}$
x_5	1	$+18.50x_2$	$-4x_{72}$	$-6.50x_3$	$+5.50x_{45}$
x_{11}	1	$-40x_2$	$-7x_{72}$	$+0x_3$	$+5x_{45}$
x_{13}	1	$+17.50x_2$	$-4x_{72}$	$-5.50x_3$	$+5.50x_{45}$
x_{14}	1.66666666667	$-28.50x_2$	$-6.666667x_{72}$	$-2.166667x_3$	$+5.833333x_{45}$
x_{28}	$-1.69642078163e-13$	$-34.50x_2$	$-4x_{72}$	$+1.50x_3$	$+2.50x_{45}$
x_{16}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{10}	3	$-101x_2$	$-8x_{72}$	$+7x_3$	$+3x_{45}$
x_{18}	1	$-41x_2$	$-7x_{72}$	$+1x_3$	$+5x_{45}$
x_{19}	3	$-90x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{20}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{21}	3	$-90x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{22}	2	$-37x_2$	$-2x_{72}$	$+2x_3$	$+1x_{45}$
x_{23}	3	$-89x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{24}	1.33333333333	$-43x_2$	$-5.333333x_{72}$	$+1.666667x_3$	$+3.666667x_{45}$
x_{17}	2	$-95.50x_2$	$-11x_{72}$	$+4.50x_3$	$+6.50x_{45}$
x_{26}	2.33333333333	$-23.50x_2$	$-3.333333x_{72}$	$-1.833333x_3$	$+4.166667x_{45}$
x_{12}	1	$+14x_2$	$-1x_{72}$	$-4x_3$	$+3x_{45}$
x_{25}	2.33333333333	$-87.50x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{29}	2.33333333333	$-87.50x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{27}	1	$+13x_2$	$-1x_{72}$	$-3x_3$	$+3x_{45}$
x_{31}	2	$-41.50x_2$	$-5x_{72}$	$+0.50x_3$	$+4.50x_{45}$
x_{32}	$1.94289029309e-16$	$+2x_2$	$-0x_{72}$	$-1x_3$	$+1x_{45}$
x_{33}	1.33333333333	$-53x_2$	$-5.333333x_{72}$	$+1.666667x_3$	$+3.666667x_{45}$
x_{34}	0.666666666667	$+14.50x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{35}	0.666666666667	$+14.50x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{36}	2	$-40.50x_2$	$-5x_{72}$	$+0.50x_3$	$+4.50x_{45}$
x_{37}	$-3.10307335383e-14$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{38}	0.666666666667	$+14.50x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{39}	$2.77555756156e-16$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{40}	2	$-41.50x_2$	$-5x_{72}$	$+0.50x_3$	$+4.50x_{45}$
x_{41}	$-5.55111512313e-17$	$+2x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{42}	2.66666666667	$-30x_2$	$-4.666667x_{72}$	$-1.666667x_3$	$+5.333333x_{45}$
x_{15}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{43}	3.66666666667	$-85x_2$	$-4.666667x_{72}$	$+4.333333x_3$	$+2.333333x_{45}$
x_{30}	$1.38777878078e-17$	$+1x_2$	$+0x_{72}$	$-1x_3$	$+1x_{45}$
x_{44}	0.666666666667	$-10x_2$	$+0.333333x_{72}$	$+0.333333x_3$	$+0.333333x_{45}$
x_{47}	3	$-85.50x_2$	$-5x_{72}$	$+4.50x_3$	$+2.50x_{45}$
x_{48}	3.33333333333	$-66x_2$	$-3.333333x_{72}$	$+2.666667x_3$	$+2.666667x_{45}$
x_{49}	1	$-38x_2$	$-2x_{72}$	$+2x_3$	$+1x_{45}$
x_{50}	2.66666666667	$-85x_2$	$-5.666667x_{72}$	$+4.333333x_3$	$+3.333333x_{45}$
x_{51}	2.33333333333	$-65x_2$	$-4.333333x_{72}$	$+3.666667x_3$	$+2.666667x_{45}$
x_{52}	3.66666666667	$-85x_2$	$-4.666667x_{72}$	$+4.333333x_3$	$+2.333333x_{45}$
x_{53}	3.33333333333	$-65x_2$	$-3.333333x_{72}$	$+2.666667x_3$	$+2.666667x_{45}$
x_{54}	0.333333333333	$-9.50x_2$	$-0.333333x_{72}$	$+0.166667x_3$	$+1.166667x_{45}$
x_{55}	0.333333333333	$-9.50x_2$	$-0.333333x_{72}$	$+0.166667x_3$	$+1.166667x_{45}$
x_{56}	2.33333333333	$-46.50x_2$	$-2.333333x_{72}$	$+2.166667x_3$	$+2.166667x_{45}$
x_{57}	0.333333333333	$-10.50x_2$	$-0.333333x_{72}$	$+0.166667x_3$	$+1.166667x_{45}$
x_{58}	2	$-56.50x_2$	$-3x_{72}$	$+3.50x_3$	$+1.50x_{45}$
	0.333333333333	-20	-1.333333	$+1.666667$	$+0.666667$

After cutting plane is added

x_4	1.66666666667	$+0.50x_2$	$+0.333333x_{72}$	$-1.166667x_3$	$-0.166667x_{45}$
x_6	19.6666666667	$-621.50x_2$	$-132.666667x_{72}$	$+148.833333x_3$	$+30.833333x_{45}$
x_7	170	$+657.50x_2$	$+159x_{72}$	$-86.50x_3$	$-42.50x_{45}$
x_1	1	$+8.50x_2$	$+2x_{72}$	$-1.50x_3$	$-0.50x_{45}$
x_9	106	$-488.50x_2$	$-99x_{72}$	$+6.50x_3$	$+21.50x_{45}$
x_8	2.66666666667	$-109x_2$	$-9.666667x_{72}$	$+8.333333x_3$	$+3.333333x_{45}$
x_5	1	$+18.50x_2$	$-4x_{72}$	$-6.50x_3$	$+5.50x_{45}$
x_{11}	1	$-40x_2$	$-7x_{72}$	$+0x_3$	$+5x_{45}$
x_{13}	1	$+17.50x_2$	$-4x_{72}$	$-5.50x_3$	$+5.50x_{45}$
x_{14}	1.66666666667	$-28.50x_2$	$-6.666667x_{72}$	$-2.166667x_3$	$+5.833333x_{45}$
x_{28}	$-1.69642078163e-13$	$-34.50x_2$	$-4x_{72}$	$+1.50x_3$	$+2.50x_{45}$
x_{16}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{10}	3	$-101x_2$	$-8x_{72}$	$+7x_3$	$+3x_{45}$
x_{18}	1	$-41x_2$	$-7x_{72}$	$+1x_3$	$+5x_{45}$
x_{19}	3	$-90x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{20}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{21}	3	$-90x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{22}	2	$-37x_2$	$-2x_{72}$	$+2x_3$	$+1x_{45}$
x_{23}	3	$-89x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{24}	1.33333333333	$-43x_2$	$-5.333333x_{72}$	$+1.666667x_3$	$+3.666667x_{45}$
x_{17}	2	$-95.50x_2$	$-11x_{72}$	$+4.50x_3$	$+6.50x_{45}$
x_{26}	2.33333333333	$-23.50x_2$	$-3.333333x_{72}$	$-1.833333x_3$	$+4.166667x_{45}$
x_{12}	1	$+14x_2$	$-1x_{72}$	$-4x_3$	$+3x_{45}$
x_{25}	2.33333333333	$-87.50x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{29}	2.33333333333	$-87.50x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{27}	1	$+13x_2$	$-1x_{72}$	$-3x_3$	$+3x_{45}$
x_{31}	2	$-41.50x_2$	$-5x_{72}$	$+0.50x_3$	$+4.50x_{45}$
x_{32}	$1.94289029309e-16$	$+2x_2$	$-0x_{72}$	$-1x_3$	$+1x_{45}$
x_{33}	1.33333333333	$-53x_2$	$-5.333333x_{72}$	$+1.666667x_3$	$+3.666667x_{45}$
x_{34}	0.666666666667	$+14.50x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{35}	0.666666666667	$+14.50x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{36}	2	$-40.50x_2$	$-5x_{72}$	$+0.50x_3$	$+4.50x_{45}$
x_{37}	$-3.10307335383e-14$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{38}	0.666666666667	$+14.50x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{39}	$2.77555756156e-16$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{40}	2	$-41.50x_2$	$-5x_{72}$	$+0.50x_3$	$+4.50x_{45}$
x_{41}	$-5.55111512313e-17$	$+2x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{42}	2.66666666667	$-30x_2$	$-4.666667x_{72}$	$-1.666667x_3$	$+5.333333x_{45}$
x_{15}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{43}	3.66666666667	$-85x_2$	$-4.666667x_{72}$	$+4.333333x_3$	$+2.333333x_{45}$
x_{30}	$1.38777878078e-17$	$+1x_2$	$+0x_{72}$	$-1x_3$	$+1x_{45}$
x_{44}	0.666666666667	$-10x_2$	$+0.333333x_{72}$	$+0.333333x_3$	$+0.333333x_{45}$
x_{47}	3	$-85.50x_2$	$-5x_{72}$	$+4.50x_3$	$+2.50x_{45}$
x_{48}	3.33333333333	$-66x_2$	$-3.333333x_{72}$	$+2.666667x_3$	$+2.666667x_{45}$
x_{49}	1	$-38x_2$	$-2x_{72}$	$+2x_3$	$+1x_{45}$
x_{50}	2.66666666667	$-85x_2$	$-5.666667x_{72}$	$+4.333333x_3$	$+3.333333x_{45}$
x_{51}	2.33333333333	$-65x_2$	$-4.333333x_{72}$	$+3.666667x_3$	$+2.666667x_{45}$
x_{52}	3.66666666667	$-85x_2$	$-4.666667x_{72}$	$+4.333333x_3$	$+2.333333x_{45}$
x_{53}	3.33333333333	$-65x_2$	$-3.333333x_{72}$	$+2.666667x_3$	$+2.666667x_{45}$
x_{54}	0.333333333333	$-9.50x_2$	$-0.333333x_{72}$	$+0.166667x_3$	$+1.166667x_{45}$
x_{55}	0.333333333333	$-9.50x_2$	$-0.333333x_{72}$	$+0.166667x_3$	$+1.166667x_{45}$
x_{56}	2.33333333333	$-46.50x_2$	$-2.333333x_{72}$	$+2.166667x_3$	$+2.166667x_{45}$
x_{57}	0.333333333333	$-10.50x_2$	$-0.333333x_{72}$	$+0.166667x_3$	$+1.166667x_{45}$
x_{58}	2	$-56.50x_2$	$-3x_{72}$	$+3.50x_3$	$+1.50x_{45}$
	0.333333333333	-20	-1.333333	$+1.666667$	$+0.666667$

Forming the dual dictionary:

y_2	7	$-0.50y_4$	$+621.50y_6$	$-657.50y_7$	$-8.50y_1$	$+488.50y_9$	$+109y_8$	$-18.50y_5$	$+40$
y_{72}	4.33333333333	$-0.333333y_4$	$+132.666667y_6$	$-159y_7$	$-2y_1$	$+99y_9$	$+9.666667y_8$	$+4y_5$	$+7$
y_3	70.3333333333	$+1.166667y_4$	$-148.833333y_6$	$+86.50y_7$	$+1.50y_1$	$-6.50y_9$	$-8.333333y_8$	$+6.50y_5$	-0
y_{45}	2.33333333333	$+0.166667y_4$	$-30.833333y_6$	$+42.50y_7$	$+0.50y_1$	$-21.50y_9$	$-3.333333y_8$	$-5.50y_5$	-5
z	-59.3333333333	$-1.666667y_4$	$-19.666667y_6$	$-170y_7$	$-1y_1$	$-106y_9$	$-2.666667y_8$	$-1y_5$	-1

The Final Dual Dictionary is:

y_2	13.9453125	$+1.789063y_4$	$-8.156250y_{45}$	$+132.601563y_7$	$+1.156250y_1$	$+37.023437y_9$	$+54.851562y_8$	-7
y_{74}	10.38671875	$+0.277344y_4$	$-3.109375y_{45}$	$+17.246094y_7$	$+0.109375y_1$	$+4.691406y_9$	$-3.378906y_8$	-1
y_3	65.6953125	$+0.539063y_4$	$+2.843750y_{45}$	$-107.648437y_7$	$-0.843750y_1$	$+100.273438y_9$	$+5.601562y_8$	$+2$
y_6	0.01953125	$+0.003906y_4$	$-0.015625y_{45}$	$+1.285156y_7$	$+0.015625y_1$	$-0.722656y_9$	$-0.089844y_8$	$-$
z	-52.79296875	$-1.558594y_4$	$-1.765625y_{45}$	$-183.777344y_7$	$-1.234375y_1$	$-88.660156y_9$	$-3.152344y_8$	$-$

Final primal dictionary obtained:

