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 Final dictionary after first LP relaxation solve:

$$\begin{array}{r|ll} x_1 & 1 & -0.166667x_3 +0.166667x_4 \\ x_2 & 1.5 & -0.25x_3 \quad -0.25x_4 \\ \hline z & 1.5 & -0.25x_3 \quad -0.25x_4 \end{array}$$

After cutting plane is added

$$\begin{array}{r|ll} x_1 & 1 & -0.166667x_3 +0.166667x_4 \\ x_2 & 1.5 & -0.25x_3 \quad -0.25x_4 \\ x_5 & -0.5 & +0.25x_3 \quad +0.25x_4 \\ \hline z & 1.5 & -0.25x_3 \quad -0.25x_4 \end{array}$$

Forming the dual dictionary:

$$\begin{array}{r|lll} y_3 & 0.25 & +0.166667y_1 +0.25y_2 -0.25y_5 \\ y_4 & 0.25 & -0.166667y_1 +0.25y_2 -0.25y_5 \\ \hline z & -1.5 & -1y_1 \quad -1.5y_2 \quad +0.5y_5 \end{array}$$

The Final Dual Dictionary is:

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

Final primal dictionary obtained:

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

After cutting plane is added

$$\begin{array}{r|ll} x_1 & 0.666666666667 & -0.666667x_5 +0.333333x_4 \\ x_2 & 1 & -1x_5 \\ x_3 & 2 & +4x_5 \quad -1x_4 \\ x_6 & -0.666666666667 & +0.666667x_5 +0.666667x_4 \\ \hline z & 1 & -1x_5 \end{array}$$

Forming the dual dictionary:

$$\begin{array}{r|l} y_5 & 1 \quad +0.666667y_1 +1y_2 -4y_3 -0.666667y_6 \\ y_4 & 0 \quad -0.333333y_1 \qquad +1y_3 -0.666667y_6 \\ \hline z & -1 \quad -0.666667y_1 -1y_2 -2y_3 +0.666667y_6 \end{array}$$

The Final Dual Dictionary is:

$$\begin{array}{r|l} y_5 & 1 \quad +1y_1 +1y_2 -5y_3 +1y_4 \\ y_6 & 0 \quad -0.5y_1 \qquad +1.5y_3 -1.5y_4 \\ \hline z & -1 \quad -1y_1 -1y_2 -1y_3 -1y_4 \end{array}$$

Final primal dictionary obtained:

$$\begin{array}{r|l} x_1 & 1 \quad -1x_5 +0.5x_6 \\ x_2 & 1 \quad -1x_5 \\ x_3 & 1 \quad +5x_5 -1.5x_6 \\ x_4 & 1 \quad -1x_5 +1.5x_6 \\ \hline z & 1 \quad -1x_5 \end{array}$$

Done.

2 ilpTest2

Initial Dictionary

$$\begin{array}{r|l} x_4 & 10 \quad -1x_1 \\ x_5 & 10 \qquad -1x_2 \\ x_6 & 10 \qquad\qquad -1x_3 \\ x_7 & 1 \quad +2x_1 -7x_2 \\ x_8 & 3 \quad -1x_1 +2x_2 -5x_3 \\ x_9 & 7 \quad -1x_1 -1x_2 +3x_3 \\ \hline z & 0 \quad +1x_1 +1x_2 -5x_3 \end{array}$$

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

$$\begin{array}{r|l} x_4 & 4.33333333333 \quad +0.333333x_8 +0.666667x_9 -0.333333x_3 \\ x_5 & 8.66666666667 \quad -0.333333x_8 +0.333333x_9 -2.666667x_3 \\ x_6 & 10 \qquad\qquad\qquad\qquad\qquad -1x_3 \\ x_7 & 3 \qquad\quad -3x_8 \qquad +1x_9 \qquad -18x_3 \\ x_1 & 5.66666666667 \quad -0.333333x_8 -0.666667x_9 +0.333333x_3 \\ x_2 & 1.33333333333 \quad +0.333333x_8 -0.333333x_9 +2.666667x_3 \\ \hline z & 7 \qquad\qquad\qquad -1x_9 \qquad -2x_3 \end{array}$$

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

The Final Dual Dictionary is:

y_{11}	1.28571428571	$-1y_4$	$-0.285714y_5$		$-1.285714y_9$	$+1y_1$	$+0.285714y_2$	$-0.428571y_8$ -0.71428
y_7	0.142857142857	$+y_4$	$-0.142857y_5$		$-0.142857y_9$	$-y_1$	$+0.142857y_2$	$+0.285714y_8$ $+0.14285$
y_3	3.71428571429	$+1y_4$	$+0.285714y_5$	$+1y_6$	$-1.714286y_9$	$-1y_1$	$-0.285714y_2$	$+5.428571y_8$ $+2.71428$
z	-6.57142857143	$-5y_4$	$-8.428571y_5$	$-1y_6$	$-0.428571y_9$	$-5y_1$	$-1.571429y_2$	$-1.142857y_8$ -0.57142

Final primal dictionary obtained:

x_4	5	$+1x_{11}$	$-x_7$	$-1x_3$
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	$-1x_{11}$	$+x_7$	$+1x_3$
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}	$1.58603289232e-17$	$+1x_{11}$	$-x_7$	$-x_3$
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	$+1x_{11}$	$-x_7$	$-1x_3$
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	$-1x_{11}$	$+x_7$	$+1x_3$
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}	$1.58603289232e-17$	$+1x_{11}$	$-x_7$	$-x_3$
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	$-1y_4$	$-0.285714y_5$		$-1.285714y_9$	$+1y_1$	$+0.285714y_2$	$-0.428571y_8$	-0.71428
y_7	0.142857142857	$+y_4$	$-0.142857y_5$		$-0.142857y_9$	$-y_1$	$+0.142857y_2$	$+0.285714y_8$	$+0.14285$
y_3	3.71428571429	$+1y_4$	$+0.285714y_5$	$+1y_6$	$-1.714286y_9$	$-1y_1$	$-0.285714y_2$	$+5.428571y_8$	$+2.71428$
z	-6.57142857143	$-5y_4$	$-8.428571y_5$	$-1y_6$	$-0.428571y_9$	$-5y_1$	$-1.571429y_2$	$-1.142857y_8$	-0.57142

The Final Dual Dictionary is:

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

Final primal dictionary obtained:

x_4	5	$+1x_{11}\ -x_{16}\ -1x_3$
x_5	9	$+1x_{16}\ -1x_3$
x_6	10	$-1x_3$
x_9	1	$+1x_{11}\ +1x_{16}\ +1x_3$
x_1	5	$-1x_{11}\ +x_{16}\ +1x_3$
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}	$-1.11022302463e-16$	$+1x_{11}\ -x_{16}\ +x_3$
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}	$1.11022302463e-15$	$+1x_{16}\ +x_3$
x_{19}	$7.77156117238e-16$	$+x_{11}\ +1x_{16}\ +x_3$
z	6	$-1x_{11}\ -1x_{16}\ -3x_3$

Note: we treat these as zero/integer. A floating pt. tolerance of 10^{-10} or so should be used to decide integrality.

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 Final dictionary after first LP relaxation solve:

x_4	10	$-1x_1$		
x_2	10		$-1x_5$	
x_6	5.4	$-0.2x_1$	$+0.4x_5$	$+0.2x_8$
x_7	71	$+2x_1$	$-7x_5$	
x_3	4.6	$+0.2x_1$	$-0.4x_5$	$-0.2x_8$
x_9	10.8	$+1.6x_1$	$-0.2x_5$	$-0.6x_8$
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	$-0.2x_1$	$+0.4x_5$	$+0.2x_8$
x_7	71	$+2x_1$	$-7x_5$	
x_3	4.6	$+0.2x_1$	$-0.4x_5$	$-0.2x_8$
x_9	10.8	$+1.6x_1$	$-0.2x_5$	$-0.6x_8$
x_{10}	-0.4	$+0.2x_1$	$+0.6x_5$	$+0.8x_8$
x_{11}	-0.6	$+0.8x_1$	$+0.4x_5$	$+0.2x_8$
x_{12}	-0.8	$+0.4x_1$	$+0.2x_5$	$+0.6x_8$
z	13		$-1x_5$	$-1x_8$