x_4	1.55859375	$-1.789063x_2$	$-0.277344x_{74}$	$-0.539063x_3$	$-0.003906x_6$
x_{45}	1.765625	$+8.156250x_2$	$+3.109375x_{74}$	$-2.843750x_3$	$+0.015625x_6$
x_7	183.77734375	$-132.601563x_2$	$-17.246094x_{74}$	$+107.648437x_3$	$-1.285156x_6$
x_1	1.234375	$-1.156250x_2$	$-0.109375x_{74}$	$+0.843750x_3$	$-0.015625x_6$
x_9	88.66015625	$-37.023437x_2$	$-4.691406x_{74}$	$-100.273438x_3$	$+0.722656x_6$
x_8	3.15234375	$-54.851562x_2$	$+3.378906x_{74}$	$-5.601562x_3$	$+0.089844x_6$
x_5	8.4765625	$+74.515625x_2$	$+14.210937x_{74}$	$-23.984375x_3$	$+0.101562x_6$
x_{11}	5.91796875	$+20.304688x_2$	$+10.488281x_{74}$	$-17.445312x_3$	$+0.105469x_6$
x_{13}	8.4765625	$+73.515625x_2$	$+14.210937x_{74}$	$-22.984375x_3$	$+0.101562x_6$
x_{14}	8.2421875	$+37.671875x_2$	$+13.320312x_{74}$	$-21.828125x_3$	$+0.117187x_6$
x_{28}	2.1796875	$-2.953125x_2$	$+4.882812x_{74}$	$-7.453125x_3$	$+0.054687x_6$
x_{16}	4.50390625	$-53.585937x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{10}	3.828125	$-54.218750x_2$	$+3.546875x_{74}$	$-5.218750x_3$	$+0.078125x_6$
x_{18}	5.91796875	$+19.304688x_2$	$+10.488281x_{74}$	$-16.445312x_3$	$+0.105469x_6$
x_{19}	5.59375	$-35.062500x_2$	$+6.656250x_{74}$	$-10.062500x_3$	$+0.093750x_6$
x_{20}	4.50390625	$-53.585938x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{21}	5.59375	$-35.062500x_2$	$+6.656250x_{74}$	$-10.062500x_3$	$+0.093750x_6$
x_{22}	2.6484375	$-23.265625x_2$	$+1.664062x_{74}$	$-1.765625x_3$	$+0.023437x_6$
x_{23}	5.59375	$-34.062500x_2$	$+6.656250x_{74}$	$-10.062500x_3$	$+0.093750x_6$
x_{24}	4.828125	$+1.781250x_2$	$+7.546875x_{74}$	$-11.218750x_3$	$+0.078125x_6$
x_{17}	7.33203125	$-11.804687x_2$	$+12.261719x_{74}$	$-19.054687x_3$	$+0.144531x_6$
x_{26}	7.828125	$+19.781250x_2$	$+10.546875x_{74}$	$-15.218750x_3$	$+0.078125x_6$
x_{12}	5.73828125	$+41.257813x_2$	$+8.605469x_{74}$	$-12.992187x_3$	$+0.050781x_6$
x_{25}	8.0078125	$-11.171875x_2$	$+12.429687x_{74}$	$-18.671875x_3$	$+0.132812x_6$
x_{29}	8.0078125	$-11.171875x_2$	$+12.429687x_{74}$	$-18.671875x_3$	$+0.132812x_6$
x_{27}	5.73828125	$+40.257813x_2$	$+8.605469x_{74}$	$-11.992187x_3$	$+0.050781x_6$
x_{31}	7.15234375	$+9.148437x_2$	$+10.378906x_{74}$	$-14.601562x_3$	$+0.089844x_6$
x_{32}	1.765625	$+10.156250x_2$	$+3.109375x_{74}$	$-3.843750x_3$	$+0.015625x_6$
x_{33}	4.828125	$-8.218750x_2$	$+7.546875x_{74}$	$-11.218750x_3$	$+0.078125x_6$
x_{34}	5.296875	$+39.468750x_2$	$+8.328125x_{74}$	$-11.531250x_3$	$+0.046875x_6$
x_{35}	5.296875	$+39.468750x_2$	$+8.328125x_{74}$	$-11.531250x_3$	$+0.046875x_6$
x_{36}	7.15234375	$+10.148437x_2$	$+10.378906x_{74}$	$-14.601562x_3$	$+0.089844x_6$
x_{37}	2.97265625	$+22.101563x_2$	$+5.496094x_{74}$	$-8.148437x_3$	$+0.035156x_6$
x_{38}	5.296875	$+39.468750x_2$	$+8.328125x_{74}$	$-11.531250x_3$	$+0.046875x_6$
x_{39}	2.97265625	$+22.101562x_2$	$+5.496094x_{74}$	$-8.148437x_3$	$+0.035156x_6$
x_{40}	7.15234375	$+9.148437x_2$	$+10.378906x_{74}$	$-14.601562x_3$	$+0.089844x_6$
x_{41}	2.97265625	$+21.101562x_2$	$+5.496094x_{74}$	$-8.148437x_3$	$+0.035156x_6$
x_{42}	9.4765625	$+26.515625x_2$	$+13.210937x_{74}$	$-18.984375x_3$	$+0.101562x_6$
x_{15}	4.50390625	$-53.585937x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{43}	5.1796875	$-52.953125x_2$	$+3.882812x_{74}$	$-4.453125x_3$	$+0.054687x_6$
x_{30}	1.765625	$+9.156250x_2$	$+3.109375x_{74}$	$-3.843750x_3$	$+0.015625x_6$
x_{44}	1.44140625	$-8.210937x_2$	$+1.277344x_{74}$	$-0.460937x_3$	$+0.003906x_6$
x_{47}	4.62109375	$-51.164062x_2$	$+4.160156x_{74}$	$-4.914062x_3$	$+0.058594x_6$
x_{48}	6.1796875	$-34.953125x_2$	$+5.882812x_{74}$	$-6.453125x_3$	$+0.054687x_6$
x_{49}	1.6484375	$-24.265625x_2$	$+1.664063x_{74}$	$-1.765625x_3$	$+0.023437x_6$
x_{50}	5.38671875	$-42.007813x_2$	$+6.269531x_{74}$	$-7.757812x_3$	$+0.074219x_6$
x_{51}	4.62109375	$-31.164062x_2$	$+5.160156x_{74}$	$-5.914062x_3$	$+0.058594x_6$
x_{52}	5.1796875	$-52.953125x_2$	$+3.882812x_{74}$	$-4.453125x_3$	$+0.054687x_6$
x_{53}	6.1796875	$-33.953125x_2$	$+5.882812x_{74}$	$-6.453125x_3$	$+0.054687x_6$
x_{54}	2.20703125	$+0.945313x_2$	$+3.386719x_{74}$	$-3.304687x_3$	$+0.019531x_6$
x_{55}	2.20703125	$+0.945312x_2$	$+3.386719x_{74}$	$-3.304687x_3$	$+0.019531x_6$
x_{56}	4.85546875	$-22.320312x_2$	$+5.050781x_{74}$	$-5.070312x_3$	$+0.042969x_6$
x_{57}	2.20703125	$-0.054688x_2$	$+3.386719x_{74}$	$-3.304687x_3$	$+0.019531x_6$
x_{58}	2.97265625	$-35.898438x_2$	$+2.496094x_{74}$	$-2.148437x_3$	$+0.035156x_6$

After cutting plane is added

x_4	1.55859375	$-1.789063x_2$	$-0.277344x_{74}$	$-0.539063x_3$	$-0.003906x_6$
x_{45}	1.765625	$+8.156250x_2$	$+3.109375x_{74}$	$-2.843750x_3$	$+0.015625x_6$
x_7	183.77734375	$-132.601563x_2$	$-17.246094x_{74}$	$+107.648437x_3$	$-1.285156x_6$
x_1	1.234375	$-1.156250x_2$	$-0.109375x_{74}$	$+0.843750x_3$	$-0.015625x_6$
x_9	88.66015625	$-37.023437x_2$	$-4.691406x_{74}$	$-100.273438x_3$	$+0.722656x_6$
x_8	3.15234375	$-54.851562x_2$	$+3.378906x_{74}$	$-5.601562x_3$	$+0.089844x_6$
x_5	8.4765625	$+74.515625x_2$	$+14.210937x_{74}$	$-23.984375x_3$	$+0.101562x_6$
x_{11}	5.91796875	$+20.304688x_2$	$+10.488281x_{74}$	$-17.445312x_3$	$+0.105469x_6$
x_{13}	8.4765625	$+73.515625x_2$	$+14.210937x_{74}$	$-22.984375x_3$	$+0.101562x_6$
x_{14}	8.2421875	$+37.671875x_2$	$+13.320312x_{74}$	$-21.828125x_3$	$+0.117187x_6$
x_{28}	2.1796875	$-2.953125x_2$	$+4.882812x_{74}$	$-7.453125x_3$	$+0.054687x_6$
x_{16}	4.50390625	$-53.585937x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{10}	3.828125	$-54.218750x_2$	$+3.546875x_{74}$	$-5.218750x_3$	$+0.078125x_6$
x_{18}	5.91796875	$+19.304688x_2$	$+10.488281x_{74}$	$-16.445312x_3$	$+0.105469x_6$
x_{19}	5.59375	$-35.062500x_2$	$+6.656250x_{74}$	$-10.062500x_3$	$+0.093750x_6$
x_{20}	4.50390625	$-53.585938x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{21}	5.59375	$-35.062500x_2$	$+6.656250x_{74}$	$-10.062500x_3$	$+0.093750x_6$
x_{22}	2.6484375	$-23.265625x_2$	$+1.664062x_{74}$	$-1.765625x_3$	$+0.023437x_6$
x_{23}	5.59375	$-34.062500x_2$	$+6.656250x_{74}$	$-10.062500x_3$	$+0.093750x_6$
x_{24}	4.828125	$+1.781250x_2$	$+7.546875x_{74}$	$-11.218750x_3$	$+0.078125x_6$
x_{17}	7.33203125	$-11.804687x_2$	$+12.261719x_{74}$	$-19.054687x_3$	$+0.144531x_6$
x_{26}	7.828125	$+19.781250x_2$	$+10.546875x_{74}$	$-15.218750x_3$	$+0.078125x_6$
x_{12}	5.73828125	$+41.257813x_2$	$+8.605469x_{74}$	$-12.992187x_3$	$+0.050781x_6$
x_{25}	8.0078125	$-11.171875x_2$	$+12.429687x_{74}$	$-18.671875x_3$	$+0.132812x_6$
x_{29}	8.0078125	$-11.171875x_2$	$+12.429687x_{74}$	$-18.671875x_3$	$+0.132812x_6$
x_{27}	5.73828125	$+40.257813x_2$	$+8.605469x_{74}$	$-11.992187x_3$	$+0.050781x_6$
x_{31}	7.15234375	$+9.148437x_2$	$+10.378906x_{74}$	$-14.601562x_3$	$+0.089844x_6$
x_{32}	1.765625	$+10.156250x_2$	$+3.109375x_{74}$	$-3.843750x_3$	$+0.015625x_6$
x_{33}	4.828125	$-8.218750x_2$	$+7.546875x_{74}$	$-11.218750x_3$	$+0.078125x_6$
x_{34}	5.296875	$+39.468750x_2$	$+8.328125x_{74}$	$-11.531250x_3$	$+0.046875x_6$
x_{35}	5.296875	$+39.468750x_2$	$+8.328125x_{74}$	$-11.531250x_3$	$+0.046875x_6$
x_{36}	7.15234375	$+10.148437x_2$	$+10.378906x_{74}$	$-14.601562x_3$	$+0.089844x_6$
x_{37}	2.97265625	$+22.101563x_2$	$+5.496094x_{74}$	$-8.148437x_3$	$+0.035156x_6$
x_{38}	5.296875	$+39.468750x_2$	$+8.328125x_{74}$	$-11.531250x_3$	$+0.046875x_6$
x_{39}	2.97265625	$+22.101562x_2$	$+5.496094x_{74}$	$-8.148437x_3$	$+0.035156x_6$
x_{40}	7.15234375	$+9.148437x_2$	$+10.378906x_{74}$	$-14.601562x_3$	$+0.089844x_6$
x_{41}	2.97265625	$+21.101562x_2$	$+5.496094x_{74}$	$-8.148437x_3$	$+0.035156x_6$
x_{42}	9.4765625	$+26.515625x_2$	$+13.210937x_{74}$	$-18.984375x_3$	$+0.101562x_6$
x_{15}	4.50390625	$-53.585937x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{43}	5.1796875	$-52.953125x_2$	$+3.882812x_{74}$	$-4.453125x_3$	$+0.054687x_6$
x_{30}	1.765625	$+9.156250x_2$	$+3.109375x_{74}$	$-3.843750x_3$	$+0.015625x_6$
x_{44}	1.44140625	$-8.210937x_2$	$+1.277344x_{74}$	$-0.460937x_3$	$+0.003906x_6$
x_{47}	4.62109375	$-51.164062x_2$	$+4.160156x_{74}$	$-4.914062x_3$	$+0.058594x_6$
x_{48}	6.1796875	$-34.953125x_2$	$+5.882812x_{74}$	$-6.453125x_3$	$+0.054687x_6$
x_{49}	1.6484375	$-24.265625x_2$	$+1.664063x_{74}$	$-1.765625x_3$	$+0.023437x_6$
x_{50}	5.38671875	$-42.007813x_2$	$+6.269531x_{74}$	$-7.757812x_3$	$+0.074219x_6$
x_{51}	4.62109375	$-31.164062x_2$	$+5.160156x_{74}$	$-5.914062x_3$	$+0.058594x_6$
x_{52}	5.1796875	$-52.953125x_2$	$+3.882812x_{74}$	$-4.453125x_3$	$+0.054687x_6$
x_{53}	6.1796875	$-33.953125x_2$	$+5.882812x_{74}$	$-6.453125x_3$	$+0.054687x_6$
x_{54}	2.20703125	$+0.945313x_2$	$+3.386719x_{74}$	$-3.304687x_3$	$+0.019531x_6$
x_{55}	2.20703125	$+0.945312x_2$	$+3.386719x_{74}$	$-3.304687x_3$	$+0.019531x_6$
x_{56}	4.85546875	$-22.320312x_2$	$+5.050781x_{74}$	$-5.070312x_3$	$+0.042969x_6$
x_{57}	2.20703125	$-0.054688x_2$	$+3.386719x_{74}$	$-3.304687x_3$	$+0.019531x_6$
x_{58}	2.97265625	$-35.898438x_2$	$+2.496094x_{74}$	$-2.148437x_3$	$+0.035156x_6$

Forming the dual dictionary:

y_2	13.9453125	$+1.789063y_4$	$-8.156250y_{45}$	$+132.601563y_7$	$+1.156250y_1$	$+37.023437y_9$	$+54.851562y_8$ -7
y_{74}	10.38671875	$+0.277344y_4$	$-3.109375y_{45}$	$+17.246094y_7$	$+0.109375y_1$	$+4.691406y_9$	$-3.378906y_8$ -1
y_3	65.6953125	$+0.539063y_4$	$+2.843750y_{45}$	$-107.648437y_7$	$-0.843750y_1$	$+100.273438y_9$	$+5.601562y_8$ $+2$
y_6	0.01953125	$+0.003906y_4$	$-0.015625y_{45}$	$+1.285156y_7$	$+0.015625y_1$	$-0.722656y_9$	$-0.089844y_8$ $-$
z	-52.79296875	$-1.558594y_4$	$-1.765625y_{45}$	$-183.777344y_7$	$-1.234375y_1$	$-88.660156y_9$	$-3.152344y_8$ $-$

The Final Dual Dictionary is:

y_1	9	$+0y_4$	$-2y_{45}$	$-74y_7$	$-0y_2$	$+56y_9$	$-1y_{74}$
y_{61}	0.571428571429	$-0.071429y_4$	$+0.071429y_{45}$	$-1.50y_7$	$+0.071429y_2$	$-5.071429y_9$	$-0.142857y_{74}$ $+2.$
y_3	37.1428571429	$-0.142857y_4$	$+11.142857y_{45}$	$-66y_7$	$+0.142857y_2$	$+21.857143y_9$	$+2.714286y_{74}$ $+64$
y_{110}	39.2857142857	$+1.214286y_4$	$-12.214286y_{45}$	$+37.50y_7$	$-0.214286y_2$	$+54.214286y_9$	$-3.571429y_{74}$ -62
z	-42.1428571429	$-0.857143y_4$	$-6.142857y_{45}$	$-71y_7$	$-0.142857y_2$	$-125.857143y_9$	$-0.714286y_{74}$ -35

Final primal dictionary obtained:

x_4	0.857142857143	$-0x_1$	$+0.071429x_{61}$	$+0.142857x_3$	$-1.214286x_{110}$
x_{45}	6.14285714286	$+2x_1$	$-0.071429x_{61}$	$-11.142857x_3$	$+12.214286x_{110}$
x_7	71	$+74x_1$	$+1.50x_{61}$	$+66x_3$	$-37.50x_{110}$
x_2	0.142857142857	$+0x_1$	$-0.071429x_{61}$	$-0.142857x_3$	$+0.214286x_{110}$
x_9	125.857142857	$-56x_1$	$+5.071429x_{61}$	$-21.857143x_3$	$-54.214286x_{110}$
x_{74}	0.714285714286	$+1x_1$	$+0.142857x_{61}$	$-2.714286x_3$	$+3.571429x_{110}$
x_5	35.7142857143	$+7x_1$	$-2.857143x_{61}$	$-64.714286x_3$	$+62.571429x_{110}$
x_{11}	23	$+3x_1$	$+0.50x_{61}$	$-40x_3$	$+37.50x_{110}$
x_{13}	35.5714285714	$+7x_1$	$-2.785714x_{61}$	$-63.571429x_3$	$+62.357143x_{110}$
x_{14}	30.5714285714	$+5x_1$	$-0.285714x_{61}$	$-53.571429x_3$	$+50.857143x_{110}$
x_{28}	8.71428571429	$+1x_1$	$+1.142857x_{61}$	$-15.714286x_3$	$+14.571429x_{110}$
x_{16}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{10}	3.57142857143	$-2x_1$	$+4.714286x_{61}$	$-0.571429x_3$	$-2.142857x_{110}$
x_{18}	22.8571428571	$+3x_1$	$+0.571429x_{61}$	$-38.857143x_3$	$+37.285714x_{110}$
x_{19}	11.2857142857	$-0x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{20}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{21}	11.2857142857	$-0x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{22}	2	$-0x_1$	$+2x_{61}$	$-1x_3$	$-0x_{110}$
x_{23}	11.4285714286	$-0x_1$	$+3.785714x_{61}$	$-15.428571x_3$	$+12.642857x_{110}$
x_{24}	15.4285714286	$+2x_1$	$+1.285714x_{61}$	$-25.428571x_3$	$+24.142857x_{110}$
x_{17}	23.5714285714	$+2x_1$	$+3.214286x_{61}$	$-38.571429x_3$	$+35.357143x_{110}$
x_{26}	23.1428571429	$+5x_1$	$+0.428571x_{61}$	$-40.142857x_3$	$+38.714286x_{110}$
x_{12}	21	$+5x_1$	$-1.50x_{61}$	$-38x_3$	$+37.50x_{110}$
x_{25}	23.7142857143	$+3x_1$	$+3.142857x_{61}$	$-39.714286x_3$	$+36.571429x_{110}$
x_{29}	23.7142857143	$+3x_1$	$+3.142857x_{61}$	$-39.714286x_3$	$+36.571429x_{110}$
x_{27}	20.8571428571	$+5x_1$	$-1.428571x_{61}$	$-36.857143x_3$	$+37.285714x_{110}$
x_{31}	21.5714285714	$+4x_1$	$+1.214286x_{61}$	$-36.571429x_3$	$+35.357143x_{110}$
x_{32}	6.42857142857	$+2x_1$	$-0.214286x_{61}$	$-12.428571x_3$	$+12.642857x_{110}$
x_{33}	14	$+2x_1$	$+2x_{61}$	$-24x_3$	$+22x_{110}$
x_{34}	19.8571428571	$+5x_1$	$-1.428571x_{61}$	$-35.857143x_3$	$+36.285714x_{110}$
x_{35}	19.8571428571	$+5x_1$	$-1.428571x_{61}$	$-35.857143x_3$	$+36.285714x_{110}$
x_{36}	21.7142857143	$+4x_1$	$+1.142857x_{61}$	$-36.714286x_3$	$+35.571429x_{110}$
x_{37}	12.2857142857	$+3x_1$	$-0.642857x_{61}$	$-23.285714x_3$	$+22.928571x_{110}$
x_{38}	19.8571428571	$+5x_1$	$-1.428571x_{61}$	$-35.857143x_3$	$+36.285714x_{110}$
x_{39}	12.2857142857	$+3x_1$	$-0.642857x_{61}$	$-23.285714x_3$	$+22.928571x_{110}$
x_{40}	21.5714285714	$+4x_1$	$+1.214286x_{61}$	$-36.571429x_3$	$+35.357143x_{110}$
x_{41}	12.1428571429	$+3x_1$	$-0.571429x_{61}$	$-23.142857x_3$	$+22.714286x_{110}$
x_{42}	29.1428571429	$+6x_1$	$+0.428571x_{61}$	$-50.142857x_3$	$+48.714286x_{110}$
x_{15}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{43}	3.85714285714	$-0x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$
x_{30}	6.28571428571	$+2x_1$	$-0.142857x_{61}$	$-12.285714x_3$	$+12.428571x_{110}$
x_{44}	1.42857142857	$+1x_1$	$+0.785714x_{61}$	$-2.428571x_3$	$+2.642857x_{110}$
x_{47}	4	$-0x_1$	$+4.50x_{61}$	$-4x_3$	$+1.50x_{110}$
x_{48}	8.85714285714	$+2x_1$	$+3.571429x_{61}$	$-12.857143x_3$	$+11.285714x_{110}$
x_8	3.42857142857	$-3x_1$	$+4.785714x_{61}$	$+0.571429x_3$	$-3.357143x_{110}$
x_{50}	8.57142857143	$+1x_1$	$+4.214286x_{61}$	$-12.571429x_3$	$+10.357143x_{110}$
x_{51}	7.57142857143	$+1x_1$	$+3.214286x_{61}$	$-10.571429x_3$	$+9.357143x_{110}$
x_{52}	3.85714285714	$-0x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$
x_{53}	9	$+2x_1$	$+3.50x_{61}$	$-13x_3$	$+11.50x_{110}$
x_{54}	6	$+2x_1$	$+0.50x_{61}$	$-11x_3$	$+11.50x_{110}$
x_{55}	6	$+2x_1$	$+0.50x_{61}$	$-11x_3$	$+11.50x_{110}$
x_{56}	8	$+2x_1$	$+2.50x_{61}$	$-12x_3$	$+11.50x_{110}$
x_{57}	5.85714285714	$+2x_1$	$+0.571429x_{61}$	$-10.857143x_3$	$+11.285714x_{110}$
x_{58}	1.85714285714	$-0x_1$	$+3.071429x_{61}$	$-0.857143x_3$	$-0.214286x_{110}$

After cutting plane is added

x_4	0.857142857143	$-0x_1$	$+0.071429x_{61}$	$+0.142857x_3$	$-1.214286x_{110}$
x_{45}	6.14285714286	$+2x_1$	$-0.071429x_{61}$	$-11.142857x_3$	$+12.214286x_{110}$
x_7	71	$+74x_1$	$+1.50x_{61}$	$+66x_3$	$-37.50x_{110}$
x_2	0.142857142857	$+0x_1$	$-0.071429x_{61}$	$-0.142857x_3$	$+0.214286x_{110}$
x_9	125.857142857	$-56x_1$	$+5.071429x_{61}$	$-21.857143x_3$	$-54.214286x_{110}$
x_{74}	0.714285714286	$+1x_1$	$+0.142857x_{61}$	$-2.714286x_3$	$+3.571429x_{110}$
x_5	35.7142857143	$+7x_1$	$-2.857143x_{61}$	$-64.714286x_3$	$+62.571429x_{110}$
x_{11}	23	$+3x_1$	$+0.50x_{61}$	$-40x_3$	$+37.50x_{110}$
x_{13}	35.5714285714	$+7x_1$	$-2.785714x_{61}$	$-63.571429x_3$	$+62.357143x_{110}$
x_{14}	30.5714285714	$+5x_1$	$-0.285714x_{61}$	$-53.571429x_3$	$+50.857143x_{110}$
x_{28}	8.71428571429	$+1x_1$	$+1.142857x_{61}$	$-15.714286x_3$	$+14.571429x_{110}$
x_{16}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{10}	3.57142857143	$-2x_1$	$+4.714286x_{61}$	$-0.571429x_3$	$-2.142857x_{110}$
x_{18}	22.8571428571	$+3x_1$	$+0.571429x_{61}$	$-38.857143x_3$	$+37.285714x_{110}$
x_{19}	11.2857142857	$-0x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{20}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{21}	11.2857142857	$-0x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{22}	2	$-0x_1$	$+2x_{61}$	$-1x_3$	$-0x_{110}$
x_{23}	11.4285714286	$-0x_1$	$+3.785714x_{61}$	$-15.428571x_3$	$+12.642857x_{110}$
x_{24}	15.4285714286	$+2x_1$	$+1.285714x_{61}$	$-25.428571x_3$	$+24.142857x_{110}$
x_{17}	23.5714285714	$+2x_1$	$+3.214286x_{61}$	$-38.571429x_3$	$+35.357143x_{110}$
x_{26}	23.1428571429	$+5x_1$	$+0.428571x_{61}$	$-40.142857x_3$	$+38.714286x_{110}$
x_{12}	21	$+5x_1$	$-1.50x_{61}$	$-38x_3$	$+37.50x_{110}$
x_{25}	23.7142857143	$+3x_1$	$+3.142857x_{61}$	$-39.714286x_3$	$+36.571429x_{110}$
x_{29}	23.7142857143	$+3x_1$	$+3.142857x_{61}$	$-39.714286x_3$	$+36.571429x_{110}$
x_{27}	20.8571428571	$+5x_1$	$-1.428571x_{61}$	$-36.857143x_3$	$+37.285714x_{110}$
x_{31}	21.5714285714	$+4x_1$	$+1.214286x_{61}$	$-36.571429x_3$	$+35.357143x_{110}$
x_{32}	6.42857142857	$+2x_1$	$-0.214286x_{61}$	$-12.428571x_3$	$+12.642857x_{110}$
x_{33}	14	$+2x_1$	$+2x_{61}$	$-24x_3$	$+22x_{110}$
x_{34}	19.8571428571	$+5x_1$	$-1.428571x_{61}$	$-35.857143x_3$	$+36.285714x_{110}$
x_{35}	19.8571428571	$+5x_1$	$-1.428571x_{61}$	$-35.857143x_3$	$+36.285714x_{110}$
x_{36}	21.7142857143	$+4x_1$	$+1.142857x_{61}$	$-36.714286x_3$	$+35.571429x_{110}$
x_{37}	12.2857142857	$+3x_1$	$-0.642857x_{61}$	$-23.285714x_3$	$+22.928571x_{110}$
x_{38}	19.8571428571	$+5x_1$	$-1.428571x_{61}$	$-35.857143x_3$	$+36.285714x_{110}$
x_{39}	12.2857142857	$+3x_1$	$-0.642857x_{61}$	$-23.285714x_3$	$+22.928571x_{110}$
x_{40}	21.5714285714	$+4x_1$	$+1.214286x_{61}$	$-36.571429x_3$	$+35.357143x_{110}$
x_{41}	12.1428571429	$+3x_1$	$-0.571429x_{61}$	$-23.142857x_3$	$+22.714286x_{110}$
x_{42}	29.1428571429	$+6x_1$	$+0.428571x_{61}$	$-50.142857x_3$	$+48.714286x_{110}$
x_{15}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{43}	3.85714285714	$-0x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$
x_{30}	6.28571428571	$+2x_1$	$-0.142857x_{61}$	$-12.285714x_3$	$+12.428571x_{110}$
x_{44}	1.42857142857	$+1x_1$	$+0.785714x_{61}$	$-2.428571x_3$	$+2.642857x_{110}$
x_{47}	4	$-0x_1$	$+4.50x_{61}$	$-4x_3$	$+1.50x_{110}$
x_{48}	8.85714285714	$+2x_1$	$+3.571429x_{61}$	$-12.857143x_3$	$+11.285714x_{110}$
x_8	3.42857142857	$-3x_1$	$+4.785714x_{61}$	$+0.571429x_3$	$-3.357143x_{110}$
x_{50}	8.57142857143	$+1x_1$	$+4.214286x_{61}$	$-12.571429x_3$	$+10.357143x_{110}$
x_{51}	7.57142857143	$+1x_1$	$+3.214286x_{61}$	$-10.571429x_3$	$+9.357143x_{110}$
x_{52}	3.85714285714	$-0x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$
x_{53}	9	$+2x_1$	$+3.50x_{61}$	$-13x_3$	$+11.50x_{110}$
x_{54}	6	$+2x_1$	$+0.50x_{61}$	$-11x_3$	$+11.50x_{110}$
x_{55}	6	$+2x_1$	$+0.50x_{61}$	$-11x_3$	$+11.50x_{110}$
x_{56}	8	$+2x_1$	$+2.50x_{61}$	$-12x_3$	$+11.50x_{110}$
x_{57}	5.85714285714	$+2x_1$	$+0.571429x_{61}$	$-10.857143x_3$	$+11.285714x_{110}$
x_{58}	1.85714285714	$-0x_1$	$+3.071429x_{61}$	$-0.857143x_3$	$-0.214286x_{110}$

Forming the dual dictionary:

y_1	9	$+0y_4$	$-2y_{45}$	$-74y_7$	$-0y_2$	$+56y_9$	$-1y_{74}$
y_{61}	0.571428571429	$-0.071429y_4$	$+0.071429y_{45}$	$-1.50y_7$	$+0.071429y_2$	$-5.071429y_9$	$-0.142857y_{74}$ $+2.$
y_3	37.1428571429	$-0.142857y_4$	$+11.142857y_{45}$	$-66y_7$	$+0.142857y_2$	$+21.857143y_9$	$+2.714286y_{74}$ $+64$
y_{110}	39.2857142857	$+1.214286y_4$	$-12.214286y_{45}$	$+37.50y_7$	$-0.214286y_2$	$+54.214286y_9$	$-3.571429y_{74}$ -62
z	-42.1428571429	$-0.857143y_4$	$-6.142857y_{45}$	$-71y_7$	$-0.142857y_2$	$-125.857143y_9$	$-0.714286y_{74}$ -35

The Final Dual Dictionary is:

y_1	1	$+1y_4$	$-3y_{45}$	$-53y_7$	$-1y_2$	$+127y_9$	$+1y_{74}$	$-47y_5$	$+4y_{11}$	$-46y_{13}$	$-9y_{14}$	$+15y_{28}$	$+66y_{16}$ $+68y_{10}$ $+5y$
y_{209}	8	$-1y_4$	$+1y_{45}$	$-21y_7$	$+1y_2$	$-71y_9$	$-2y_{74}$	$+40y_5$	$-7y_{11}$	$+39y_{13}$	$+4y_{14}$	$-16y_{28}$	$-65y_{16}$ $-66y_{10}$ $-8y$
y_3	36	$+0y_4$	$+11y_{45}$	$-63y_7$	$-0y_2$	$+32y_9$	$+3y_{74}$	$+59y_5$	$+41y_{11}$	$+58y_{13}$	$+53y_{14}$	$+18y_{28}$	$+11y_{16}$ $+10y_{10}$ $+40$
y_{110}	33	$+2y_4$	$-13y_{45}$	$+54y_7$	$-1y_2$	$+110y_9$	$-2y_{74}$	$-94y_5$	$-32y_{11}$	$-93y_{13}$	$-54y_{14}$	$-2y_{28}$	$+52y_{16}$ $+54y_{10}$ -31
z	-41	$-1y_4$	$-6y_{45}$	$-74y_7$	$-0y_2$	$-136y_9$	$-1y_{74}$	$-30y_5$	$-24y_{11}$	$-30y_{13}$	$-30y_{14}$	$-11y_{28}$	$-13y_{16}$ $-13y_{10}$ -24

Final primal dictionary obtained:

x_4	1	$-1x_1 \ +1x_{209} \ -0x_3 \ -2x_{110}$
x_{45}	6	$+3x_1 \ -1x_{209} \ -11x_3 \ +13x_{110}$
x_7	74	$+53x_1 \ +21x_{209} \ +63x_3 \ -54x_{110}$
x_2	$1.02279296144e-14$	$+1x_1 \ -1x_{209} \ +0x_3 \ +1x_{110}$
x_9	136	$-127x_1 \ +71x_{209} \ -32x_3 \ -110x_{110}$
x_{74}	1	$-1x_1 \ +2x_{209} \ -3x_3 \ +2x_{110}$
x_5	30	$+47x_1 \ -40x_{209} \ -59x_3 \ +94x_{110}$
x_{11}	24	$-4x_1 \ +7x_{209} \ -41x_3 \ +32x_{110}$
x_{13}	30	$+46x_1 \ -39x_{209} \ -58x_3 \ +93x_{110}$
x_{14}	30	$+9x_1 \ -4x_{209} \ -53x_3 \ +54x_{110}$
x_{28}	11	$-15x_1 \ +16x_{209} \ -18x_3 \ +2x_{110}$
x_{16}	13	$-66x_1 \ +65x_{209} \ -11x_3 \ -52x_{110}$
x_{10}	13	$-68x_1 \ +66x_{209} \ -10x_3 \ -54x_{110}$
x_{18}	24	$-5x_1 \ +8x_{209} \ -40x_3 \ +31x_{110}$
x_{19}	19	$-54x_1 \ +54x_{209} \ -23x_3 \ -30x_{110}$
x_{20}	13	$-66x_1 \ +65x_{209} \ -11x_3 \ -52x_{110}$
x_{21}	19	$-54x_1 \ +54x_{209} \ -23x_3 \ -30x_{110}$
x_{22}	6	$-28x_1 \ +28x_{209} \ -5x_3 \ -22x_{110}$
x_{23}	19	$-53x_1 \ +53x_{209} \ -23x_3 \ -29x_{110}$
x_{24}	18	$-16x_1 \ +18x_{209} \ -28x_3 \ +10x_{110}$
x_{17}	30	$-43x_1 \ +45x_{209} \ -45x_3 \ +0x_{110}$
x_{26}	24	$-1x_1 \ +6x_{209} \ -41x_3 \ +34x_{110}$
x_{12}	18	$+26x_1 \ -21x_{209} \ -35x_3 \ +54x_{110}$
x_{25}	30	$-41x_1 \ +44x_{209} \ -46x_3 \ +2x_{110}$
x_{29}	30	$-41x_1 \ +44x_{209} \ -46x_3 \ +2x_{110}$
x_{27}	18	$+25x_1 \ -20x_{209} \ -34x_3 \ +53x_{110}$
x_{31}	24	$-13x_1 \ +17x_{209} \ -39x_3 \ +22x_{110}$
x_{32}	6	$+5x_1 \ -3x_{209} \ -12x_3 \ +15x_{110}$
x_{33}	18	$-26x_1 \ +28x_{209} \ -28x_3 \ +0x_{110}$
x_{34}	17	$+25x_1 \ -20x_{209} \ -33x_3 \ +52x_{110}$
x_{35}	17	$+25x_1 \ -20x_{209} \ -33x_3 \ +52x_{110}$
x_{36}	24	$-12x_1 \ +16x_{209} \ -39x_3 \ +23x_{110}$
x_{37}	11	$+12x_1 \ -9x_{209} \ -22x_3 \ +30x_{110}$
x_{38}	17	$+25x_1 \ -20x_{209} \ -33x_3 \ +52x_{110}$
x_{39}	11	$+12x_1 \ -9x_{209} \ -22x_3 \ +30x_{110}$
x_{40}	24	$-13x_1 \ +17x_{209} \ -39x_3 \ +22x_{110}$
x_{41}	11	$+11x_1 \ -8x_{209} \ -22x_3 \ +29x_{110}$
x_{42}	30	$+0x_1 \ +6x_{209} \ -51x_3 \ +44x_{110}$
x_{15}	13	$-66x_1 \ +65x_{209} \ -11x_3 \ -52x_{110}$
x_{43}	13	$-64x_1 \ +64x_{209} \ -12x_3 \ -50x_{110}$
x_{30}	6	$+4x_1 \ -2x_{209} \ -12x_3 \ +14x_{110}$
x_{44}	3	$-10x_1 \ +11x_{209} \ -4x_3 \ -6x_{110}$
x_{47}	13	$-63x_1 \ +63x_{209} \ -13x_3 \ -48x_{110}$
x_{48}	16	$-48x_1 \ +50x_{209} \ -20x_3 \ -28x_{110}$
x_8	13	$-70x_1 \ +67x_{209} \ -9x_3 \ -56x_{110}$
x_{50}	17	$-58x_1 \ +59x_{209} \ -21x_3 \ -36x_{110}$
x_{51}	14	$-44x_1 \ +45x_{209} \ -17x_3 \ -26x_{110}$
x_{52}	13	$-64x_1 \ +64x_{209} \ -12x_3 \ -50x_{110}$
x_{53}	16	$-47x_1 \ +49x_{209} \ -20x_3 \ -27x_{110}$
x_{54}	7	$-5x_1 \ +7x_{209} \ -12x_3 \ +6x_{110}$
x_{55}	7	$-5x_1 \ +7x_{209} \ -12x_3 \ +6x_{110}$
x_{56}	13	$-33x_1 \ +35x_{209} \ -17x_3 \ -16x_{110}$
x_{57}	7	$-6x_1 \ +8x_{209} \ -12x_3 \ +5x_{110}$
x_{58}	8	$-43x_1 \ +43x_{209} \ -7x_3 \ -34x_{110}$

Done.