Forming the dual dictionary:

y_1	$-$	$+1y_4$	$+0.2y_6$	$-2y_7$	$-0.2y_3$	$-1.6y_9$	$-0.2y_{10}$	$-0.8y_{11}$	$-0.4y_{12}$
y_5	1	$+1y_2$	$-0.4y_6$	$+7y_7$	$+0.4y_3$	$+0.2y_9$	$-0.6y_{10}$	$-0.4y_{11}$	$-0.2y_{12}$
y_8	1		$-0.2y_6$		$+0.2y_3$	$+0.6y_9$	$-0.8y_{10}$	$-0.2y_{11}$	$-0.6y_{12}$
z	-13	$-1y_4$	$-1y_2$	$-5.4y_6$	$-71y_7$	$-4.6y_3$	$-10.8y_9$	$+0.4y_{10}$	$+0.6y_{11}$	$+0.8y_{12}$

The Final Dual Dictionary is:

y_{10}	$-$	$+5y_4$	$+1y_6$	$-1y_7$	$-1y_3$	$-8y_9$	$-5y_1$	$-4y_{11}$	$-2y_{12}$
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	$-8y_4$	$-1y_2$	$-5y_6$	$-75y_7$	$-5y_3$	$-14y_9$	$-2y_1$	$-1y_{11}$	$+y_{12}$

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	$+1x_{10}$ $-13x_5$ $-8x_8$
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 Final dictionary after first LP relaxation solve:

x_2	7.5	$-1x_1$ $-0.5x_3$
x_4	20	$-4x_1$ $-1x_3$
z	10	$-1x_1$ $-2x_3$

After cutting plane is added

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

Forming the dual dictionary:

y_1	1	$+1y_2$ $+4y_4$
y_3	2	$+0.5y_2$ $+1y_4$ $-0.5y_5$
z	-10	$-7.5y_2$ $-2y_4$ $+0.5y_5$

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 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	$-0.5x_4$	$-1x_3$

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	$-0.5x_4$	$-1x_3$

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	$-0.4y_2$	$+1y_1$	$-2.8y_4$	$-2.4y_5$
y_3	0.8	$+0.2y_2$		$+0.4y_4$	$+0.2y_5$
z	3.8	$-1.8y_2$	$-3y_1$	$-2.6y_4$	$-1.8y_5$

Final primal dictionary obtained:

x_2	1.8	$+0.4x_6$ $-0.2x_3$
x_1	3	$-1x_6$
x_4	2.6	$+2.8x_6$ $-0.4x_3$
x_5	1.8	$+2.4x_6$ $-0.2x_3$
z	-3.8	$-1.4x_6$ $-0.8x_3$

After cutting plane is added

x_2	1.8	$+0.4x_6$ $-0.2x_3$
x_1	3	$-1x_6$
x_4	2.6	$+2.8x_6$ $-0.4x_3$
x_5	1.8	$+2.4x_6$ $-0.2x_3$
x_7	-0.8	$+0.6x_6$ $+0.2x_3$
x_8	-0.6	$+0.2x_6$ $+0.4x_3$
x_9	-0.8	$+0.6x_6$ $+0.2x_3$
z	-3.8	$-1.4x_6$ $-0.8x_3$

Forming the dual dictionary:

y_6	1.4	$-0.4y_2$	$+1y_1$	$-2.8y_4$	$-2.4y_5$	$-0.6y_7$	$-0.2y_8$ $-0.6y_9$
y_3	0.8	$+0.2y_2$		$+0.4y_4$	$+0.2y_5$	$-0.2y_7$	$-0.4y_8$ $-0.2y_9$
z	3.8	$-1.8y_2$	$-3y_1$	$-2.6y_4$	$-1.8y_5$	$+0.8y_7$	$+0.6y_8$ $+0.8y_9$

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

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	$-9.71445146547e-16$	$+1x_7$ $+x_8$
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	$-1x_1$	$-1x_2$	$-1x_3$	$-1x_4$	$-1x_5$ $-1x_6$

x_7 leaves

Problem is feasible Initialization phase yields a zero answer 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 Final dictionary after first LP relaxation solve:

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

After cutting plane is added

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

Forming the dual dictionary:

y_3	0.5	$+0.5y_1$	$+0.5y_4$	$-0.5y_2$	$-0.5y_6$	$-0.5y_7$	$-0.5y_8$
y_5	1	$-1y_1$	$-3y_4$	$+2y_2$			
z	-12.5	$-2.5y_1$	$-0.5y_4$	$-2.5y_2$	$+0.5y_6$	$+0.5y_7$	$+0.5y_8$

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	$-$	$-1x_6 + 3x_5$
x_2	3	$+1x_6 - 2x_5$
x_3	1	$+2x_6$
x_7	$-$	$+1x_6$
x_8	$-$	$+1x_6$
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 Final dictionary after first LP relaxation solve:

x_4	1.53178905865	$+0.144899x_1 +0.00345x_8 -1.103006x_3 -0.019221x_5$
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	$+0.144899x_1 +0.00345x_8 -1.103006x_3 -0.019221x_5$
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	$+0.855101x_1 +0.99655x_8 +0.103006x_3 +0.019221x_5$
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	$-0.144899y_4 +65.058157y_6 -78.074914y_7 +0.058896y_2 +48.464268y_9 -0.85510$
y_8	0.510596352883	$-0.00345y_4 -0.522425y_6 +0.045835y_7 +0.013307y_2 -0.560375y_9 -0.9965$
y_3	79.2550517496	$+1.103006y_4 -42.830458y_6 -27.082799y_7 -0.040168y_2 +76.302612y_9 -0.10300$
y_5	0.655248891079	$+0.019221y_4 +0.624938y_6 +0.601774y_7 -0.002711y_2 +0.836373y_9 -0.01922$
z	-67.2952193199	$-1.531789y_4 -83.956629y_6 -92.649088y_7 -0.091671y_2 -153.806309y_9 +0.53178$

The Final Dual Dictionary is:

y_1	5.87550200803	$-0.130924y_4$	$+65.869076y_6$	$-77.771084y_7$	$+0.045783y_2$	$+49.428916y_9$	$+0.869$
y_{10}	0.0100401606426	$-0.018474y_4$	$-1.018474y_6$	$-0.421687y_7$	$+0.015663y_2$	$-1.221687y_9$	-1.018
y_3	79.0763052209	$+1.099598y_4$	$-42.900402y_6$	$-27.204819y_7$	$-0.040964y_2$	$+76.195181y_9$	$+0.099$
y_{11}	1.04819277108	$+0.031325y_4$	$+1.031325y_6$	$+0.975904y_7$	$-0.004819y_2$	$+1.375904y_9$	$+0.031$
z	-66.2871485944	$-1.511647y_4$	$-83.511647y_6$	$-91.939759y_7$	$-0.087952y_2$	$-153.139759y_9$	-0.511

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	$-5.875502x_1$	$-0.01004x_{10}$	$-79.076305x_3$	$-1.048193x_{11}$

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	$-5.875502x_1$	$-0.01004x_{10}$	$-79.076305x_3$	$-1.048193x_{11}$

Forming the dual dictionary:

y_1	5.87550200803	$-0.130924y_4$	$+65.869076y_6$	$-77.771084y_7$	$+0.045783y_2$	$+49.428916y_9$	$+0.8690$
y_{10}	0.0100401606426	$-0.018474y_4$	$-1.018474y_6$	$-0.421687y_7$	$+0.015663y_2$	$-1.221687y_9$	-1.0184
y_3	79.0763052209	$+1.099598y_4$	$-42.900402y_6$	$-27.204819y_7$	$-0.040964y_2$	$+76.195181y_9$	$+0.0995$
y_{11}	1.04819277108	$+0.031325y_4$	$+1.031325y_6$	$+0.975904y_7$	$-0.004819y_2$	$+1.375904y_9$	$+0.0313$
z	-66.2871485944	$-1.511647y_4$	$-83.511647y_6$	$-91.939759y_7$	$-0.087952y_2$	$-153.139759y_9$	-0.5116

The Final Dual Dictionary is:

y_1	5.01851851852	$-0.175309y_4$	$+63.997531y_6$	$-79y_7$	$+0.065432y_2$	$+47.069136y_9$	$-0.175309y_8+1$
y_{17}	0.462962962963	$-0.004938y_4$	$-0.57284y_6$		$+0.01358y_2$	$-0.62716y_9$	$-1.004938y_8+0$
y_3	78.2222222222	$+1.074074y_4$	$-43.740741y_6$	$-28y_7$	$-0.037037y_2$	$+75.074074y_9$	$+0.074074y_8+1$
y_{12}	0.611111111111	$+0.037037y_4$	$+1.62963y_6$	$+1y_7$	$-0.018519y_2$	$+2.037037y_9$	$+1.037037y_8-1$
z	-65.8888888889	$-1.518519y_4$	$-84.148148y_6$	$-92y_7$	$-0.074074y_2$	$-153.851852y_9$	$-1.518519y_8-0$