9 ilpTest9

Initial Dictionary

x_1	1.2	$-3.10x_2 +4.30x_3 -0.50x_5$
x_4	1	$-1x_2 +1x_3 -1x_5$
x_6	2.5	$+1.30x_2 -2.10x_3 +1x_5$
z	0	$-1.20x_2 -2.30x_3 -2.10x_5$

No initialization required $\rightarrow$ Proceed to Optimize. Final Dictionary Final dictionary after first LP relaxation solve:

x_1	1.2	$-3.10x_2 +4.30x_3 -0.50x_5$
x_4	1	$-1x_2 +1x_3 -1x_5$
x_6	2.5	$+1.30x_2 -2.10x_3 +1x_5$
z	0	$-1.20x_2 -2.30x_3 -2.10x_5$

After cutting plane is added

x_1	1.2	$-3.10x_2 +4.30x_3 -0.50x_5$
x_4	1	$-1x_2 +1x_3 -1x_5$
x_6	2.5	$+1.30x_2 -2.10x_3 +1x_5$
x_7	-0.2	$+0.10x_2 +0.70x_3 +0.50x_5$
x_8	-0.5	$+0.70x_2 +0.10x_3$
z	0	$-1.20x_2 -2.30x_3 -2.10x_5$

Forming the dual dictionary:

y_2	1.2	$+3.10y_1 +1y_4 -1.30y_6 -0.10y_7 -0.70y_8$
y_3	2.3	$-4.30y_1 -1y_4 +2.10y_6 -0.70y_7 -0.10y_8$
y_5	2.1	$+0.50y_1 +1y_4 -1y_6 -0.50y_7$
z	-0	$-1.20y_1 -1y_4 -2.50y_6 +0.20y_7 +0.50y_8$

The Final Dual Dictionary is:

y_8	3.70180722892	$-0.783133y_7 +0.361446y_4 +0.277108y_6 -0.933735y_3 -1.295181y_2$
y_1	0.448795180723	$-0.144578y_7 -0.240964y_4 +0.481928y_6 -0.210843y_3 +0.030120y_2$
y_5	2.32439759036	$-0.572289y_7 +0.879518y_4 -0.759036y_6 -0.105422y_3 +0.015060y_2$
z	1.31234939759	$-0.018072y_7 -0.530120y_4 -2.939759y_6 -0.213855y_3 -0.683735y_2$

Final primal dictionary obtained:

x_7	0.0180722891566	$+0.783133x_8 +0.144578x_1 +0.572289x_5$
x_4	0.530120481928	$-0.361446x_8 +0.240964x_1 -0.879518x_5$
x_6	2.93975903614	$-0.277108x_8 -0.481928x_1 +0.759036x_5$
x_3	0.213855421687	$+0.933735x_8 +0.210843x_1 +0.105422x_5$
x_2	0.683734939759	$+1.295181x_8 -0.030120x_1 -0.015060x_5$
z	-1.31234939759	$-3.701807x_8 -0.448795x_1 -2.324398x_5$

After cutting plane is added

x_7	0.0180722891566	$+0.783133x_8 +0.144578x_1 +0.572289x_5$
x_4	0.530120481928	$-0.361446x_8 +0.240964x_1 -0.879518x_5$
x_6	2.93975903614	$-0.277108x_8 -0.481928x_1 +0.759036x_5$
x_3	0.213855421687	$+0.933735x_8 +0.210843x_1 +0.105422x_5$
x_2	0.683734939759	$+1.295181x_8 -0.030120x_1 -0.015060x_5$
x_9	−0.0180722891566	$+0.216867x_8 +0.855422x_1 +0.427711x_5$
x_{10}	−0.530120481928	$+0.361446x_8 +0.759036x_1 +0.879518x_5$
x_{11}	−0.939759036145	$+0.277108x_8 +0.481928x_1 +0.240964x_5$
x_{12}	−0.213855421687	$+0.066265x_8 +0.789157x_1 +0.894578x_5$
x_{13}	−0.683734939759	$+0.704819x_8 +0.030120x_1 +0.015060x_5$
z	−1.31234939759	$-3.701807x_8 -0.448795x_1 -2.324398x_5$

Forming the dual dictionary:

y_8	3.70180722892	$-0.783133y_7 +0.361446y_4 +0.277108y_6 -0.933735y_3 -1.295181y_2 -0.216867y_9 -0.3614$
y_1	0.448795180723	$-0.144578y_7 -0.240964y_4 +0.481928y_6 -0.210843y_3 +0.030120y_2 -0.855422y_9 -0.7590$
y_5	2.32439759036	$-0.572289y_7 +0.879518y_4 -0.759036y_6 -0.105422y_3 +0.015060y_2 -0.427711y_9 -0.8795$
z	1.31234939759	$-0.018072y_7 -0.530120y_4 -2.939759y_6 -0.213855y_3 -0.683735y_2 +0.018072y_9 +0.5301$

The Final Dual Dictionary is:

y_{13}	5.00909090909	$-1.018182y_7$	$+0.727273y_4$		$-1.181818y_3$	$-1.909091y_2$	$+0.836364y_1$	$+0.40y_9$	$+0.109$
y_{11}	0.618181818182	$-0.236364y_7$	$-0.545455y_4$	$+1y_6$	$-0.363636y_3$	$+0.181818y_2$	$-2.127273y_1$	$-1.80y_9$	-1.581
y_5	2.1	$-0.50y_7$	$+1y_4$	$-1y_6$	$-0y_3$	$+0y_2$	$+0.50y_1$	$-0y_9$	-0.5
z	5.31818181818	$-0.936364y_7$	$-0.545455y_4$	$-2y_6$	$-1.363636y_3$	$-1.818182y_2$	$-1.427273y_1$	$-1.40y_9$	-0.881

Final primal dictionary obtained:

x_7	0.936363636364	$+1.018182x_{13}$	$+0.236364x_{11}$	$+0.50x_5$
x_4	0.545454545455	$-0.727273x_{13}$	$+0.545455x_{11}$	$-1x_5$
x_6	2		$-1x_{11}$	$+1x_5$
x_3	1.36363636364	$+1.181818x_{13}$	$+0.363636x_{11}$	$+0x_5$
x_2	1.81818181818	$+1.909091x_{13}$	$-0.181818x_{11}$	$-0x_5$
x_1	1.42727272727	$-0.836364x_{13}$	$+2.127273x_{11}$	$-0.50x_5$
x_9	1.4	$-0.40x_{13}$	$+1.80x_{11}$	$+0x_5$
x_{10}	0.881818181818	$-0.109091x_{13}$	$+1.581818x_{11}$	$+0.50x_5$
x_{12}	0.972727272727	$-0.563636x_{13}$	$+1.672727x_{11}$	$+0.50x_5$
x_8	0.909090909091	$+1.454545x_{13}$	$-0.090909x_{11}$	$-0x_5$
z	−5.31818181818	$-5.009091x_{13}$	$-0.618182x_{11}$	$-2.10x_5$

After cutting plane is added

x_7	0.936363636364	$+1.018182x_{13}$	$+0.236364x_{11}$	$+0.50x_5$
x_4	0.545454545455	$-0.727273x_{13}$	$+0.545455x_{11}$	$-1x_5$
x_6	2		$-1x_{11}$	$+1x_5$
x_3	1.36363636364	$+1.181818x_{13}$	$+0.363636x_{11}$	$+0x_5$
x_2	1.81818181818	$+1.909091x_{13}$	$-0.181818x_{11}$	$-0x_5$
x_1	1.42727272727	$-0.836364x_{13}$	$+2.127273x_{11}$	$-0.50x_5$
x_9	1.4	$-0.40x_{13}$	$+1.80x_{11}$	$+0x_5$
x_{10}	0.881818181818	$-0.109091x_{13}$	$+1.581818x_{11}$	$+0.50x_5$
x_{12}	0.972727272727	$-0.563636x_{13}$	$+1.672727x_{11}$	$+0.50x_5$
x_8	0.909090909091	$+1.454545x_{13}$	$-0.090909x_{11}$	$-0x_5$
x_{14}	-0.936363636364	$+0.981818x_{13}$	$+0.763636x_{11}$	$+0.50x_5$
x_{15}	-0.545454545455	$+0.727273x_{13}$	$+0.454545x_{11}$	$+1x_5$
x_{16}	-0.363636363636	$+0.818182x_{13}$	$+0.636364x_{11}$	$+1x_5$
x_{17}	-0.818181818182	$+0.090909x_{13}$	$+0.181818x_{11}$	$+0x_5$
x_{18}	-0.427272727273	$+0.836364x_{13}$	$+0.872727x_{11}$	$+0.50x_5$
x_{19}	-0.4	$+0.40x_{13}$	$+0.20x_{11}$	$+1x_5$
x_{20}	-0.881818181818	$+0.109091x_{13}$	$+0.418182x_{11}$	$+0.50x_5$
x_{21}	-0.972727272727	$+0.563636x_{13}$	$+0.327273x_{11}$	$+0.50x_5$
x_{22}	-0.909090909091	$+0.545455x_{13}$	$+0.090909x_{11}$	$+0x_5$
z	-5.31818181818	$-5.009091x_{13}$	$-0.618182x_{11}$	$-2.10x_5$

Forming the dual dictionary:

y_{13}	5.00909090909	$-1.018182y_7$	$+0.727273y_4$		$-1.181818y_3$	$-1.909091y_2$	$+0.836364y_1$	$+0.40y_9$	$+0.109$
y_{11}	0.618181818182	$-0.236364y_7$	$-0.545455y_4$	$+1y_6$	$-0.363636y_3$	$+0.181818y_2$	$-2.127273y_1$	$-1.80y_9$	-1.581
y_5	2.1	$-0.50y_7$	$+1y_4$	$-1y_6$	$-0y_3$	$+0y_2$	$+0.50y_1$	$-0y_9$	-0.5
z	5.31818181818	$-0.936364y_7$	$-0.545455y_4$	$-2y_6$	$-1.363636y_3$	$-1.818182y_2$	$-1.427273y_1$	$-1.40y_9$	-0.881

The Final Dual Dictionary is:

y_{22}	7.3	$-1.30y_7$	$+1y_4$	$+1y_5$	$-2y_3$	$-4y_2$	$+3.30y_1$	$+2.60y_9$	$+2.30y_{10}$	$+3.30y_{12}$	$-3y_8$	$+1y_{11}$	$+0y_{15}$	$+0y_{16}$	$-$
y_{17}	11.3	$-3.40y_7$	$+2y_4$	$-6y_5$	$-1y_3$	$+3y_2$	$-10.60y_1$	$-11.20y_9$	$-12.60y_{10}$	$-13.60y_{12}$	$+2y_8$	$-6y_{11}$	$-8y_{15}$	$-9y_{16}$	$-$
y_6	2.1	$-0.50y_7$	$+1y_4$	$-1y_5$	$-0y_3$		$+0.50y_1$	$-0y_9$	$-0.50y_{10}$	$-0.50y_{12}$		$+0y_{11}$	$-1y_{15}$	$-1y_{16}$	$-$
z	17	$-3.90y_7$	$-0y_4$	$-2y_5$	$-4y_3$	$-3y_2$	$-8.10y_1$	$-8.20y_9$	$-8.10y_{10}$	$-8.10y_{12}$	$-2y_8$	$-4y_{11}$	$-4y_{15}$	$-5y_{16}$	$-$

Final primal dictionary obtained:

x_7	3.9	$+1.30x_{22}$	$+3.40x_{17}$	$+0.50x_6$
x_4	$3.77475828373e-15$	$-1x_{22}$	$-2x_{17}$	$-1x_6$
x_5	2	$-1x_{22}$	$+6x_{17}$	$+1x_6$
x_3	4	$+2x_{22}$	$+1x_{17}$	$+0x_6$
x_2	3	$+4x_{22}$	$-3x_{17}$	
x_1	8.1	$-3.30x_{22}$	$+10.60x_{17}$	$-0.50x_6$
x_9	8.2	$-2.60x_{22}$	$+11.20x_{17}$	$+0x_6$
x_{10}	8.1	$-2.30x_{22}$	$+12.60x_{17}$	$+0.50x_6$
x_{12}	8.1	$-3.30x_{22}$	$+13.60x_{17}$	$+0.50x_6$
x_8	2	$+3x_{22}$	$-2x_{17}$	
x_{11}	4	$-1x_{22}$	$+6x_{17}$	$-0x_6$
x_{15}	4	$-0x_{22}$	$+8x_{17}$	$+1x_6$
x_{16}	5	$-0x_{22}$	$+9x_{17}$	$+1x_6$
x_{14}	4.1	$+0.70x_{22}$	$+6.60x_{17}$	$+0.50x_6$
x_{18}	4.9	$+0.30x_{22}$	$+7.40x_{17}$	$+0.50x_6$
x_{19}	2.8	$-0.40x_{22}$	$+6.80x_{17}$	$+1x_6$
x_{20}	1.9	$-0.70x_{22}$	$+5.40x_{17}$	$+0.50x_6$
x_{21}	1.9	$+0.30x_{22}$	$+4.40x_{17}$	$+0.50x_6$
x_{13}	1	$+2x_{22}$	$-1x_{17}$	
z	-17	$-7.30x_{22}$	$-11.30x_{17}$	$-2.10x_6$

After cutting plane is added

x_7	3.9	$+1.30x_{22}$	$+3.40x_{17}$	$+0.50x_6$
x_4	$3.77475828373e-15$	$-1x_{22}$	$-2x_{17}$	$-1x_6$
x_5	2	$-1x_{22}$	$+6x_{17}$	$+1x_6$
x_3	4	$+2x_{22}$	$+1x_{17}$	$+0x_6$
x_2	3	$+4x_{22}$	$-3x_{17}$	
x_1	8.1	$-3.30x_{22}$	$+10.60x_{17}$	$-0.50x_6$
x_9	8.2	$-2.60x_{22}$	$+11.20x_{17}$	$+0x_6$
x_{10}	8.1	$-2.30x_{22}$	$+12.60x_{17}$	$+0.50x_6$
x_{12}	8.1	$-3.30x_{22}$	$+13.60x_{17}$	$+0.50x_6$
x_8	2	$+3x_{22}$	$-2x_{17}$	
x_{11}	4	$-1x_{22}$	$+6x_{17}$	$-0x_6$
x_{15}	4	$-0x_{22}$	$+8x_{17}$	$+1x_6$
x_{16}	5	$-0x_{22}$	$+9x_{17}$	$+1x_6$
x_{14}	4.1	$+0.70x_{22}$	$+6.60x_{17}$	$+0.50x_6$
x_{18}	4.9	$+0.30x_{22}$	$+7.40x_{17}$	$+0.50x_6$
x_{19}	2.8	$-0.40x_{22}$	$+6.80x_{17}$	$+1x_6$
x_{20}	1.9	$-0.70x_{22}$	$+5.40x_{17}$	$+0.50x_6$
x_{21}	1.9	$+0.30x_{22}$	$+4.40x_{17}$	$+0.50x_6$
x_{13}	1	$+2x_{22}$	$-1x_{17}$	
x_{23}	-0.9	$+0.70x_{22}$	$+0.60x_{17}$	$+0.50x_6$
x_{24}	-0.1	$+0.30x_{22}$	$+0.40x_{17}$	$+0.50x_6$
x_{25}	-0.2	$+0.60x_{22}$	$+0.80x_{17}$	$+1x_6$
x_{26}	-0.1	$+0.30x_{22}$	$+0.40x_{17}$	$+0.50x_6$
x_{27}	-0.1	$+0.30x_{22}$	$+0.40x_{17}$	$+0.50x_6$
x_{28}	-0.1	$+0.30x_{22}$	$+0.40x_{17}$	$+0.50x_6$
x_{29}	-0.9	$+0.70x_{22}$	$+0.60x_{17}$	$+0.50x_6$
x_{30}	-0.8	$+0.40x_{22}$	$+0.20x_{17}$	$+0x_6$
x_{31}	-0.9	$+0.70x_{22}$	$+0.60x_{17}$	$+0.50x_6$
x_{32}	-0.9	$+0.70x_{22}$	$+0.60x_{17}$	$+0.50x_6$
z	-17	$-7.30x_{22}$	$-11.30x_{17}$	$-2.10x_6$