Final primal dictionary obtained:

x_4	1.51851851852	$+0.175309x_1$	$+0.004938x_{17}$	$-1.074074x_3$	$-0.037037x_{12}$
x_6	84.1481481481	$-63.997531x_1$	$+0.57284x_{17}$	$+43.740741x_3$	$-1.62963x_{12}$
x_7	92	$+79x_1$		$+28x_3$	$-1x_{12}$
x_2	0.0740740740741	$-0.065432x_1$	$-0.01358x_{17}$	$+0.037037x_3$	$+0.018519x_{12}$
x_9	153.851851852	$-47.069136x_1$	$+0.62716x_{17}$	$-75.074074x_3$	$-2.037037x_{12}$
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	$-0.82716x_1$	$+0.432099x_{17}$	$-0.814815x_3$	$+0.592593x_{12}$
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	$+1x_1$	$+1x_{17}$	$+x_3$	$-1x_{12}$
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	$+1.17284x_1$	$+0.432099x_{17}$	$+0.185185x_3$	$-0.407407x_{12}$
x_{23}	0.851851851852	$+0.830864x_1$	$+0.92716x_{17}$	$-0.074074x_3$	$-0.537037x_{12}$
x_{24}	0.0740740740741	$+0.101235x_1$	$+0.48642x_{17}$	$+0.37037x_3$	$+0.185185x_{12}$
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	$-63.997531x_1$	$+0.57284x_{17}$	$+43.740741x_3$	$-1.62963x_{12}$
x_7	92	$+79x_1$		$+28x_3$	$-1x_{12}$
x_2	0.0740740740741	$-0.065432x_1$	$-0.01358x_{17}$	$+0.037037x_3$	$+0.018519x_{12}$
x_9	153.851851852	$-47.069136x_1$	$+0.62716x_{17}$	$-75.074074x_3$	$-2.037037x_{12}$
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	$-0.82716x_1$	$+0.432099x_{17}$	$-0.814815x_3$	$+0.592593x_{12}$
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	$+1x_1$	$+1x_{17}$	$+x_3$	$-1x_{12}$
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	$+1.17284x_1$	$+0.432099x_{17}$	$+0.185185x_3$	$-0.407407x_{12}$
x_{23}	0.851851851852	$+0.830864x_1$	$+0.92716x_{17}$	$-0.074074x_3$	$-0.537037x_{12}$
x_{24}	0.0740740740741	$+0.101235x_1$	$+0.48642x_{17}$	$+0.37037x_3$	$+0.185185x_{12}$
x_{25}	-0.518518518519	$+0.824691x_1$	$+0.995062x_{17}$	$+0.074074x_3$	$+0.037037x_{12}$
x_{26}	-0.148148148148	$+0.997531x_1$	$+0.42716x_{17}$	$+0.259259x_3$	$+0.62963x_{12}$
x_{27}	-0.0740740740741	$+0.065432x_1$	$+0.01358x_{17}$	$+0.962963x_3$	$+0.981481x_{12}$
x_{28}	-0.851851851852	$+0.069136x_1$	$+0.37284x_{17}$	$+0.074074x_3$	$+0.037037x_{12}$
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	$+0.82716x_1$	$+0.567901x_{17}$	$+0.814815x_3$	$+0.407407x_{12}$
x_{32}	-0.888888888889	$+0.485185x_1$	$+0.062963x_{17}$	$+0.555556x_3$	$+0.277778x_{12}$
x_{33}	-0.666666666667	$+0.755556x_1$	$+0.622222x_{17}$	$+x_3$	
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	$+0.82716x_1$	$+0.567901x_{17}$	$+0.814815x_3$	$+0.407407x_{12}$
x_{41}	-0.851851851852	$+0.169136x_1$	$+0.07284x_{17}$	$+0.074074x_3$	$+0.537037x_{12}$
x_{42}	-0.0740740740741	$+0.898765x_1$	$+0.51358x_{17}$	$+0.62963x_3$	$+0.814815x_{12}$
z	65.8888888889	$-5.018519x_1$	$-0.462963x_{17}$	$-78.222222x_3$	$-0.611111x_{12}$

Forming the dual dictionary:

y_1	5.01851851852	$-0.175309y_4$	$+63.997531y_6$	$-79y_7$	$+0.065432y_2$	$+47.069136y_9$	$-0.175309y_8 +1$
y_{17}	0.462962962963	$-0.004938y_4$	$-0.57284y_6$		$+0.01358y_2$	$-0.62716y_9$	$-1.004938y_8 +0$
y_3	78.2222222222	$+1.074074y_4$	$-43.740741y_6$	$-28y_7$	$-0.037037y_2$	$+75.074074y_9$	$+0.074074y_8 +1$
y_{12}	0.611111111111	$+0.037037y_4$	$+1.62963y_6$	$+1y_7$	$-0.018519y_2$	$+2.037037y_9$	$+1.037037y_8 -1$
z	-65.8888888889	$-1.518519y_4$	$-84.148148y_6$	$-92y_7$	$-0.074074y_2$	$-153.851852y_9$	$-1.518519y_8 -0$

The Final Dual Dictionary is:

y_1	2.86600496278	$-0.205955y_4$	$+63.724566y_6$	$-80.230769y_7$	$+0.047146y_2$	$+46.459057y_9$	$+1.58808$
y_{15}	0.220843672457	$-0.012407y_4$	$-0.823821y_6$	$-0.230769y_7$	$+0.014888y_2$	$-0.960298y_9$	-1.02481
y_3	76.5583126551	$+1.024814y_4$	$-45.352357y_6$	$-29.538462y_7$	$-0.029777y_2$	$+72.920596y_9$	$+0.04962$
y_{30}	3.17741935484	$+0.096774y_4$	$+3.225806y_6$	$+3y_7$	$-0.016129y_2$	$+4.290323y_9$	$+0.19354$
z	-62.935483871	$-1.419355y_4$	$-80.645161y_6$	$-89y_7$	$-0.096774y_2$	$-149.258065y_9$	-0.8387

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	$-3.414392x_1$	$-0.44665x_{15}$	$-3.1067x_3$	$+4.983871x_{30}$
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}	$2.6645352591e-15$	$+x_1$	$+1x_{15}$	$-x_3$	
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}	$1.11022302463e-16$	$-x_1$	$+1x_{15}$	$+x_3$	$-x_{30}$
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	$-1.312655x_1$	$+0.848635x_{15}$	$-0.69727x_3$	$+1.080645x_{30}$
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	$-1.39206x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
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	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.83871x_{30}$
x_{38}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{39}	1.03225806452	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.83871x_{30}$
x_{40}	2.22580645161	$-1.39206x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
x_{41}	0.935483870968	$-0.712159x_1$	$-0.066998x_{15}$	$-0.866005x_3$	$+1.822581x_{30}$
x_{42}	3.61290322581	$-1.657568x_1$	$+0.2134x_{15}$	$-1.426799x_3$	$+3.935484x_{30}$
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	$-3.414392x_1$	$-0.44665x_{15}$	$-3.1067x_3$	$+4.983871x_{30}$
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}	$2.6645352591e-15$	$+x_1$	$+1x_{15}$	$-x_3$	
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}	$1.11022302463e-16$	$-x_1$	$+1x_{15}$	$+x_3$	$-x_{30}$
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	$-1.312655x_1$	$+0.848635x_{15}$	$-0.69727x_3$	$+1.080645x_{30}$
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	$-1.39206x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
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	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.83871x_{30}$
x_{38}	2.41935483871	$-1.024814x_1$	$-0.218362x_{15}$	$-0.563275x_3$	$+2.903226x_{30}$
x_{39}	1.03225806452	$-0.759305x_1$	$-0.081886x_{15}$	$-0.836228x_3$	$+1.83871x_{30}$
x_{40}	2.22580645161	$-1.39206x_1$	$+0.349876x_{15}$	$-0.699752x_3$	$+2.870968x_{30}$
x_{41}	0.935483870968	$-0.712159x_1$	$-0.066998x_{15}$	$-0.866005x_3$	$+1.822581x_{30}$
x_{42}	3.61290322581	$-1.657568x_1$	$+0.2134x_{15}$	$-1.426799x_3$	$+3.935484x_{30}$
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	$+0.414392x_1$	$+0.44665x_{15}$	$+0.1067x_3$	$+0.016129x_{30}$
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	$+0.794045x_1$	$+0.987593x_{15}$	$+0.024814x_3$	$+0.096774x_{30}$