Forming the dual dictionary:

y_{22}	7.3	$-1.30y_7$	$+1y_4$	$+1y_5$	$-2y_3$	$-4y_2$	$+3.30y_1$	$+2.60y_9$	$+2.30y_{10}$	$+3.30y_{12}$	$-3y_8$	$+1y_{11}$	$+0y_{15}$	$+0y_{16}$	$-$
y_{17}	11.3	$-3.40y_7$	$+2y_4$	$-6y_5$	$-1y_3$	$+3y_2$	$-10.60y_1$	$-11.20y_9$	$-12.60y_{10}$	$-13.60y_{12}$	$+2y_8$	$-6y_{11}$	$-8y_{15}$	$-9y_{16}$	$-$
y_6	2.1	$-0.50y_7$	$+1y_4$	$-1y_5$	$-0y_3$		$+0.50y_1$	$-0y_9$	$-0.50y_{10}$	$-0.50y_{12}$		$+0y_{11}$	$-1y_{15}$	$-1y_{16}$	$-$
z	17	$-3.90y_7$	$-0y_4$	$-2y_5$	$-4y_3$	$-3y_2$	$-8.10y_1$	$-8.20y_9$	$-8.10y_{10}$	$-8.10y_{12}$	$-2y_8$	$-4y_{11}$	$-4y_{15}$	$-5y_{16}$	$-$

Unbounded Dictionary! The Final Dual Dictionary is:

y_4	29.8583333333	$-5.833333y_7$	$-4.666667y_{22}$	$+6y_5$	$-10.416667y_3$	$-15.416667y_2$	$-1.083333y_{17}$	$+0y_9$	$+1y$
y_1	2.91666666667	$-0.666667y_7$	$-0.333333y_{22}$	$-0y_5$	$-0.833333y_3$	$-0.833333y_2$	$-0.166667y_{17}$	$-1y_9$	$-1y$
y_{23}	66.8333333333	$-13.333333y_7$	$-9.666667y_{22}$	$+10y_5$	$-21.666667y_3$	$-31.666667y_2$	$-2.333333y_{17}$	$-1y_9$	$-0y$
z	53.525	$-10.50y_7$	$-6y_{22}$	$+7y_5$	$-16.750y_3$	$-24.750y_2$	$-0.750y_{17}$	$-1y_9$	$+0y$

Dual is unbounded. Primal is therefore infeasible.

Problem is ILP infeasible. Could not find an integer point.
Done.

10 ilpTest10

Initial Dictionary

x_4	3.6	$+7.70x_1 -1.40x_2 +1.30x_3$
x_5	0.9	$+7.20x_1 -1.40x_2 +0.60x_3$
x_6	2.2	$+4.50x_1 -2.50x_2 +3.50x_3$
x_7	-4.2	$+5.60x_1 +1.50x_2 -2.90x_3$
x_8	2.7	$+2.60x_1 +1.70x_2 -1.10x_3$
x_9	3.7	$+0.10x_1 -1.30x_2 -3.30x_3$
z	0	$-0.60x_1 -1.90x_2 -0.30x_3$

10.1 Initialization Phase: Aux. Problem Solving

x_4	3.6	$+7.70x_1 -1.40x_2 +1.30x_3 +1x_0$
x_5	0.9	$+7.20x_1 -1.40x_2 +0.60x_3 +1x_0$
x_6	2.2	$+4.50x_1 -2.50x_2 +3.50x_3 +1x_0$
x_7	-4.2	$+5.60x_1 +1.50x_2 -2.90x_3 +1x_0$
x_8	2.7	$+2.60x_1 +1.70x_2 -1.10x_3 +1x_0$
x_9	3.7	$+0.10x_1 -1.30x_2 -3.30x_3 +1x_0$
z	0	$-1x_0$

x_7 leaves

x_4	7.8	$+2.10x_1 -2.90x_2 +4.20x_3 +1x_7$
x_5	5.1	$+1.60x_1 -2.90x_2 +3.50x_3 +1x_7$
x_6	6.4	$-1.10x_1 -4x_2 +6.40x_3 +1x_7$
x_0	4.2	$-5.60x_1 -1.50x_2 +2.90x_3 +1x_7$
x_8	6.9	$-3x_1 +0.20x_2 +1.80x_3 +1x_7$
x_9	7.9	$-5.50x_1 -2.80x_2 -0.40x_3 +1x_7$
z	-4.2	$+5.60x_1 +1.50x_2 -2.90x_3 -1x_7$

x_1 enters and x_0 leaves

x_4	9.375	$-0.3750x_0 -3.462500x_2 +5.287500x_3 +1.3750x_7$
x_5	6.3	$-0.285714x_0 -3.328571x_2 +4.328571x_3 +1.285714x_7$
x_6	5.575	$+0.196429x_0 -3.705357x_2 +5.830357x_3 +0.803571x_7$
x_1	0.75	$-0.178571x_0 -0.267857x_2 +0.517857x_3 +0.178571x_7$
x_8	4.65	$+0.535714x_0 +1.003571x_2 +0.246429x_3 +0.464286x_7$
x_9	3.775	$+0.982143x_0 -1.326786x_2 -3.248214x_3 +0.017857x_7$
z	0	$-1x_0 +0x_2$

Final Dictionary Problem is feasible. Initialization phase yields a zero answer. Starting optimization phase with dictionary:

x_4	9.375	$-3.462500x_2 +5.287500x_3 +1.3750x_7$
x_5	6.3	$-3.328571x_2 +4.328571x_3 +1.285714x_7$
x_6	5.575	$-3.705357x_2 +5.830357x_3 +0.803571x_7$
x_1	0.75	$-0.267857x_2 +0.517857x_3 +0.178571x_7$
x_8	4.65	$+1.003571x_2 +0.246429x_3 +0.464286x_7$
x_9	3.775	$-1.326786x_2 -3.248214x_3 +0.017857x_7$
z	-0.45	$-1.739286x_2 -0.610714x_3 -0.107143x_7$

Final Dictionary Final dictionary after first LP relaxation solve:

x_4	9.375	$-3.462500x_2 +5.287500x_3 +1.3750x_7$
x_5	6.3	$-3.328571x_2 +4.328571x_3 +1.285714x_7$
x_6	5.575	$-3.705357x_2 +5.830357x_3 +0.803571x_7$
x_1	0.75	$-0.267857x_2 +0.517857x_3 +0.178571x_7$
x_8	4.65	$+1.003571x_2 +0.246429x_3 +0.464286x_7$
x_9	3.775	$-1.326786x_2 -3.248214x_3 +0.017857x_7$
z	-0.45	$-1.739286x_2 -0.610714x_3 -0.107143x_7$

After cutting plane is added

x_4	9.375	$-3.462500x_2 +5.287500x_3 +1.3750x_7$
x_5	6.3	$-3.328571x_2 +4.328571x_3 +1.285714x_7$
x_6	5.575	$-3.705357x_2 +5.830357x_3 +0.803571x_7$
x_1	0.75	$-0.267857x_2 +0.517857x_3 +0.178571x_7$
x_8	4.65	$+1.003571x_2 +0.246429x_3 +0.464286x_7$
x_9	3.775	$-1.326786x_2 -3.248214x_3 +0.017857x_7$
x_{10}	-0.375	$+0.462500x_2 +0.712500x_3 +0.6250x_7$
x_{11}	-0.3	$+0.328571x_2 +0.671429x_3 +0.714286x_7$
x_{12}	-0.575	$+0.705357x_2 +0.169643x_3 +0.196429x_7$
x_{13}	-0.75	$+0.267857x_2 +0.482143x_3 +0.821429x_7$
x_{14}	-0.65	$+0.996429x_2 +0.753571x_3 +0.535714x_7$
x_{15}	-0.775	$+0.326786x_2 +0.248214x_3 +0.982143x_7$
z	-0.45	$-1.739286x_2 -0.610714x_3 -0.107143x_7$

Forming the dual dictionary:

y_2	1.73928571429	$+3.462500y_4 +3.328571y_5 +3.705357y_6 +0.267857y_1 -1.003571y_8 +1.326786y_9 -0.4625$
y_3	0.610714285714	$-5.287500y_4 -4.328571y_5 -5.830357y_6 -0.517857y_1 -0.246429y_8 +3.248214y_9 -0.7125$
y_7	0.107142857143	$-1.3750y_4 -1.285714y_5 -0.803571y_6 -0.178571y_1 -0.464286y_8 -0.017857y_9 -0.625$
z	0.45	$-9.3750y_4 -6.30y_5 -5.5750y_6 -0.750y_1 -4.650y_8 -3.7750y_9 +0.375$

The Final Dual Dictionary is:

y_2	1.35454545455	$+8.40y_4 +7.945455y_5 +6.590909y_6 +0.909091y_1 +0.663636y_8 +1.390909y_9 +3.590909$
y_3	0.518181818182	$-4.10y_4 -3.218182y_5 -5.136364y_6 -0.363636y_1 +0.154545y_8 +3.263636y_9 +0.863636$
y_{12}	0.545454545455	$-7y_4 -6.545455y_5 -4.090909y_6 -0.909091y_1 -2.363636y_8 -0.090909y_9 -5.090909$
z	0.763636363636	$-13.40y_4 -10.063636y_5 -7.927273y_6 -1.272727y_1 -6.009091y_8 -3.827273y_9 -2.927273$

Final primal dictionary obtained:

x_4	13.4	$-8.40x_2$	$+4.10x_3$	$+7x_{12}$
x_5	10.0636363636	$-7.945455x_2$	$+3.218182x_3$	$+6.545455x_{12}$
x_6	7.92727272727	$-6.590909x_2$	$+5.136364x_3$	$+4.090909x_{12}$
x_1	1.27272727273	$-0.909091x_2$	$+0.363636x_3$	$+0.909091x_{12}$
x_8	6.00909090909	$-0.663636x_2$	$-0.154545x_3$	$+2.363636x_{12}$
x_9	3.82727272727	$-1.390909x_2$	$-3.263636x_3$	$+0.090909x_{12}$
x_7	2.92727272727	$-3.590909x_2$	$-0.863636x_3$	$+5.090909x_{12}$
x_{11}	1.79090909091	$-2.236364x_2$	$+0.054545x_3$	$+3.636364x_{12}$
x_{10}	1.45454545455	$-1.781818x_2$	$+0.172727x_3$	$+3.181818x_{12}$
x_{13}	1.65454545455	$-2.681818x_2$	$-0.227273x_3$	$+4.181818x_{12}$
x_{14}	0.918181818182	$-0.927273x_2$	$+0.290909x_3$	$+2.727273x_{12}$
x_{15}	2.1	$-3.20x_2$	$-0.60x_3$	$+5x_{12}$
z	-0.763636363636	$-1.354545x_2$	$-0.518182x_3$	$-0.545455x_{12}$

After cutting plane is added

x_4	13.4	$-8.40x_2$	$+4.10x_3$	$+7x_{12}$
x_5	10.0636363636	$-7.945455x_2$	$+3.218182x_3$	$+6.545455x_{12}$
x_6	7.92727272727	$-6.590909x_2$	$+5.136364x_3$	$+4.090909x_{12}$
x_1	1.27272727273	$-0.909091x_2$	$+0.363636x_3$	$+0.909091x_{12}$
x_8	6.00909090909	$-0.663636x_2$	$-0.154545x_3$	$+2.363636x_{12}$
x_9	3.82727272727	$-1.390909x_2$	$-3.263636x_3$	$+0.090909x_{12}$
x_7	2.92727272727	$-3.590909x_2$	$-0.863636x_3$	$+5.090909x_{12}$
x_{11}	1.79090909091	$-2.236364x_2$	$+0.054545x_3$	$+3.636364x_{12}$
x_{10}	1.45454545455	$-1.781818x_2$	$+0.172727x_3$	$+3.181818x_{12}$
x_{13}	1.65454545455	$-2.681818x_2$	$-0.227273x_3$	$+4.181818x_{12}$
x_{14}	0.918181818182	$-0.927273x_2$	$+0.290909x_3$	$+2.727273x_{12}$
x_{15}	2.1	$-3.20x_2$	$-0.60x_3$	$+5x_{12}$
x_{16}	-0.4	$+0.40x_2$	$+0.90x_3$	$+1x_{12}$
x_{17}	-0.0636363636364	$+0.945455x_2$	$+0.781818x_3$	$+0.454545x_{12}$
x_{18}	-0.927272727273	$+0.590909x_2$	$+0.863636x_3$	$+0.909091x_{12}$
x_{19}	-0.272727272727	$+0.909091x_2$	$+0.636364x_3$	$+0.090909x_{12}$
x_{20}	-0.00909090909091	$+0.663636x_2$	$+0.154545x_3$	$+0.636364x_{12}$
x_{21}	-0.827272727273	$+0.390909x_2$	$+0.263636x_3$	$+0.909091x_{12}$
x_{22}	-0.927272727273	$+0.590909x_2$	$+0.863636x_3$	$+0.909091x_{12}$
x_{23}	-0.790909090909	$+0.236364x_2$	$+0.945455x_3$	$+0.363636x_{12}$
x_{24}	-0.454545454545	$+0.781818x_2$	$+0.827273x_3$	$+0.818182x_{12}$
x_{25}	-0.654545454545	$+0.681818x_2$	$+0.227273x_3$	$+0.818182x_{12}$
x_{26}	-0.918181818182	$+0.927273x_2$	$+0.709091x_3$	$+0.272727x_{12}$
x_{27}	-0.1	$+0.20x_2$	$+0.60x_3$	$+1x_{12}$
z	-0.763636363636	$-1.354545x_2$	$-0.518182x_3$	$-0.545455x_{12}$

Forming the dual dictionary:

y_2	1.35454545455	$+8.40y_4$	$+7.945455y_5$	$+6.590909y_6$	$+0.909091y_1$	$+0.663636y_8$	$+1.390909y_9$	$+3.590909$
y_3	0.518181818182	$-4.10y_4$	$-3.218182y_5$	$-5.136364y_6$	$-0.363636y_1$	$+0.154545y_8$	$+3.263636y_9$	$+0.863630$
y_{12}	0.545454545455	$-7y_4$	$-6.545455y_5$	$-4.090909y_6$	$-0.909091y_1$	$-2.363636y_8$	$-0.090909y_9$	-5.090909
z	0.763636363636	$-13.40y_4$	$-10.063636y_5$	$-7.927273y_6$	$-1.272727y_1$	$-6.009091y_8$	$-3.827273y_9$	-2.927273

The Final Dual Dictionary is:

y_2	0.657142857143	$+14.071429y_4$	$+12.457143y_5$	$+13.428571y_6$	$+0.814286y_{16}$	$+0.60y_8$	$+2.771429y_7$	$+1$
y_{26}	0.571428571429	$-3.285714y_4$	$-2.095238y_5$	$-6.269841y_6$	$-0.968254y_{16}$	$+1.333333y_8$	$+3.714286y_7$	-0
y_{21}	0.428571428571	$-6.714286y_4$	$-6.571429y_5$	$-2.619048y_6$	$-0.809524y_{16}$	$-3y_8$	$-6.714286y_7$	-0
z	1.64285714286	$-21.971429y_4$	$-17.423810y_5$	$-15.850794y_6$	$-1.158730y_{16}$	$-7.266667y_8$	$-5.071429y_7$	-2