Forming the dual dictionary:

y_1	2.86600496278	$-0.205955y_4$	$+63.724566y_6$	$-80.230769y_7$	$+0.047146y_2$	$+46.459057y_9$	$+1.58808$
y_{15}	0.220843672457	$-0.012407y_4$	$-0.823821y_6$	$-0.230769y_7$	$+0.014888y_2$	$-0.960298y_9$	-1.02481
y_3	76.5583126551	$+1.024814y_4$	$-45.352357y_6$	$-29.538462y_7$	$-0.029777y_2$	$+72.920596y_9$	$+0.04962$
y_{30}	3.17741935484	$+0.096774y_4$	$+3.225806y_6$	$+3y_7$	$-0.016129y_2$	$+4.290323y_9$	$+0.19354$
z	-62.935483871	$-1.419355y_4$	$-80.645161y_6$	$-89y_7$	$-0.096774y_2$	$-149.258065y_9$	-0.8387

The Final Dual Dictionary is:

y_2	7	$-0.5y_4$	$+621.5y_6$	$-657.5y_7$	$-8.5y_1$	$+488.5y_9$	$+109y_8$	$-18.5y_5$ +
y_{72}	4.33333333333	$-0.333333y_4$	$+132.666667y_6$	$-159y_7$	$-2y_1$	$+99y_9$	$+9.666667y_8$	$+4y_5$ +
y_3	70.3333333333	$+1.166667y_4$	$-148.833333y_6$	$+86.5y_7$	$+1.5y_1$	$-6.5y_9$	$-8.333333y_8$	$+6.5y_5$ -
y_{45}	2.33333333333	$+0.166667y_4$	$-30.833333y_6$	$+42.5y_7$	$+0.5y_1$	$-21.5y_9$	$-3.333333y_8$	$-5.5y_5$ -
z	-59.3333333333	$-1.666667y_4$	$-19.666667y_6$	$-17y_7$	$-1y_1$	$-106y_9$	$-2.666667y_8$	$-1y_5$ -

Final primal dictionary obtained:

x_4	1.66666666667	$+0.5x_2$	$+0.333333x_{72}$	$-1.166667x_3$	$-0.166667x_{45}$
x_6	19.6666666667	$-621.5x_2$	$-132.666667x_{72}$	$+148.833333x_3$	$+30.833333x_{45}$
x_7	170	$+657.5x_2$	$+159x_{72}$	$-86.5x_3$	$-42.5x_{45}$
x_1	1	$+8.5x_2$	$+2x_{72}$	$-1.5x_3$	$-0.5x_{45}$
x_9	106	$-488.5x_2$	$-99x_{72}$	$+6.5x_3$	$+21.5x_{45}$
x_8	2.66666666667	$-109x_2$	$-9.666667x_{72}$	$+8.333333x_3$	$+3.333333x_{45}$
x_5	1	$+18.5x_2$	$-4x_{72}$	$-6.5x_3$	$+5.5x_{45}$
x_{11}	1	$-4x_2$	$-7x_{72}$	$+x_3$	$+5x_{45}$
x_{13}	1	$+17.5x_2$	$-4x_{72}$	$-5.5x_3$	$+5.5x_{45}$
x_{14}	1.66666666667	$-28.5x_2$	$-6.666667x_{72}$	$-2.166667x_3$	$+5.833333x_{45}$
x_{28}	$-1.69642078163e-13$	$-34.5x_2$	$-4x_{72}$	$+1.5x_3$	$+2.5x_{45}$
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	$-9x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{20}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{21}	3	$-9x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
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	$-95.5x_2$	$-11x_{72}$	$+4.5x_3$	$+6.5x_{45}$
x_{26}	2.33333333333	$-23.5x_2$	$-3.333333x_{72}$	$-1.833333x_3$	$+4.166667x_{45}$
x_{12}	1	$+14x_2$	$-1x_{72}$	$-4x_3$	$+3x_{45}$
x_{25}	2.33333333333	$-87.5x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{29}	2.33333333333	$-87.5x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{27}	1	$+13x_2$	$-1x_{72}$	$-3x_3$	$+3x_{45}$
x_{31}	2	$-41.5x_2$	$-5x_{72}$	$+0.5x_3$	$+4.5x_{45}$
x_{32}	$1.94289029309e-16$	$+2x_2$	$-x_{72}$	$-1x_3$	$+1x_{45}$
x_{33}	1.33333333333	$-53x_2$	$-5.333333x_{72}$	$+1.666667x_3$	$+3.666667x_{45}$
x_{34}	0.666666666667	$+14.5x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{35}	0.666666666667	$+14.5x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{36}	2	$-40.5x_2$	$-5x_{72}$	$+0.5x_3$	$+4.5x_{45}$
x_{37}	$-3.10307335383e-14$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{38}	0.666666666667	$+14.5x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{39}	$2.77555756156e-16$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{40}	2	$-41.5x_2$	$-5x_{72}$	$+0.5x_3$	$+4.5x_{45}$
x_{41}	$-5.55111512313e-17$	$+2x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{42}	2.66666666667	$-3x_2$	$-4.666667x_{72}$	$-1.666667x_3$	$+5.333333x_{45}$
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}	$1.38777878078e-17$	$+1x_2$	$+x_{72}$	$-1x_3$	$+1x_{45}$
x_{44}	0.666666666667	$-1x_2$	$+0.333333x_{72}$	$+0.333333x_3$	$+0.333333x_{45}$
x_{47}	3	$-85.5x_2$	$-5x_{72}$	$+4.5x_3$	$+2.5x_{45}$
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	$-85x_2$	$-4.666667x_{72}$	$+4.333333x_3$	$+2.333333x_{45}$

After cutting plane is added

x_4	1.66666666667	$+0.5x_2$	$+0.333333x_{72}$	$-1.166667x_3$	$-0.166667x_{45}$
x_6	19.6666666667	$-621.5x_2$	$-132.666667x_{72}$	$+148.833333x_3$	$+30.833333x_{45}$
x_7	170	$+657.5x_2$	$+159x_{72}$	$-86.5x_3$	$-42.5x_{45}$
x_1	1	$+8.5x_2$	$+2x_{72}$	$-1.5x_3$	$-0.5x_{45}$
x_9	106	$-488.5x_2$	$-99x_{72}$	$+6.5x_3$	$+21.5x_{45}$
x_8	2.66666666667	$-109x_2$	$-9.666667x_{72}$	$+8.333333x_3$	$+3.333333x_{45}$
x_5	1	$+18.5x_2$	$-4x_{72}$	$-6.5x_3$	$+5.5x_{45}$
x_{11}	1	$-4x_2$	$-7x_{72}$	$+x_3$	$+5x_{45}$
x_{13}	1	$+17.5x_2$	$-4x_{72}$	$-5.5x_3$	$+5.5x_{45}$
x_{14}	1.66666666667	$-28.5x_2$	$-6.666667x_{72}$	$-2.166667x_3$	$+5.833333x_{45}$
x_{28}	$-1.69642078163e-13$	$-34.5x_2$	$-4x_{72}$	$+1.5x_3$	$+2.5x_{45}$
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	$-9x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
x_{20}	3.33333333333	$-93x_2$	$-6.333333x_{72}$	$+5.666667x_3$	$+2.666667x_{45}$
x_{21}	3	$-9x_2$	$-8x_{72}$	$+5x_3$	$+4x_{45}$
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	$-95.5x_2$	$-11x_{72}$	$+4.5x_3$	$+6.5x_{45}$
x_{26}	2.33333333333	$-23.5x_2$	$-3.333333x_{72}$	$-1.833333x_3$	$+4.166667x_{45}$
x_{12}	1	$+14x_2$	$-1x_{72}$	$-4x_3$	$+3x_{45}$
x_{25}	2.33333333333	$-87.5x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{29}	2.33333333333	$-87.5x_2$	$-9.333333x_{72}$	$+3.166667x_3$	$+6.166667x_{45}$
x_{27}	1	$+13x_2$	$-1x_{72}$	$-3x_3$	$+3x_{45}$
x_{31}	2	$-41.5x_2$	$-5x_{72}$	$+0.5x_3$	$+4.5x_{45}$
x_{32}	$1.94289029309e-16$	$+2x_2$	$-x_{72}$	$-1x_3$	$+1x_{45}$
x_{33}	1.33333333333	$-53x_2$	$-5.333333x_{72}$	$+1.666667x_3$	$+3.666667x_{45}$
x_{34}	0.666666666667	$+14.5x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{35}	0.666666666667	$+14.5x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{36}	2	$-40.5x_2$	$-5x_{72}$	$+0.5x_3$	$+4.5x_{45}$
x_{37}	$-3.10307335383e-14$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{38}	0.666666666667	$+14.5x_2$	$-0.666667x_{72}$	$-3.166667x_3$	$+2.833333x_{45}$
x_{39}	$2.77555756156e-16$	$+3x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{40}	2	$-41.5x_2$	$-5x_{72}$	$+0.5x_3$	$+4.5x_{45}$
x_{41}	$-5.55111512313e-17$	$+2x_2$	$-1x_{72}$	$-2x_3$	$+2x_{45}$
x_{42}	2.66666666667	$-3x_2$	$-4.666667x_{72}$	$-1.666667x_3$	$+5.333333x_{45}$
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}	$1.38777878078e-17$	$+1x_2$	$+x_{72}$	$-1x_3$	$+1x_{45}$
x_{44}	0.666666666667	$-1x_2$	$+0.333333x_{72}$	$+0.333333x_3$	$+0.333333x_{45}$
x_{47}	3	$-85.5x_2$	$-5x_{72}$	$+4.5x_3$	$+2.5x_{45}$
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	$-85x_2$	$-4.666667x_{72}$	$+4.333333x_3$	$+2.333333x_{45}$