Final primal dictionary obtained:

x_4	21.9714285714	$-14.071429x_2$	$+3.285714x_{26}$	$+6.714286x_{21}$
x_5	17.4238095238	$-12.457143x_2$	$+2.095238x_{26}$	$+6.571429x_{21}$
x_6	15.8507936508	$-13.428571x_2$	$+6.269841x_{26}$	$+2.619048x_{21}$
x_{16}	1.15873015873	$-0.814286x_2$	$+0.968254x_{26}$	$+0.809524x_{21}$
x_8	7.26666666667	$-0.60x_2$	$-1.333333x_{26}$	$+3x_{21}$
x_7	5.07142857143	$-2.771429x_2$	$-3.714286x_{26}$	$+6.714286x_{21}$
x_1	2.20634920635	$-1.428571x_2$	$+0.158730x_{26}$	$+0.952381x_{21}$
x_{11}	4.03650793651	$-2.514286x_2$	$-1.587302x_{26}$	$+4.476190x_{21}$
x_{10}	3.55238095238	$-2.185714x_2$	$-1.190476x_{26}$	$+3.857143x_{21}$
x_{13}	3.92857142857	$-2.628571x_2$	$-2.285714x_{26}$	$+5.285714x_{21}$
x_{14}	2.86825396825	$-1.457143x_2$	$-0.793651x_{26}$	$+3.238095x_{21}$
x_{15}	4.46984126984	$-2.714286x_2$	$-3.253968x_{26}$	$+6.476190x_{21}$
x_9	0.411111111111	$+2.80x_2$	$-5.222222x_{26}$	$+1.666667x_{21}$
x_{17}	1.04126984127	$-0.085714x_2$	$+1.031746x_{26}$	$+0.190476x_{21}$
x_3	1.06349206349	$-1.285714x_2$	$+1.587302x_{26}$	$-0.476190x_{21}$
x_{18}	0.538095238095	$-0.571429x_2$	$+0.952381x_{26}$	$+0.714286x_{21}$
x_{20}	0.538095238095	$+0.428571x_2$	$-0.047619x_{26}$	$+0.714286x_{21}$
x_{12}	0.601587301587	$-0.057143x_2$	$-0.460317x_{26}$	$+1.238095x_{21}$
x_{22}	0.538095238095	$-0.571429x_2$	$+0.952381x_{26}$	$+0.714286x_{21}$
x_{19}	0.45873015873	$+0.085714x_2$	$+0.968254x_{26}$	$-0.190476x_{21}$
x_{24}	0.91746031746	$-0.328571x_2$	$+0.936508x_{26}$	$+0.619048x_{21}$
x_{25}	0.0793650793651	$+0.342857x_2$	$-0.015873x_{26}$	$+0.904762x_{21}$
x_{23}	0.433333333333	$-1x_2$	$+1.333333x_{26}$	$-0x_{21}$
x_{27}	1.13968253968	$-0.628571x_2$	$+0.492063x_{26}$	$+0.952381x_{21}$
z	-1.64285714286	$-0.657143x_2$	$-0.571429x_{26}$	$-0.428571x_{21}$

After cutting plane is added

x_4	21.9714285714	$-14.071429x_2$	$+3.285714x_{26}$	$+6.714286x_{21}$
x_5	17.4238095238	$-12.457143x_2$	$+2.095238x_{26}$	$+6.571429x_{21}$
x_6	15.8507936508	$-13.428571x_2$	$+6.269841x_{26}$	$+2.619048x_{21}$
x_{16}	1.15873015873	$-0.814286x_2$	$+0.968254x_{26}$	$+0.809524x_{21}$
x_8	7.26666666667	$-0.60x_2$	$-1.333333x_{26}$	$+3x_{21}$
x_7	5.07142857143	$-2.771429x_2$	$-3.714286x_{26}$	$+6.714286x_{21}$
x_1	2.20634920635	$-1.428571x_2$	$+0.158730x_{26}$	$+0.952381x_{21}$
x_{11}	4.03650793651	$-2.514286x_2$	$-1.587302x_{26}$	$+4.476190x_{21}$
x_{10}	3.55238095238	$-2.185714x_2$	$-1.190476x_{26}$	$+3.857143x_{21}$
x_{13}	3.92857142857	$-2.628571x_2$	$-2.285714x_{26}$	$+5.285714x_{21}$
x_{14}	2.86825396825	$-1.457143x_2$	$-0.793651x_{26}$	$+3.238095x_{21}$
x_{15}	4.46984126984	$-2.714286x_2$	$-3.253968x_{26}$	$+6.476190x_{21}$
x_9	0.411111111111	$+2.80x_2$	$-5.222222x_{26}$	$+1.666667x_{21}$
x_{17}	1.04126984127	$-0.085714x_2$	$+1.031746x_{26}$	$+0.190476x_{21}$
x_3	1.06349206349	$-1.285714x_2$	$+1.587302x_{26}$	$-0.476190x_{21}$
x_{18}	0.538095238095	$-0.571429x_2$	$+0.952381x_{26}$	$+0.714286x_{21}$
x_{20}	0.538095238095	$+0.428571x_2$	$-0.047619x_{26}$	$+0.714286x_{21}$
x_{12}	0.601587301587	$-0.057143x_2$	$-0.460317x_{26}$	$+1.238095x_{21}$
x_{22}	0.538095238095	$-0.571429x_2$	$+0.952381x_{26}$	$+0.714286x_{21}$
x_{19}	0.45873015873	$+0.085714x_2$	$+0.968254x_{26}$	$-0.190476x_{21}$
x_{24}	0.91746031746	$-0.328571x_2$	$+0.936508x_{26}$	$+0.619048x_{21}$
x_{25}	0.0793650793651	$+0.342857x_2$	$-0.015873x_{26}$	$+0.904762x_{21}$
x_{23}	0.433333333333	$-1x_2$	$+1.333333x_{26}$	$-0x_{21}$
x_{27}	1.13968253968	$-0.628571x_2$	$+0.492063x_{26}$	$+0.952381x_{21}$
x_{28}	-0.971428571429	$+0.071429x_2$	$+0.714286x_{26}$	$+0.285714x_{21}$
x_{29}	-0.42380952381	$+0.457143x_2$	$+0.904762x_{26}$	$+0.428571x_{21}$
x_{30}	-0.850793650794	$+0.428571x_2$	$+0.730159x_{26}$	$+0.380952x_{21}$
x_{31}	-0.15873015873	$+0.814286x_2$	$+0.031746x_{26}$	$+0.190476x_{21}$
x_{32}	-0.266666666667	$+0.60x_2$	$+0.333333x_{26}$	$+0x_{21}$
x_{33}	-0.0714285714286	$+0.771429x_2$	$+0.714286x_{26}$	$+0.285714x_{21}$
x_{34}	-0.206349206349	$+0.428571x_2$	$+0.841270x_{26}$	$+0.047619x_{21}$
x_{35}	-0.0365079365079	$+0.514286x_2$	$+0.587302x_{26}$	$+0.523810x_{21}$
x_{36}	-0.552380952381	$+0.185714x_2$	$+0.190476x_{26}$	$+0.142857x_{21}$
x_{37}	-0.928571428571	$+0.628571x_2$	$+0.285714x_{26}$	$+0.714286x_{21}$
x_{38}	-0.868253968254	$+0.457143x_2$	$+0.793651x_{26}$	$+0.761905x_{21}$
x_{39}	-0.469841269841	$+0.714286x_2$	$+0.253968x_{26}$	$+0.523810x_{21}$
x_{40}	-0.411111111111	$+0.20x_2$	$+0.222222x_{26}$	$+0.333333x_{21}$
x_{41}	-0.0412698412698	$+0.085714x_2$	$+0.968254x_{26}$	$+0.809524x_{21}$
x_{42}	-0.0634920634921	$+0.285714x_2$	$+0.412698x_{26}$	$+0.476190x_{21}$
x_{43}	-0.538095238095	$+0.571429x_2$	$+0.047619x_{26}$	$+0.285714x_{21}$
x_{44}	-0.538095238095	$+0.571429x_2$	$+0.047619x_{26}$	$+0.285714x_{21}$
x_{45}	-0.601587301587	$+0.057143x_2$	$+0.460317x_{26}$	$+0.761905x_{21}$
x_{46}	-0.538095238095	$+0.571429x_2$	$+0.047619x_{26}$	$+0.285714x_{21}$
x_{47}	-0.45873015873	$+0.914286x_2$	$+0.031746x_{26}$	$+0.190476x_{21}$
x_{48}	-0.91746031746	$+0.328571x_2$	$+0.063492x_{26}$	$+0.380952x_{21}$
x_{49}	-0.0793650793651	$+0.657143x_2$	$+0.015873x_{26}$	$+0.095238x_{21}$
x_{50}	-0.433333333333	$+1x_2$	$+0.666667x_{26}$	$+0x_{21}$
x_{51}	-0.139682539683	$+0.628571x_2$	$+0.507937x_{26}$	$+0.047619x_{21}$
z	-1.64285714286	$-0.657143x_2$	$-0.571429x_{26}$	$-0.428571x_{21}$

Forming the dual dictionary:

y_2	0.657142857143	$+14.071429y_4$	$+12.457143y_5$	$+13.428571y_6$	$+0.814286y_{16}$	$+0.60y_8$	$+2.771429y_7 +1$
y_{26}	0.571428571429	$-3.285714y_4$	$-2.095238y_5$	$-6.269841y_6$	$-0.968254y_{16}$	$+1.333333y_8$	$+3.714286y_7 -0$
y_{21}	0.428571428571	$-6.714286y_4$	$-6.571429y_5$	$-2.619048y_6$	$-0.809524y_{16}$	$-3y_8$	$-6.714286y_7 -0$
z	1.64285714286	$-21.971429y_4$	$-17.423810y_5$	$-15.850794y_6$	$-1.158730y_{16}$	$-7.266667y_8$	$-5.071429y_7 -2$

The Final Dual Dictionary is:

y_{32}	$-1.02140518266e-14$	$+17y_4$	$+20y_5$	$-8.333333y_6$	$+0.333333y_{16}$	$+16y_8$	$+38y_7$	$+3.333333y_1$
y_{36}	3	$-47y_4$	$-46y_5$	$-18.333333y_6$	$-5.666667y_{16}$	$-21y_8$	$-47y_7$	$-6.666667y_1$
y_2	0.1	$+12.60y_4$	$+9y_5$	$+21.833333y_6$	$+1.666667y_{16}$	$-5.10y_8$	$-11.30y_7$	$+0.666667y_1$
z	3.3	$-43.40y_4$	$-37.50y_5$	$-28.20y_6$	$-4.20y_{16}$	$-14.60y_8$	$-20.90y_7$	$-5y_1$

Final primal dictionary obtained:

x_4	43.4	$-17x_{32}$	$+47x_{36}$	$-12.60x_2$
x_5	37.5	$-20x_{32}$	$+46x_{36}$	$-9x_2$
x_6	28.2	$+8.333333x_{32}$	$+18.333333x_{36}$	$-21.833333x_2$
x_{16}	4.2	$-0.333333x_{32}$	$+5.666667x_{36}$	$-1.666667x_2$
x_8	14.6	$-16x_{32}$	$+21x_{36}$	$+5.10x_2$
x_7	20.9	$-38x_{32}$	$+47x_{36}$	$+11.30x_2$
x_1	5	$-3.333333x_{32}$	$+6.666667x_{36}$	$-0.666667x_2$
x_{11}	15.3	$-22.666667x_{32}$	$+31.333333x_{36}$	$+5.266667x_2$
x_{10}	13.4	$-19x_{32}$	$+27x_{36}$	$+4.20x_2$
x_{13}	16.9	$-28x_{32}$	$+37x_{36}$	$+7.30x_2$
x_{14}	11.3	$-15.333333x_{32}$	$+22.666667x_{36}$	$+3.533333x_2$
x_{15}	20	$-35.666667x_{32}$	$+45.333333x_{36}$	$+10.266667x_2$
x_{21}	2.8	$-4x_{32}$	$+7x_{36}$	$+1.10x_2$
x_{17}	2.4	$+2.333333x_{32}$	$+1.333333x_{36}$	$-1.733333x_2$
x_3	1	$+6.666667x_{32}$	$-3.333333x_{36}$	$-4.666667x_2$
x_{18}	3.3	$-0x_{32}$	$+5x_{36}$	$-1.50x_2$
x_{20}	2.5	$-3x_{32}$	$+5x_{36}$	$+1.30x_2$
x_{12}	3.7	$-6.333333x_{32}$	$+8.666667x_{36}$	$+2.133333x_2$
x_{22}	3.3	$-0x_{32}$	$+5x_{36}$	$-1.50x_2$
x_{19}	0.7	$+3.666667x_{32}$	$-1.333333x_{36}$	$-1.866667x_2$
x_{24}	3.4	$+0.333333x_{32}$	$+4.333333x_{36}$	$-1.333333x_2$
x_{25}	2.6	$-3.666667x_{32}$	$+6.333333x_{36}$	$+1.366667x_2$
x_{23}	1.5	$+4x_{32}$	$-0x_{36}$	$-3.40x_2$
x_{27}	4.2	$-2.333333x_{32}$	$+6.666667x_{36}$	$-0.466667x_2$
x_{26}	0.8	$+3x_{32}$	$-0x_{36}$	$-1.80x_2$
x_{29}	1.5	$+1x_{32}$	$+3x_{36}$	$-0.70x_2$
x_{30}	0.8	$+0.666667x_{32}$	$+2.666667x_{36}$	$-0.466667x_2$
x_{31}	0.4	$-0.666667x_{32}$	$+1.333333x_{36}$	$+0.966667x_2$
x_9	0.9	$-22.333333x_{32}$	$+11.666667x_{36}$	$+14.033333x_2$
x_{33}	1.3	$+1x_{32}$	$+2x_{36}$	$-0.20x_2$
x_{34}	0.6	$+2.333333x_{32}$	$+0.333333x_{36}$	$-1.033333x_2$
x_{35}	1.9	$-0.333333x_{32}$	$+3.666667x_{36}$	$+0.033333x_2$
x_{28}	0.4	$+1x_{32}$	$+2x_{36}$	$-0.90x_2$
x_{37}	1.3	$-2x_{32}$	$+5x_{36}$	$+0.90x_2$
x_{38}	1.9	$-0.666667x_{32}$	$+5.333333x_{36}$	$-0.133333x_2$
x_{39}	1.2	$-1.333333x_{32}$	$+3.666667x_{36}$	$+0.833333x_2$
x_{40}	0.7	$-0.666667x_{32}$	$+2.333333x_{36}$	$+0.166667x_2$
x_{41}	3	$-0.333333x_{32}$	$+5.666667x_{36}$	$-0.766667x_2$
x_{42}	1.6	$-0.666667x_{32}$	$+3.333333x_{36}$	$+0.066667x_2$
x_{43}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.80x_2$
x_{44}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.80x_2$
x_{45}	1.9	$-1.666667x_{32}$	$+5.333333x_{36}$	$+0.066667x_2$
x_{46}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.80x_2$
x_{47}	0.1	$-0.666667x_{32}$	$+1.333333x_{36}$	$+1.066667x_2$
x_{48}	0.2	$-1.333333x_{32}$	$+2.666667x_{36}$	$+0.633333x_2$
x_{49}	0.2	$-0.333333x_{32}$	$+0.666667x_{36}$	$+0.733333x_2$
x_{50}	0.0999999999999	$+2x_{43}$	$-0x_{36}$	$-0.20x_2$
x_{51}	0.4	$+1.333333x_{32}$	$+0.333333x_{36}$	$-0.233333x_2$
z	-3.3	$+0x_{32}$	$-3x_{36}$	$-0.10x_2$