Forming the dual dictionary:

y_2	7	$-0.5y_4$	$+621.5y_6$	$-657.5y_7$	$-8.5y_1$	$+488.5y_9$	$+109y_8$	$-18.5y_5+$
y_{72}	4.33333333333	$-0.333333y_4$	$+132.666667y_6$	$-159y_7$	$-2y_1$	$+99y_9$	$+9.666667y_8$	$+4y_5$ $+$
y_3	70.3333333333	$+1.166667y_4$	$-148.833333y_6$	$+86.5y_7$	$+1.5y_1$	$-6.5y_9$	$-8.333333y_8$	$+6.5y_5$ $-$
y_{45}	2.33333333333	$+0.166667y_4$	$-30.833333y_6$	$+42.5y_7$	$+0.5y_1$	$-21.5y_9$	$-3.333333y_8$	$-5.5y_5$ $-$
z	-59.3333333333	$-1.666667y_4$	$-19.666667y_6$	$-17y_7$	$-1y_1$	$-106y_9$	$-2.666667y_8$	$-1y_5$ $-$

The Final Dual Dictionary is:

y_2	13.9453125	$+1.789063y_4$	$-8.15625y_{45}$	$+132.601563y_7$	$+1.15625y_1$	$+37.023437y_9$	$+54.8515$
y_{74}	10.38671875	$+0.277344y_4$	$-3.109375y_{45}$	$+17.246094y_7$	$+0.109375y_1$	$+4.691406y_9$	-3.3789
y_3	65.6953125	$+0.539063y_4$	$+2.84375y_{45}$	$-107.648437y_7$	$-0.84375y_1$	$+100.273438y_9$	$+5.6015$
y_6	0.01953125	$+0.003906y_4$	$-0.015625y_{45}$	$+1.285156y_7$	$+0.015625y_1$	$-0.722656y_9$	-0.0898
z	-52.79296875	$-1.558594y_4$	$-1.765625y_{45}$	$-183.777344y_7$	$-1.234375y_1$	$-88.660156y_9$	-3.1523

Final primal dictionary obtained:

x_4	1.55859375	$-1.789063x_2$	$-0.277344x_{74}$	$-0.539063x_3$	$-0.003906x_6$
x_{45}	1.765625	$+8.15625x_2$	$+3.109375x_{74}$	$-2.84375x_3$	$+0.015625x_6$
x_7	183.77734375	$-132.601563x_2$	$-17.246094x_{74}$	$+107.648437x_3$	$-1.285156x_6$
x_1	1.234375	$-1.15625x_2$	$-0.109375x_{74}$	$+0.84375x_3$	$-0.015625x_6$
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	$-54.21875x_2$	$+3.546875x_{74}$	$-5.21875x_3$	$+0.078125x_6$
x_{18}	5.91796875	$+19.304688x_2$	$+10.488281x_{74}$	$-16.445312x_3$	$+0.105469x_6$
x_{19}	5.59375	$-35.0625x_2$	$+6.65625x_{74}$	$-10.0625x_3$	$+0.09375x_6$
x_{20}	4.50390625	$-53.585938x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{21}	5.59375	$-35.0625x_2$	$+6.65625x_{74}$	$-10.0625x_3$	$+0.09375x_6$
x_{22}	2.6484375	$-23.265625x_2$	$+1.664062x_{74}$	$-1.765625x_3$	$+0.023437x_6$
x_{23}	5.59375	$-34.0625x_2$	$+6.65625x_{74}$	$-10.0625x_3$	$+0.09375x_6$
x_{24}	4.828125	$+1.78125x_2$	$+7.546875x_{74}$	$-11.21875x_3$	$+0.078125x_6$
x_{17}	7.33203125	$-11.804687x_2$	$+12.261719x_{74}$	$-19.054687x_3$	$+0.144531x_6$
x_{26}	7.828125	$+19.78125x_2$	$+10.546875x_{74}$	$-15.21875x_3$	$+0.078125x_6$
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	$+10.15625x_2$	$+3.109375x_{74}$	$-3.84375x_3$	$+0.015625x_6$
x_{33}	4.828125	$-8.21875x_2$	$+7.546875x_{74}$	$-11.21875x_3$	$+0.078125x_6$
x_{34}	5.296875	$+39.46875x_2$	$+8.328125x_{74}$	$-11.53125x_3$	$+0.046875x_6$
x_{35}	5.296875	$+39.46875x_2$	$+8.328125x_{74}$	$-11.53125x_3$	$+0.046875x_6$
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	$+39.46875x_2$	$+8.328125x_{74}$	$-11.53125x_3$	$+0.046875x_6$
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	$+9.15625x_2$	$+3.109375x_{74}$	$-3.84375x_3$	$+0.015625x_6$
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	$-52.953125x_2$	$+3.882812x_{74}$	$-4.453125x_3$	$+0.054687x_6$

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	$+8.15625x_2$	$+3.109375x_{74}$	$-2.84375x_3$	$+0.015625x_6$
x_7	183.77734375	$-132.601563x_2$	$-17.246094x_{74}$	$+107.648437x_3$	$-1.285156x_6$
x_1	1.234375	$-1.15625x_2$	$-0.109375x_{74}$	$+0.84375x_3$	$-0.015625x_6$
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	$-54.21875x_2$	$+3.546875x_{74}$	$-5.21875x_3$	$+0.078125x_6$
x_{18}	5.91796875	$+19.304688x_2$	$+10.488281x_{74}$	$-16.445312x_3$	$+0.105469x_6$
x_{19}	5.59375	$-35.0625x_2$	$+6.65625x_{74}$	$-10.0625x_3$	$+0.09375x_6$
x_{20}	4.50390625	$-53.585938x_2$	$+3.714844x_{74}$	$-4.835937x_3$	$+0.066406x_6$
x_{21}	5.59375	$-35.0625x_2$	$+6.65625x_{74}$	$-10.0625x_3$	$+0.09375x_6$
x_{22}	2.6484375	$-23.265625x_2$	$+1.664062x_{74}$	$-1.765625x_3$	$+0.023437x_6$
x_{23}	5.59375	$-34.0625x_2$	$+6.65625x_{74}$	$-10.0625x_3$	$+0.09375x_6$
x_{24}	4.828125	$+1.78125x_2$	$+7.546875x_{74}$	$-11.21875x_3$	$+0.078125x_6$
x_{17}	7.33203125	$-11.804687x_2$	$+12.261719x_{74}$	$-19.054687x_3$	$+0.144531x_6$
x_{26}	7.828125	$+19.78125x_2$	$+10.546875x_{74}$	$-15.21875x_3$	$+0.078125x_6$
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	$+10.15625x_2$	$+3.109375x_{74}$	$-3.84375x_3$	$+0.015625x_6$
x_{33}	4.828125	$-8.21875x_2$	$+7.546875x_{74}$	$-11.21875x_3$	$+0.078125x_6$
x_{34}	5.296875	$+39.46875x_2$	$+8.328125x_{74}$	$-11.53125x_3$	$+0.046875x_6$
x_{35}	5.296875	$+39.46875x_2$	$+8.328125x_{74}$	$-11.53125x_3$	$+0.046875x_6$
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	$+39.46875x_2$	$+8.328125x_{74}$	$-11.53125x_3$	$+0.046875x_6$
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	$+9.15625x_2$	$+3.109375x_{74}$	$-3.84375x_3$	$+0.015625x_6$
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	$-52.953125x_2$	$+3.882812x_{74}$	$-4.453125x_3$	$+0.054687x_6$