After cutting plane is added

x_4	43.4	$-17x_{32}$	$+47x_{36}$	$-12.60x_2$
x_5	37.5	$-20x_{32}$	$+46x_{36}$	$-9x_2$
x_6	28.2	$+8.333333x_{32}$	$+18.333333x_{36}$	$-21.833333x_2$
x_{16}	4.2	$-0.333333x_{32}$	$+5.666667x_{36}$	$-1.666667x_2$
x_8	14.6	$-16x_{32}$	$+21x_{36}$	$+5.10x_2$
x_7	20.9	$-38x_{32}$	$+47x_{36}$	$+11.30x_2$
x_1	5	$-3.333333x_{32}$	$+6.666667x_{36}$	$-0.666667x_2$
x_{11}	15.3	$-22.666667x_{32}$	$+31.333333x_{36}$	$+5.266667x_2$
x_{10}	13.4	$-19x_{32}$	$+27x_{36}$	$+4.20x_2$
x_{13}	16.9	$-28x_{32}$	$+37x_{36}$	$+7.30x_2$
x_{14}	11.3	$-15.333333x_{32}$	$+22.666667x_{36}$	$+3.533333x_2$
x_{15}	20	$-35.666667x_{32}$	$+45.333333x_{36}$	$+10.266667x_2$
x_{21}	2.8	$-4x_{32}$	$+7x_{36}$	$+1.10x_2$
x_{17}	2.4	$+2.333333x_{32}$	$+1.333333x_{36}$	$-1.733333x_2$
x_3	1	$+6.666667x_{32}$	$-3.333333x_{36}$	$-4.666667x_2$
x_{18}	3.3	$-0x_{32}$	$+5x_{36}$	$-1.50x_2$
x_{20}	2.5	$-3x_{32}$	$+5x_{36}$	$+1.30x_2$
x_{12}	3.7	$-6.333333x_{32}$	$+8.666667x_{36}$	$+2.133333x_2$
x_{22}	3.3	$-0x_{32}$	$+5x_{36}$	$-1.50x_2$
x_{19}	0.7	$+3.666667x_{32}$	$-1.333333x_{36}$	$-1.866667x_2$
x_{24}	3.4	$+0.333333x_{32}$	$+4.333333x_{36}$	$-1.333333x_2$
x_{25}	2.6	$-3.666667x_{32}$	$+6.333333x_{36}$	$+1.366667x_2$
x_{23}	1.5	$+4x_{32}$	$-0x_{36}$	$-3.40x_2$
x_{27}	4.2	$-2.333333x_{32}$	$+6.666667x_{36}$	$-0.466667x_2$
x_{26}	0.8	$+3x_{32}$	$-0x_{36}$	$-1.80x_2$
x_{29}	1.5	$+1x_{32}$	$+3x_{36}$	$-0.70x_2$
x_{30}	0.8	$+0.666667x_{32}$	$+2.666667x_{36}$	$-0.466667x_2$
x_{31}	0.4	$-0.666667x_{32}$	$+1.333333x_{36}$	$+0.966667x_2$
x_9	0.9	$-22.333333x_{32}$	$+11.666667x_{36}$	$+14.033333x_2$
x_{33}	1.3	$+1x_{32}$	$+2x_{36}$	$-0.20x_2$
x_{34}	0.6	$+2.333333x_{32}$	$+0.333333x_{36}$	$-1.033333x_2$
x_{35}	1.9	$-0.333333x_{32}$	$+3.666667x_{36}$	$+0.033333x_2$
x_{28}	0.4	$+1x_{32}$	$+2x_{36}$	$-0.90x_2$
x_{37}	1.3	$-2x_{32}$	$+5x_{36}$	$+0.90x_2$
x_{38}	1.9	$-0.666667x_{32}$	$+5.333333x_{36}$	$-0.133333x_2$
x_{39}	1.2	$-1.333333x_{32}$	$+3.666667x_{36}$	$+0.833333x_2$
x_{40}	0.7	$-0.666667x_{32}$	$+2.333333x_{36}$	$+0.166667x_2$
x_{41}	3	$-0.333333x_{32}$	$+5.666667x_{36}$	$-0.766667x_2$
x_{42}	1.6	$-0.666667x_{32}$	$+3.333333x_{36}$	$+0.066667x_2$
x_{43}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.80x_2$
x_{44}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.80x_2$
x_{45}	1.9	$-1.666667x_{32}$	$+5.333333x_{36}$	$+0.066667x_2$
x_{46}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.80x_2$
x_{47}	0.1	$-0.666667x_{32}$	$+1.333333x_{36}$	$+1.066667x_2$
x_{48}	0.2	$-1.333333x_{32}$	$+2.666667x_{36}$	$+0.633333x_2$
x_{49}	0.2	$-0.333333x_{32}$	$+0.666667x_{36}$	$+0.733333x_2$
x_{50}	0.0999999999999	$+2x_{32}$	$-0x_{36}$	$-0.20x_2$
x_{51}	0.4	$+1.333333x_{32}$	$+0.333333x_{36}$	$-0.233333x_2$
x_{52}	-0.399999999999	$+0x_{32}$	$+0x_{36}$	$+0.60x_2$
x_{53}	-0.499999999999	$+0x_{32}$	$+0x_{36}$	$+1x_2$
x_{54}	-0.199999999999	$+0.666667x_{32}$	$+0.666667x_{36}$	$+0.833333x_2$
x_{55}	-0.2	$+0.333333x_{32}$	$+0.333333x_{36}$	$+0.666667x_2$
x_{56}	-0.6	$+0x_{32}$	$+0x_{36}$	$+0.90x_2$
x_{57}	-0.9	$+0x_{32}$	$+0x_{36}$	$+0.70x_2$

Forming the dual dictionary:

y_{32}	$-1.02140518266e-14$	$+17y_4$	$+20y_5$	$-8.333333y_6$	$+0.333333y_{16}$	$+16y_8$	$+38y_7$	$+3.333333y_1$
y_{36}	3	$-47y_4$	$-46y_5$	$-18.333333y_6$	$-5.666667y_{16}$	$-21y_8$	$-47y_7$	$-6.666667y_1$
y_2	0.1	$+12.60y_4$	$+9y_5$	$+21.833333y_6$	$+1.666667y_{16}$	$-5.10y_8$	$-11.30y_7$	$+0.666667y_1$
z	3.3	$-43.40y_4$	$-37.50y_5$	$-28.20y_6$	$-4.20y_{16}$	$-14.60y_8$	$-20.90y_7$	$-5y_1$

The Final Dual Dictionary is:

y_{82}	2.74025289779	$+0.771075y_4$	$+0.026344y_1$	$-0.961538y_3$	$-2.270021y_{16}$	$-1.081665y_8$	$+1.430980y_5$	-1.1
y_6	0.00885142255005	$-0.862381y_4$	$-0.077977y_1$	$-0.153846y_3$	$-0.100738y_{16}$	$+0.041728y_8$	$-0.715701y_5$	$+0.0$
y_{13}	0.00263435194942	$-0.863804y_4$	$-0.142255y_1$	$+0.192308y_3$	$-0.041886y_{16}$	$-0.559009y_8$	$-0.927292y_5$	-0.0
z	3.82794520548	$-4.251233y_4$	$-0.389041y_1$	$-0.20y_3$	$-1.332329y_{16}$	$-6.653973y_8$	$-1.216712y_5$	-0.0

Final primal dictionary obtained:

x_4	4.25123287671	$-0.771075x_{82} +0.862381x_6 +0.863804x_{13}$
x_1	0.38904109589	$-0.026344x_{82} +0.077977x_6 +0.142255x_{13}$
x_3	0.2	$+0.961538x_{82} +0.153846x_6 -0.192308x_{13}$
x_{16}	1.33232876712	$+2.270021x_{82} +0.100738x_6 +0.041886x_{13}$
x_8	6.65397260274	$+1.081665x_{82} -0.041728x_6 +0.559009x_{13}$
x_5	1.21671232877	$-1.430980x_{82} +0.715701x_6 +0.927292x_{13}$
x_{48}	0.0298630136986	$+1.158325x_{82} -0.008641x_6 +0.045047x_{13}$
x_{11}	0.580547945205	$+0.366702x_{82} +0.034563x_6 +0.819810x_{13}$
x_{10}	0.74602739726	$+0.668335x_{82} +0.041728x_6 +0.690991x_{13}$
x_7	0.189041095891	$-0.987882x_{82} -0.075869x_6 +1.334563x_{13}$
x_{14}	1.45561643836	$+1.489463x_{82} +0.031191x_6 +0.556902x_{13}$
x_{15}	0.0682191780822	$-0.307165x_{82} -0.050790x_6 +1.258693x_{13}$
x_{21}	0.687397260274	$+1.565859x_{82} +0.005058x_6 +0.144362x_{13}$
x_{17}	2.21890410959	$+2.381981x_{82} +0.069336x_6 -0.062698x_{13}$
x_{32}	1.23917808219	$+1.488409x_{82} -0.005690x_6 -0.037408x_{13}$
x_{18}	1.07945205479	$+2.402529x_{82} +0.088514x_6 +0.026344x_{13}$
x_{20}	1.77068493151	$+1.573762x_{82} -0.018335x_6 +0.101686x_{13}$
x_{12}	0.808219178082	$+0.885142x_{82} -0.020021x_6 +0.220232x_{13}$
x_{22}	1.07945205479	$+2.402529x_{82} +0.088514x_6 +0.026344x_{13}$
x_{19}	1.61917808219	$+1.873024x_{82} +0.055848x_6 -0.114331x_{13}$
x_{24}	1.82657534247	$+2.535037x_{82} +0.076291x_6 +0.010801x_{13}$
x_{25}	1.32054794521	$+1.828240x_{82} -0.011591x_6 +0.127503x_{13}$
x_{23}	0.131780821918	$+1.537935x_{82} +0.127713x_6 -0.104847x_{13}$
x_{27}	1.2002739726	$+1.721812x_{82} +0.063435x_6 +0.102213x_{13}$
x_{26}	1.16904109589	$+2.127503x_{82} +0.062592x_6 -0.088514x_{13}$
x_{29}	1.77890410959	$+3.189673x_{82} +0.038567x_6 -0.024236x_{13}$
x_{30}	1.06191780822	$+2.706533x_{82} +0.028662x_6 -0.015279x_{13}$
x_{31}	1.52410958904	$+1.423340x_{82} -0.033087x_6 +0.013962x_{13}$
x_9	0.660547945206	$-4.864067x_{82} -0.442360x_6 +0.665964x_{13}$
x_{33}	2.39506849315	$+2.968915x_{82} +0.012013x_6 -0.032139x_{13}$
x_{34}	1.60712328767	$+2.420969x_{82} +0.033930x_6 -0.073235x_{13}$
x_{35}	1.96684931507	$+2.737619x_{82} +0.016649x_6 +0.016860x_{13}$
x_{36}	0.11397260274	$+0.870126x_{82} +0.004426x_6 +0.001317x_{13}$
x_{37}	1.06575342466	$+2.542677x_{82} -0.006322x_6 +0.069547x_{13}$
x_{38}	1.43369863014	$+3.475237x_{82} +0.033298x_6 +0.033720x_{13}$
x_{39}	1.51589041096	$+2.288198x_{82} -0.013066x_6 +0.043730x_{13}$
x_{40}	0.449863013699	$+1.254478x_{82} +0.006744x_6 +0.025817x_{13}$
x_{41}	1.80657534247	$+3.438883x_{82} +0.060906x_6 +0.030032x_{13}$
x_{42}	1.27780821918	$+1.994731x_{82} +0.015595x_6 +0.028451x_{13}$
x_{43}	0.77698630137	$+1.290832x_{82} -0.020864x_6 +0.029505x_{13}$
x_{44}	0.77698630137	$+1.290832x_{82} -0.020864x_6 +0.029505x_{13}$
x_{45}	0.566575342466	$+2.246575x_{82} +0.030137x_6 +0.068493x_{13}$
x_{46}	0.77698630137	$+1.290832x_{82} -0.020864x_6 +0.029505x_{13}$
x_{47}	1.4101369863	$+1.553214x_{82} -0.037513x_6 +0.012645x_{13}$
x_{57}	0.402191780822	$+0.909115x_{82} -0.030980x_6 -0.009220x_{13}$
x_{49}	1.22712328767	$+1.036354x_{82} -0.027608x_6 +0.003688x_{13}$
x_{50}	2.20630136986	$+2.717071x_{82} -0.002529x_6 -0.072181x_{13}$
x_{51}	1.65616438356	$+1.971549x_{82} +0.004215x_6 -0.046365x_{13}$
x_2	1.8602739726	$+1.298736x_{82} -0.044257x_6 -0.013172x_{13}$
x_{53}	1.3602739726	$+1.298736x_{82} -0.044257x_6 -0.013172x_{13}$
x_{54}	2.25232876712	$+2.654636x_{82} -0.037724x_6 -0.035037x_{13}$
x_{55}	1.49123287671	$+1.652002x_{82} -0.029926x_6 -0.020811x_{13}$
x_{56}	1.07424657534	$+1.168862x_{82} -0.039831x_6 -0.011855x_{13}$
x_{52}	0.716164383562	$+0.779241x_{82} -0.026554x_6 -0.007903x_{13}$

After cutting plane is added

x_4	4.25123287671	$-0.771075x_{82} +0.862381x_6 +0.863804x_{13}$
x_1	0.38904109589	$-0.026344x_{82} +0.077977x_6 +0.142255x_{13}$
x_3	0.2	$+0.961538x_{82} +0.153846x_6 -0.192308x_{13}$
x_{16}	1.33232876712	$+2.270021x_{82} +0.100738x_6 +0.041886x_{13}$
x_8	6.65397260274	$+1.081665x_{82} -0.041728x_6 +0.559009x_{13}$
x_5	1.21671232877	$-1.430980x_{82} +0.715701x_6 +0.927292x_{13}$
x_{48}	0.0298630136986	$+1.158325x_{82} -0.008641x_6 +0.045047x_{13}$
x_{11}	0.580547945205	$+0.366702x_{82} +0.034563x_6 +0.819810x_{13}$
x_{10}	0.74602739726	$+0.668335x_{82} +0.041728x_6 +0.690991x_{13}$
x_7	0.189041095891	$-0.987882x_{82} -0.075869x_6 +1.334563x_{13}$
x_{14}	1.45561643836	$+1.489463x_{82} +0.031191x_6 +0.556902x_{13}$
x_{15}	0.0682191780822	$-0.307165x_{82} -0.050790x_6 +1.258693x_{13}$
x_{21}	0.687397260274	$+1.565859x_{82} +0.005058x_6 +0.144362x_{13}$
x_{17}	2.21890410959	$+2.381981x_{82} +0.069336x_6 -0.062698x_{13}$
x_{32}	1.23917808219	$+1.488409x_{82} -0.005690x_6 -0.037408x_{13}$
x_{18}	1.07945205479	$+2.402529x_{82} +0.088514x_6 +0.026344x_{13}$
x_{20}	1.77068493151	$+1.573762x_{82} -0.018335x_6 +0.101686x_{13}$
x_{12}	0.808219178082	$+0.885142x_{82} -0.020021x_6 +0.220232x_{13}$
x_{22}	1.07945205479	$+2.402529x_{82} +0.088514x_6 +0.026344x_{13}$
x_{19}	1.61917808219	$+1.873024x_{82} +0.055848x_6 -0.114331x_{13}$
x_{24}	1.82657534247	$+2.535037x_{82} +0.076291x_6 +0.010801x_{13}$
x_{25}	1.32054794521	$+1.828240x_{82} -0.011591x_6 +0.127503x_{13}$
x_{23}	0.131780821918	$+1.537935x_{82} +0.127713x_6 -0.104847x_{13}$
x_{27}	1.2002739726	$+1.721812x_{82} +0.063435x_6 +0.102213x_{13}$
x_{26}	1.16904109589	$+2.127503x_{82} +0.062592x_6 -0.088514x_{13}$
x_{29}	1.77890410959	$+3.189673x_{82} +0.038567x_6 -0.024236x_{13}$
x_{30}	1.06191780822	$+2.706533x_{82} +0.028662x_6 -0.015279x_{13}$
x_{31}	1.52410958904	$+1.423340x_{82} -0.033087x_6 +0.013962x_{13}$
x_9	0.660547945206	$-4.864067x_{82} -0.442360x_6 +0.665964x_{13}$
x_{33}	2.39506849315	$+2.968915x_{82} +0.012013x_6 -0.032139x_{13}$
x_{34}	1.60712328767	$+2.420969x_{82} +0.033930x_6 -0.073235x_{13}$
x_{35}	1.96684931507	$+2.737619x_{82} +0.016649x_6 +0.016860x_{13}$
x_{36}	0.11397260274	$+0.870126x_{82} +0.004426x_6 +0.001317x_{13}$
x_{37}	1.06575342466	$+2.542677x_{82} -0.006322x_6 +0.069547x_{13}$
x_{38}	1.43369863014	$+3.475237x_{82} +0.033298x_6 +0.033720x_{13}$
x_{39}	1.51589041096	$+2.288198x_{82} -0.013066x_6 +0.043730x_{13}$
x_{40}	0.449863013699	$+1.254478x_{82} +0.006744x_6 +0.025817x_{13}$
x_{41}	1.80657534247	$+3.438883x_{82} +0.060906x_6 +0.030032x_{13}$
x_{42}	1.27780821918	$+1.994731x_{82} +0.015595x_6 +0.028451x_{13}$
x_{43}	0.77698630137	$+1.290832x_{82} -0.020864x_6 +0.029505x_{13}$
x_{44}	0.77698630137	$+1.290832x_{82} -0.020864x_6 +0.029505x_{13}$
x_{45}	0.566575342466	$+2.246575x_{82} +0.030137x_6 +0.068493x_{13}$
x_{46}	0.77698630137	$+1.290832x_{82} -0.020864x_6 +0.029505x_{13}$
x_{47}	1.4101369863	$+1.553214x_{82} -0.037513x_6 +0.012645x_{13}$
x_{57}	0.402191780822	$+0.909115x_{82} -0.030980x_6 -0.009220x_{13}$
x_{49}	1.22712328767	$+1.036354x_{82} -0.027608x_6 +0.003688x_{13}$
x_{50}	2.20630136986	$+2.717071x_{82} -0.002529x_6 -0.072181x_{13}$
x_{51}	1.65616438356	$+1.971549x_{82} +0.004215x_6 -0.046365x_{13}$
x_2	1.8602739726	$+1.298736x_{82} -0.044257x_6 -0.013172x_{13}$
x_{53}	1.3602739726	$+1.298736x_{82} -0.044257x_6 -0.013172x_{13}$
x_{54}	2.25232876712	$+2.654636x_{82} -0.037724x_6 -0.035037x_{13}$
x_{55}	1.49123287671	$+1.652002x_{82} -0.029926x_6 -0.020811x_{13}$
x_{56}	1.07424657534	$+1.168862x_{82} -0.039831x_6 -0.011855x_{13}$
x_{52}	0.716164383562	$+0.779241x_{82} -0.026554x_6 -0.007903x_{13}$

Forming the dual dictionary:

y_{82}	2.74025289779	$+0.771075y_4$	$+0.026344y_1$	$-0.961538y_3$	$-2.270021y_{16}$	$-1.081665y_8$	$+1.430980y_5$	-1.1	
y_6	0.00885142255005	$-0.862381y_4$	$-0.077977y_1$	$-0.153846y_3$	$-0.100738y_{16}$	$+0.041728y_8$	$-0.715701y_5$	$+0.0$	
y_{13}	0.00263435194942	$-0.863804y_4$	$-0.142255y_1$	$+0.192308y_3$	$-0.041886y_{16}$	$-0.559009y_8$	$-0.927292y_5$	-0.0	
z	3.82794520548	$-4.251233y_4$	$-0.389041y_1$	$-0.20y_3$	$-1.332329y_{16}$	$-6.653973y_8$	$-1.216712y_5$	-0.0	

The Final Dual Dictionary is:

y_{87}	8	$+26.250y_4$	$+2.50y_1$	$+23.750y_6$	$-4.250y_{16}$	$-2y_8$	$+25y_5$	$-3.50y_{48}$	$+3y_{11}$	$+1.750y_{10}$
y_3	0.3	$-1.30y_4$	$+0y_1$	$-3.50y_6$	$-0.50y_{16}$	$+1.10y_8$	$-0.60y_5$	$+0y_{48}$	$+1.40y_{11}$	$+1.10y_{10}$
y_{187}	3	$-38.50y_4$	$-5y_1$	$-22.50y_6$	$-5.50y_{16}$	$-13y_8$	$-36y_5$	$-2y_{48}$	$-20y_{11}$	$-17.50y_{10}$
z	6	$-41.9250y_4$	$-5.250y_1$	$-22.0750y_6$	$-6.0750y_{16}$	$-18.90y_8$	$-36.60y_5$	$-1.650y_{48}$	$-19.80y_{11}$	$-17.4750y_{10}$

Final primal dictionary obtained:

x_4	41.925	$-26.250x_{87} +1.30x_3 +38.50x_{187}$
x_1	5.25	$-2.50x_{87} -0x_3 +5x_{187}$
x_6	22.075	$-23.750x_{87} +3.50x_3 +22.50x_{187}$
x_{16}	6.075	$+4.250x_{87} +0.50x_3 +5.50x_{187}$
x_8	18.9	$+2x_{87} -1.10x_3 +13x_{187}$
x_5	36.6	$-25x_{87} +0.60x_3 +36x_{187}$
x_{48}	1.65	$+3.50x_{87} -0x_3 +2x_{187}$
x_{11}	19.8	$-3x_{87} -1.40x_3 +20x_{187}$
x_{10}	17.475	$-1.750x_{87} -1.10x_3 +17.50x_{187}$
x_7	27.45	$-6.50x_{87} -2.90x_3 +28x_{187}$
x_{14}	15.55	$+1.50x_{87} -0.80x_3 +15x_{187}$
x_{15}	26.675	$-4.750x_{87} -2.60x_3 +27.50x_{187}$
x_{21}	5.1	$+4x_{87} -0.10x_3 +5x_{187}$
x_{17}	4.025	$+5.750x_{87} +0.60x_3 +2.50x_{187}$
x_{32}	1.325	$+4.750x_{87} +0.20x_3 +0.50x_{187}$
x_{18}	5.3	$+5x_{87} +0.50x_3 +5x_{187}$
x_{20}	4.725	$+4.750x_{87} -0.10x_3 +3.50x_{187}$
x_{12}	5.875	$+2.250x_{87} -0.40x_3 +5.50x_{187}$
x_{22}	5.3	$+5x_{87} +0.50x_3 +5x_{187}$
x_{19}	1.625	$+4.750x_{87} +0.60x_3 +0.50x_{187}$
x_{24}	5.525	$+5.750x_{87} +0.50x_3 +4.50x_{187}$
x_{25}	5.175	$+5.250x_{87} -0.10x_3 +4.50x_{187}$
x_{23}	1.7	$+2x_{87} +0.80x_3 +2x_{187}$
x_{27}	6.075	$+3.250x_{87} +0.20x_3 +5.50x_{187}$
x_{26}	2.075	$+5.250x_{87} +0.60x_3 +1.50x_{187}$
x_{29}	4.325	$+8.750x_{87} +0.50x_3 +3.50x_{187}$
x_{30}	3.25	$+7.50x_{87} +0.40x_3 +3x_{187}$
x_{31}	2.1	$+5x_{87} -0x_3 +1x_{187}$
x_{110}	1.075	$+1.250x_{87} -0x_3 +1.50x_{187}$
x_{33}	4.025	$+8.750x_{87} +0.40x_3 +2.50x_{187}$
x_{34}	2.425	$+6.750x_{87} +0.50x_3 +1.50x_{187}$
x_{35}	4.625	$+7.750x_{87} +0.30x_3 +3.50x_{187}$
x_{36}	0.85	$+2.50x_{87} +0.10x_3 +1x_{187}$
x_{37}	4.25	$+7.50x_{87} +0.10x_3 +4x_{187}$
x_{38}	5.35	$+9.50x_{87} +0.40x_3 +5x_{187}$
x_{39}	3.8	$+7x_{87} +0.10x_3 +3x_{187}$
x_{40}	2.05	$+3.50x_{87} +0.10x_3 +2x_{187}$
x_{41}	6.225	$+8.750x_{87} +0.50x_3 +5.50x_{187}$
x_{42}	3.65	$+5.50x_{87} +0.20x_3 +3x_{187}$
x_{43}	1.875	$+4.250x_{87} -0x_3 +1.50x_{187}$
x_{44}	1.875	$+4.250x_{87} -0x_3 +1.50x_{187}$
x_{45}	4.325	$+5.750x_{87} +0.20x_3 +4.50x_{187}$
x_{46}	1.875	$+4.250x_{87} -0x_3 +1.50x_{187}$
x_{47}	1.95	$+5.50x_{87} -0x_3 +1x_{187}$
x_{57}	0.15	$+3.50x_{87} +0x_3 +0x_{187}$
x_{49}	1.425	$+3.750x_{87} -0x_3 +0.50x_{187}$
x_{50}	2.45	$49+8.50x_{87} +0.40x_3 +1x_{187}$
x_{51}	2.1	$+6x_{87} +0.30x_3 +1x_{187}$
x_2	1.5	$+5x_{87} -0x_3 -0x_{187}$
x_{53}	1	$+5x_{87} +0x_3 +0x_{187}$
x_{54}	2.5	$+9x_{87} +0.20x_3 +1x_{187}$
x_{55}	1.525	$+5.750x_{87} +0.10x_3 +0.50x_{187}$
x_{56}	0.75	$+4.50x_{87} +0x_3 +0x_{187}$
x_{52}	0.500000000001	$+3x_{87} +0x_3 +0x_{187}$

After cutting plane is added

x_4	41.925	$-26.250x_{87}$ $+1.30x_3$ $+38.50x_{187}$
x_1	5.25	$-2.50x_{87}$ $-0x_3$ $+5x_{187}$
x_6	22.075	$-23.750x_{87}$ $+3.50x_3$ $+22.50x_{187}$
x_{16}	6.075	$+4.250x_{87}$ $+0.50x_3$ $+5.50x_{187}$
x_8	18.9	$+2x_{87}$ $-1.10x_3$ $+13x_{187}$
x_5	36.6	$-25x_{87}$ $+0.60x_3$ $+36x_{187}$
x_{48}	1.65	$+3.50x_{87}$ $-0x_3$ $+2x_{187}$
x_{11}	19.8	$-3x_{87}$ $-1.40x_3$ $+20x_{187}$
x_{10}	17.475	$-1.750x_{87}$ $-1.10x_3$ $+17.50x_{187}$
x_7	27.45	$-6.50x_{87}$ $-2.90x_3$ $+28x_{187}$
x_{14}	15.55	$+1.50x_{87}$ $-0.80x_3$ $+15x_{187}$
x_{15}	26.675	$-4.750x_{87}$ $-2.60x_3$ $+27.50x_{187}$
x_{21}	5.1	$+4x_{87}$ $-0.10x_3$ $+5x_{187}$
x_{17}	4.025	$+5.750x_{87}$ $+0.60x_3$ $+2.50x_{187}$
x_{32}	1.325	$+4.750x_{87}$ $+0.20x_3$ $+0.50x_{187}$
x_{18}	5.3	$+5x_{87}$ $+0.50x_3$ $+5x_{187}$
x_{20}	4.725	$+4.750x_{87}$ $-0.10x_3$ $+3.50x_{187}$
x_{12}	5.875	$+2.250x_{87}$ $-0.40x_3$ $+5.50x_{187}$
x_{22}	5.3	$+5x_{87}$ $+0.50x_3$ $+5x_{187}$
x_{19}	1.625	$+4.750x_{87}$ $+0.60x_3$ $+0.50x_{187}$
x_{24}	5.525	$+5.750x_{87}$ $+0.50x_3$ $+4.50x_{187}$
x_{25}	5.175	$+5.250x_{87}$ $-0.10x_3$ $+4.50x_{187}$
x_{23}	1.7	$+2x_{87}$ $+0.80x_3$ $+2x_{187}$
x_{27}	6.075	$+3.250x_{87}$ $+0.20x_3$ $+5.50x_{187}$
x_{26}	2.075	$+5.250x_{87}$ $+0.60x_3$ $+1.50x_{187}$
x_{29}	4.325	$+8.750x_{87}$ $+0.50x_3$ $+3.50x_{187}$
x_{30}	3.25	$+7.50x_{87}$ $+0.40x_3$ $+3x_{187}$
x_{31}	2.1	$+5x_{87}$ $-0x_3$ $+1x_{187}$
x_{110}	1.075	$+1.250x_{87}$ $-0x_3$ $+1.50x_{187}$
x_{33}	4.025	$+8.750x_{87}$ $+0.40x_3$ $+2.50x_{187}$
x_{34}	2.425	$+6.750x_{87}$ $+0.50x_3$ $+1.50x_{187}$
x_{35}	4.625	$+7.750x_{87}$ $+0.30x_3$ $+3.50x_{187}$
x_{36}	0.85	$+2.50x_{87}$ $+0.10x_3$ $+1x_{187}$
x_{37}	4.25	$+7.50x_{87}$ $+0.10x_3$ $+4x_{187}$
x_{38}	5.35	$+9.50x_{87}$ $+0.40x_3$ $+5x_{187}$
x_{39}	3.8	$+7x_{87}$ $+0.10x_3$ $+3x_{187}$
x_{40}	2.05	$+3.50x_{87}$ $+0.10x_3$ $+2x_{187}$
x_{41}	6.225	$+8.750x_{87}$ $+0.50x_3$ $+5.50x_{187}$
x_{42}	3.65	$+5.50x_{87}$ $+0.20x_3$ $+3x_{187}$
x_{43}	1.875	$+4.250x_{87}$ $-0x_3$ $+1.50x_{187}$
x_{44}	1.875	$+4.250x_{87}$ $-0x_3$ $+1.50x_{187}$
x_{45}	4.325	$+5.750x_{87}$ $+0.20x_3$ $+4.50x_{187}$
x_{46}	1.875	$+4.250x_{87}$ $-0x_3$ $+1.50x_{187}$
x_{47}	1.95	$+5.50x_{87}$ $-0x_3$ $+1x_{187}$
x_{57}	0.15	$+3.50x_{87}$ $+0x_3$ $+0x_{187}$
x_{49}	1.425	$+3.750x_{87}$ $-0x_3$ $+0.50x_{187}$
x_{50}	2.45	$+8.50x_{87}$ $+0.40x_3$ $+1x_{187}$
x_{51}	2.1	$+6x_{87}$ $+0.30x_3$ $+1x_{187}$
x_2	1.5	$+5x_{87}$ $-0x_3$ $-0x_{187}$
x_{53}	1	$+5x_{87}$ $+0x_3$ $+0x_{187}$
x_{54}	2.5	$+9x_{87}$ $+0.20x_3$ $+1x_{187}$
x_{55}	1.525	$+5.750x_{87}$ $+0.10x_3$ $+0.50x_{187}$
x_{56}	0.75	$+4.50x_{87}$ $+0x_3$ $+0x_{187}$
x_{52}	0.500000000001	$+3x_{87}$ $+0x_3$ $+0x_{187}$

Forming the dual dictionary:

y_{87}	8	$+26.250y_4$	$+2.50y_1$	$+23.750y_6$	$-4.250y_{16}$	$-2y_8$	$+25y_5$	$-3.50y_{48}$	$+3y_{11}$	$+1.750y_{10}$
y_3	0.3	$-1.30y_4$	$+0y_1$	$-3.50y_6$	$-0.50y_{16}$	$+1.10y_8$	$-0.60y_5$	$+0y_{48}$	$+1.40y_{11}$	$+1.10y_{10}$
y_{187}	3	$-38.50y_4$	$-5y_1$	$-22.50y_6$	$-5.50y_{16}$	$-13y_8$	$-36y_5$	$-2y_{48}$	$-20y_{11}$	$-17.50y_{10}$
z	6	$-41.9250y_4$	$-5.250y_1$	$-22.0750y_6$	$-6.0750y_{16}$	$-18.90y_8$	$-36.60y_5$	$-1.650y_{48}$	$-19.80y_{11}$	$-17.4750y_{10}$

Unbounded Dictionary! The Final Dual Dictionary is:

y_{194}	96.9999999999	$-130y_1$	$-29y_{192}$	$-14y_{188}$	$-157y_{16}$	$-355y_8$	$-987y_4$	$-61y_{48}$	$-534y_{11}$
y_3	20.1	$-33y_1$	$-6.70y_{192}$	$-4y_{188}$	$-36.80y_{16}$	$-84.70y_8$	$-255.40y_4$	$-13.20y_{48}$	$-130.60y_{11}$
y_9	5.99999999999	$-10y_1$	$-2y_{192}$	$-1y_{188}$	$-11y_{16}$	$-26y_8$	$-77y_4$	$-4y_{48}$	$-40y_{11}$
z	55.3999999999	$-67y_1$	$-13.40y_{192}$	$-5.90y_{188}$	$-83.10y_{16}$	$-190.50y_8$	$-508.30y_4$	$-32.20y_{48}$	$-275.90y_{11}$

Dual is unbounded. Primal is therefore infeasible.

Problem is ILP infeasible. Could not find an integer point.

Done.