Forming the dual dictionary:

y_2	13.9453125	$+1.789063y_4$	$-8.15625y_{45}$	$+132.601563y_7$	$+1.15625y_1$	$+37.023437y_9$	$+54.8515$
y_{74}	10.38671875	$+0.277344y_4$	$-3.109375y_{45}$	$+17.246094y_7$	$+0.109375y_1$	$+4.691406y_9$	-3.3789
y_3	65.6953125	$+0.539063y_4$	$+2.84375y_{45}$	$-107.648437y_7$	$-0.84375y_1$	$+100.273438y_9$	$+5.6015$
y_6	0.01953125	$+0.003906y_4$	$-0.015625y_{45}$	$+1.285156y_7$	$+0.015625y_1$	$-0.722656y_9$	-0.0898
z	-52.79296875	$-1.558594y_4$	$-1.765625y_{45}$	$-183.777344y_7$	$-1.234375y_1$	$-88.660156y_9$	-3.1523

The Final Dual Dictionary is:

y_1	9	$+y_4$	$-2y_{45}$	$-74y_7$	$-y_2$	$+56y_9$	$-1y_{74}$
y_{61}	0.571428571429	$-0.071429y_4$	$+0.071429y_{45}$	$-1.5y_7$	$+0.071429y_2$	$-5.071429y_9$	$-0.142857y_7$
y_3	37.1428571429	$-0.142857y_4$	$+11.142857y_{45}$	$-66y_7$	$+0.142857y_2$	$+21.857143y_9$	$+2.714286y_7$
y_{110}	39.2857142857	$+1.214286y_4$	$-12.214286y_{45}$	$+37.5y_7$	$-0.214286y_2$	$+54.214286y_9$	$-3.571429y_7$
z	-42.1428571429	$-0.857143y_4$	$-6.142857y_{45}$	$-71y_7$	$-0.142857y_2$	$-125.857143y_9$	$-0.714286y_7$

Final primal dictionary obtained:

x_4	0.857142857143	$-x_1$	$+0.071429x_{61}$	$+0.142857x_3$	$-1.214286x_{110}$
x_{45}	6.14285714286	$+2x_1$	$-0.071429x_{61}$	$-11.142857x_3$	$+12.214286x_{110}$
x_7	71	$+74x_1$	$+1.5x_{61}$	$+66x_3$	$-37.5x_{110}$
x_2	0.142857142857	$+x_1$	$-0.071429x_{61}$	$-0.142857x_3$	$+0.214286x_{110}$
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	$+3x_1$	$+0.5x_{61}$	$-4x_3$	$+37.5x_{110}$
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	$-x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{20}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{21}	11.2857142857	$-x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{22}	2	$-x_1$	$+2x_{61}$	$-1x_3$	$-x_{110}$
x_{23}	11.4285714286	$-x_1$	$+3.785714x_{61}$	$-15.428571x_3$	$+12.642857x_{110}$
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	$+5x_1$	$-1.5x_{61}$	$-38x_3$	$+37.5x_{110}$
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	$-x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$
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	$-x_1$	$+4.5x_{61}$	$-4x_3$	$+1.5x_{110}$
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	$-x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$

After cutting plane is added

x_4	0.857142857143	$-x_1$	$+0.071429x_{61}$	$+0.142857x_3$	$-1.214286x_{110}$
x_{45}	6.14285714286	$+2x_1$	$-0.071429x_{61}$	$-11.142857x_3$	$+12.214286x_{110}$
x_7	71	$+74x_1$	$+1.5x_{61}$	$+66x_3$	$-37.5x_{110}$
x_2	0.142857142857	$+x_1$	$-0.071429x_{61}$	$-0.142857x_3$	$+0.214286x_{110}$
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	$+3x_1$	$+0.5x_{61}$	$-4x_3$	$+37.5x_{110}$
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	$-x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{20}	3.71428571429	$-1x_1$	$+4.642857x_{61}$	$-1.714286x_3$	$-0.928571x_{110}$
x_{21}	11.2857142857	$-x_1$	$+3.857143x_{61}$	$-15.285714x_3$	$+12.428571x_{110}$
x_{22}	2	$-x_1$	$+2x_{61}$	$-1x_3$	$-x_{110}$
x_{23}	11.4285714286	$-x_1$	$+3.785714x_{61}$	$-15.428571x_3$	$+12.642857x_{110}$
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	$+5x_1$	$-1.5x_{61}$	$-38x_3$	$+37.5x_{110}$
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	$-x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$
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	$-x_1$	$+4.5x_{61}$	$-4x_3$	$+1.5x_{110}$
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	$-x_1$	$+4.571429x_{61}$	$-2.857143x_3$	$+0.285714x_{110}$

Forming the dual dictionary:

y_1	9	$+y_4$	$-2y_{45}$	$-74y_7$	$-y_2$	$+56y_9$	$-1y_{74}$
y_{61}	0.571428571429	$-0.071429y_4$	$+0.071429y_{45}$	$-1.5y_7$	$+0.071429y_2$	$-5.071429y_9$	$-0.142857y_7$
y_3	37.1428571429	$-0.142857y_4$	$+11.142857y_{45}$	$-66y_7$	$+0.142857y_2$	$+21.857143y_9$	$+2.714286y_7$
y_{110}	39.2857142857	$+1.214286y_4$	$-12.214286y_{45}$	$+37.5y_7$	$-0.214286y_2$	$+54.214286y_9$	$-3.571429y_7$
z	-42.1428571429	$-0.857143y_4$	$-6.142857y_{45}$	$-71y_7$	$-0.142857y_2$	$-125.857143y_9$	$-0.714286y_7$

The Final Dual Dictionary is:

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

Final primal dictionary obtained:

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

Done.

9 ilpTest9

Initial Dictionary

$$\begin{array}{c|c|l} x_1 & 1.2 & -3.1x_2 +4.3x_3 -0.5x_5 \\ x_4 & 1 & -1x_2 \quad +1x_3 \quad -1x_5 \\ x_6 & 2.5 & +1.3x_2 -2.1x_3 \ +1x_5 \\ \hline z & 0 & -1.2x_2 -2.3x_3 -2.1x_5 \end{array}$$

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

$$\begin{array}{c|c|l} x_1 & 1.2 & -3.1x_2 +4.3x_3 -0.5x_5 \\ x_4 & 1 & -1x_2 \quad +1x_3 \quad -1x_5 \\ x_6 & 2.5 & +1.3x_2 -2.1x_3 \ +1x_5 \\ \hline z & 0 & -1.2x_2 -2.3x_3 -2.1x_5 \end{array}$$

After cutting plane is added

$$\begin{array}{c|c|l} x_1 & 1.2 & -3.1x_2 +4.3x_3 -0.5x_5 \\ x_4 & 1 & -1x_2 \quad +1x_3 \quad -1x_5 \\ x_6 & 2.5 & +1.3x_2 -2.1x_3 \ +1x_5 \\ x_7 & -0.2 & +0.1x_2 +0.7x_3 +0.5x_5 \\ x_8 & -0.5 & +0.7x_2 +0.1x_3 \\ \hline z & 0 & -1.2x_2 -2.3x_3 -2.1x_5 \end{array}$$

Forming the dual dictionary:

$$\begin{array}{c|c|l} y_2 & 1.2 & +3.1y_1 +1y_4 -1.3y_6 -0.1y_7 -0.7y_8 \\ y_3 & 2.3 & -4.3y_1 -1y_4 +2.1y_6 -0.7y_7 -0.1y_8 \\ y_5 & 2.1 & +0.5y_1 +1y_4 \ -1y_6 \ -0.5y_7 \\ \hline z & - & -1.2y_1 -1y_4 -2.5y_6 +0.2y_7 +0.5y_8 \end{array}$$

The Final Dual Dictionary is:

$$\begin{array}{c|c|l} y_8 & 3.70180722892 & -0.783133y_7 +0.361446y_4 +0.277108y_6 -0.933735y_3 -1.295181y_2 \\ y_1 & 0.448795180723 & -0.144578y_7 -0.240964y_4 +0.481928y_6 -0.210843y_3 \ +0.03012y_2 \\ y_5 & 2.32439759036 & -0.572289y_7 +0.879518y_4 -0.759036y_6 -0.105422y_3 \ +0.01506y_2 \\ \hline z & 1.31234939759 & -0.018072y_7 \ -0.53012y_4 \ -2.939759y_6 -0.213855y_3 -0.683735y_2 \end{array}$$

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	$+1.295181x_8 \ -0.03012x_1 \ -0.01506x_5$
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	$+1.295181x_8 \ -0.03012x_1 \ -0.01506x_5$
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	$+0.704819x_8 \ +0.03012x_1 \ +0.01506x_5$
z	-1.31234939759	$-3.701807x_8 -0.448795x_1 -2.324398x_5$

Forming the dual dictionary:

y_8	3.70180722892	$-0.783133y_7 +0.361446y_4 +0.277108y_6 -0.933735y_3 -1.295181y_2 -0.216867y_9 -$
y_1	0.448795180723	$-0.144578y_7 -0.240964y_4 +0.481928y_6 -0.210843y_3 \ +0.03012y_2 \ -0.855422y_9 -$
y_5	2.32439759036	$-0.572289y_7 +0.879518y_4 -0.759036y_6 -0.105422y_3 \ +0.01506y_2 \ -0.427711y_9 -$
z	1.31234939759	$-0.018072y_7 \ -0.53012y_4 \ -2.939759y_6 -0.213855y_3 -0.683735y_2 +0.018072y_9 \ -$

The Final Dual Dictionary is:

y_{13}	5.00909090909	$-1.018182y_7 +0.727273y_4 \quad -1.181818y_3 -1.909091y_2 +0.836364y_1 +0.4y_9 -$
y_{11}	0.618181818182	$-0.236364y_7 -0.545455y_4 +1y_6 -0.363636y_3 +0.181818y_2 -2.127273y_1 -1.8y_9 -$
y_5	2.1	$-0.5y_7 \quad +1y_4 \quad -1y_6 \quad -y_3 \quad +y_2 \quad +0.5y_1 \quad -y_9$
z	5.31818181818	$-0.936364y_7 -0.545455y_4 -2y_6 -1.363636y_3 -1.818182y_2 -1.427273y_1 -1.4y_9 -$

Final primal dictionary obtained:

x_7	0.936363636364	$+1.018182x_{13}$	$+0.236364x_{11}$	$+0.5x_5$
x_4	0.545454545455	$-0.727273x_{13}$	$+0.545455x_{11}$	$-1x_5$
x_6	2		$-1x_{11}$	$+1x_5$
x_3	1.36363636364	$+1.181818x_{13}$	$+0.363636x_{11}$	$+x_5$
x_2	1.81818181818	$+1.909091x_{13}$	$-0.181818x_{11}$	$-x_5$
x_1	1.42727272727	$-0.836364x_{13}$	$+2.127273x_{11}$	$-0.5x_5$
x_9	1.4	$-0.4x_{13}$	$+1.8x_{11}$	$+x_5$
x_{10}	0.881818181818	$-0.109091x_{13}$	$+1.581818x_{11}$	$+0.5x_5$
x_{12}	0.972727272727	$-0.563636x_{13}$	$+1.672727x_{11}$	$+0.5x_5$
x_8	0.909090909091	$+1.454545x_{13}$	$-0.090909x_{11}$	$-x_5$
z	-5.31818181818	$-5.009091x_{13}$	$-0.618182x_{11}$	$-2.1x_5$

After cutting plane is added

x_7	0.936363636364	$+1.018182x_{13}$	$+0.236364x_{11}$	$+0.5x_5$
x_4	0.545454545455	$-0.727273x_{13}$	$+0.545455x_{11}$	$-1x_5$
x_6	2		$-1x_{11}$	$+1x_5$
x_3	1.36363636364	$+1.181818x_{13}$	$+0.363636x_{11}$	$+x_5$
x_2	1.81818181818	$+1.909091x_{13}$	$-0.181818x_{11}$	$-x_5$
x_1	1.42727272727	$-0.836364x_{13}$	$+2.127273x_{11}$	$-0.5x_5$
x_9	1.4	$-0.4x_{13}$	$+1.8x_{11}$	$+x_5$
x_{10}	0.881818181818	$-0.109091x_{13}$	$+1.581818x_{11}$	$+0.5x_5$
x_{12}	0.972727272727	$-0.563636x_{13}$	$+1.672727x_{11}$	$+0.5x_5$
x_8	0.909090909091	$+1.454545x_{13}$	$-0.090909x_{11}$	$-x_5$
x_{14}	-0.936363636364	$+0.981818x_{13}$	$+0.763636x_{11}$	$+0.5x_5$
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	$+0.090909x_{13}$	$+0.181818x_{11}$	$+x_5$
x_{18}	-0.427272727273	$+0.836364x_{13}$	$+0.872727x_{11}$	$+0.5x_5$
x_{19}	-0.4	$+0.4x_{13}$	$+0.2x_{11}$	$+1x_5$
x_{20}	-0.881818181818	$+0.109091x_{13}$	$+0.418182x_{11}$	$+0.5x_5$
x_{21}	-0.972727272727	$+0.563636x_{13}$	$+0.327273x_{11}$	$+0.5x_5$
x_{22}	-0.909090909091	$+0.545455x_{13}$	$+0.090909x_{11}$	$+x_5$
z	-5.31818181818	$-5.009091x_{13}$	$-0.618182x_{11}$	$-2.1x_5$

Forming the dual dictionary:

y_{13}	5.00909090909	$-1.018182y_7$	$+0.727273y_4$		$-1.181818y_3$	$-1.909091y_2$	$+0.836364y_1$	$+0.4y_9$ -
y_{11}	0.618181818182	$-0.236364y_7$	$-0.545455y_4$	$+1y_6$	$-0.363636y_3$	$+0.181818y_2$	$-2.127273y_1$	$-1.8y_9$ -
y_5	2.1	$-0.5y_7$	$+1y_4$	$-1y_6$	$-y_3$	$+y_2$	$+0.5y_1$	$-y_9$
z	5.31818181818	$-0.936364y_7$	$-0.545455y_4$	$-2y_6$	$-1.363636y_3$	$-1.818182y_2$	$-1.427273y_1$	$-1.4y_9$ -

The Final Dual Dictionary is:

y_{22}	7.3	$-1.3y_7$	$+1y_4$	$+1y_5$	$-2y_3$	$-4y_2$	$+3.3y_1$	$+2.6y_9$	$+2.3y_{10}$	$+3.3y_{12}$	$-3y_8$	$+1y_{11}$	$+y_{15}$	$+y_{16}$
y_{17}	11.3	$-3.4y_7$	$+2y_4$	$-6y_5$	$-1y_3$	$+3y_2$	$-10.6y_1$	$-11.2y_9$	$-12.6y_{10}$	$-13.6y_{12}$	$+2y_8$	$-6y_{11}$	$-8y_{15}$	$-9y_{16}$
y_6	2.1	$-0.5y_7$	$+1y_4$	$-1y_5$	$-y_3$		$+0.5y_1$	$-y_9$	$-0.5y_{10}$	$-0.5y_{12}$		$+y_{11}$	$-1y_{15}$	$-1y_{16}$
z	17	$-3.9y_7$	$-y_4$	$-2y_5$	$-4y_3$	$-3y_2$	$-8.1y_1$	$-8.2y_9$	$-8.1y_{10}$	$-8.1y_{12}$	$-2y_8$	$-4y_{11}$	$-4y_{15}$	$-5y_{16}$

Final primal dictionary obtained:

x_7	3.9	$+1.3x_{22}$	$+3.4x_{17}$	$+0.5x_6$
x_4	$3.77475828373e-15$	$-1x_{22}$	$-2x_{17}$	$-1x_6$
x_5	2	$-1x_{22}$	$+6x_{17}$	$+1x_6$
x_3	4	$+2x_{22}$	$+1x_{17}$	$+x_6$
x_2	3	$+4x_{22}$	$-3x_{17}$	
x_1	8.1	$-3.3x_{22}$	$+10.6x_{17}$	$-0.5x_6$
x_9	8.2	$-2.6x_{22}$	$+11.2x_{17}$	$+x_6$
x_{10}	8.1	$-2.3x_{22}$	$+12.6x_{17}$	$+0.5x_6$
x_{12}	8.1	$-3.3x_{22}$	$+13.6x_{17}$	$+0.5x_6$
x_8	2	$+3x_{22}$	$-2x_{17}$	
x_{11}	4	$-1x_{22}$	$+6x_{17}$	$-x_6$
x_{15}	4	$-x_{22}$	$+8x_{17}$	$+1x_6$
x_{16}	5	$-x_{22}$	$+9x_{17}$	$+1x_6$
x_{14}	4.1	$+0.7x_{22}$	$+6.6x_{17}$	$+0.5x_6$
x_{18}	4.9	$+0.3x_{22}$	$+7.4x_{17}$	$+0.5x_6$
x_{19}	2.8	$-0.4x_{22}$	$+6.8x_{17}$	$+1x_6$
x_{20}	1.9	$-0.7x_{22}$	$+5.4x_{17}$	$+0.5x_6$
x_{21}	1.9	$+0.3x_{22}$	$+4.4x_{17}$	$+0.5x_6$
x_{13}	1	$+2x_{22}$	$-1x_{17}$	
z	-17	$-7.3x_{22}$	$-11.3x_{17}$	$-2.1x_6$

After cutting plane is added

x_7	3.9	$+1.3x_{22}$ $+3.4x_{17}$ $+0.5x_6$
x_4	$3.77475828373e-15$	$-1x_{22}$ $-2x_{17}$ $-1x_6$
x_5	2	$-1x_{22}$ $+6x_{17}$ $+1x_6$
x_3	4	$+2x_{22}$ $+1x_{17}$ $+x_6$
x_2	3	$+4x_{22}$ $-3x_{17}$
x_1	8.1	$-3.3x_{22}$ $+10.6x_{17}$ $-0.5x_6$
x_9	8.2	$-2.6x_{22}$ $+11.2x_{17}$ $+x_6$
x_{10}	8.1	$-2.3x_{22}$ $+12.6x_{17}$ $+0.5x_6$
x_{12}	8.1	$-3.3x_{22}$ $+13.6x_{17}$ $+0.5x_6$
x_8	2	$+3x_{22}$ $-2x_{17}$
x_{11}	4	$-1x_{22}$ $+6x_{17}$ $-x_6$
x_{15}	4	$-x_{22}$ $+8x_{17}$ $+1x_6$
x_{16}	5	$-x_{22}$ $+9x_{17}$ $+1x_6$
x_{14}	4.1	$+0.7x_{22}$ $+6.6x_{17}$ $+0.5x_6$
x_{18}	4.9	$+0.3x_{22}$ $+7.4x_{17}$ $+0.5x_6$
x_{19}	2.8	$-0.4x_{22}$ $+6.8x_{17}$ $+1x_6$
x_{20}	1.9	$-0.7x_{22}$ $+5.4x_{17}$ $+0.5x_6$
x_{21}	1.9	$+0.3x_{22}$ $+4.4x_{17}$ $+0.5x_6$
x_{13}	1	$+2x_{22}$ $-1x_{17}$
x_{23}	-0.9	$+0.7x_{22}$ $+0.6x_{17}$ $+0.5x_6$
x_{24}	-0.1	$+0.3x_{22}$ $+0.4x_{17}$ $+0.5x_6$
x_{25}	-0.2	$+0.6x_{22}$ $+0.8x_{17}$ $+1x_6$
x_{26}	-0.1	$+0.3x_{22}$ $+0.4x_{17}$ $+0.5x_6$
x_{27}	-0.1	$+0.3x_{22}$ $+0.4x_{17}$ $+0.5x_6$
x_{28}	-0.1	$+0.3x_{22}$ $+0.4x_{17}$ $+0.5x_6$
x_{29}	-0.9	$+0.7x_{22}$ $+0.6x_{17}$ $+0.5x_6$
x_{30}	-0.8	$+0.4x_{22}$ $+0.2x_{17}$ $+x_6$
x_{31}	-0.9	$+0.7x_{22}$ $+0.6x_{17}$ $+0.5x_6$
x_{32}	-0.9	$+0.7x_{22}$ $+0.6x_{17}$ $+0.5x_6$
z	-17	$-7.3x_{22}$ $-11.3x_{17}$ $-2.1x_6$

Forming the dual dictionary:

y_{22}	7.3	$-1.3y_7$ $+1y_4$ $+1y_5$ $-2y_3$ $-4y_2$ $+3.3y_1$ $+2.6y_9$ $+2.3y_{10}$ $+3.3y_{12}$ $-3y_8$ $+1y_{11}$ $+y_{15}$ $+y_{16}$ -
y_{17}	11.3	$-3.4y_7$ $+2y_4$ $-6y_5$ $-1y_3$ $+3y_2$ $-10.6y_1$ $-11.2y_9$ $-12.6y_{10}$ $-13.6y_{12}$ $+2y_8$ $-6y_{11}$ $-8y_{15}$ $-9y_{16}$ -
y_6	2.1	$-0.5y_7$ $+1y_4$ $-1y_5$ $-y_3$ $+0.5y_1$ $-y_9$ $-0.5y_{10}$ $-0.5y_{12}$ $+y_{11}$ $-1y_{15}$ $-1y_{16}$ -
z	17	$-3.9y_7$ $-y_4$ $-2y_5$ $-4y_3$ $-3y_2$ $-8.1y_1$ $-8.2y_9$ $-8.1y_{10}$ $-8.1y_{12}$ $-2y_8$ $-4y_{11}$ $-4y_{15}$ $-5y_{16}$ -

Unbounded Dictionary! The Final Dual Dictionary is:

y_4	29.8583333333	$-5.833333y_7$	$-4.666667y_{22}$	$+6y_5$	$-10.416667y_3$	$-15.416667y_2$	$-1.083333y_{17}$	$+y_9$
y_1	2.91666666667	$-0.666667y_7$	$-0.333333y_{22}$	$-y_5$	$-0.833333y_3$	$-0.833333y_2$	$-0.166667y_{17}$	$-1y$
y_{23}	66.8333333333	$-13.333333y_7$	$-9.666667y_{22}$	$+1y_5$	$-21.666667y_3$	$-31.666667y_2$	$-2.333333y_{17}$	$-1y$
z	53.525	$-10.5y_7$	$-6y_{22}$	$+7y_5$	$-16.75y_3$	$-24.75y_2$	$-0.75y_{17}$	$-1y$

Dual is unbounded Primal is therefore infeasible

Problem is ILP infeasible Could not find an integer point

Done.

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Initial Dictionary

x_4	3.6	$+7.7x_1$	$-1.4x_2$	$+1.3x_3$
x_5	0.9	$+7.2x_1$	$-1.4x_2$	$+0.6x_3$
x_6	2.2	$+4.5x_1$	$-2.5x_2$	$+3.5x_3$
x_7	-4.2	$+5.6x_1$	$+1.5x_2$	$-2.9x_3$
x_8	2.7	$+2.6x_1$	$+1.7x_2$	$-1.1x_3$
x_9	3.7	$+0.1x_1$	$-1.3x_2$	$-3.3x_3$
z	0	$-0.6x_1$	$-1.9x_2$	$-0.3x_3$

x_7 leaves

Problem is feasible Initialization phase yields a zero answer Final dictionary after first LP relaxation solve:

x_4	9.375	$-3.4625x_2$	$+5.2875x_3$	$+1.375x_7$
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	$-3.4625x_2$	$+5.2875x_3$	$+1.375x_7$
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	$+0.4625x_2$	$+0.7125x_3$	$+0.625x_7$
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	$+3.4625y_4$	$+3.328571y_5$	$+3.705357y_6$	$+0.267857y_1$	$-1.003571y_8$	$+1.326786y_9$	$-0.$
y_3	0.610714285714	$-5.2875y_4$	$-4.328571y_5$	$-5.830357y_6$	$-0.517857y_1$	$-0.246429y_8$	$+3.248214y_9$	$-0.$
y_7	0.107142857143	$-1.375y_4$	$-1.285714y_5$	$-0.803571y_6$	$-0.178571y_1$	$-0.464286y_8$	$-0.017857y_9$	-0
z	0.45	$-9.375y_4$	$-6.3y_5$	$-5.575y_6$	$-0.75y_1$	$-4.65y_8$	$-3.775y_9$	$+0$

The Final Dual Dictionary is:

y_2	1.35454545455	$+8.4y_4$	$+7.945455y_5$	$+6.590909y_6$	$+0.909091y_1$	$+0.663636y_8$	$+1.390909y_9$	$+3.$
y_3	0.518181818182	$-4.1y_4$	$-3.218182y_5$	$-5.136364y_6$	$-0.363636y_1$	$+0.154545y_8$	$+3.263636y_9$	$+0.$
y_{12}	0.545454545455	$-7y_4$	$-6.545455y_5$	$-4.090909y_6$	$-0.909091y_1$	$-2.363636y_8$	$-0.090909y_9$	$-5.$
z	0.763636363636	$-13.4y_4$	$-10.063636y_5$	$-7.927273y_6$	$-1.272727y_1$	$-6.009091y_8$	$-3.827273y_9$	$-2.$

Final primal dictionary obtained:

x_4	13.4	$-8.4x_2$	$+4.1x_3$	$+7x_{12}$
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	$-3.2x_2$	$-0.6x_3$	$+5x_{12}$
z	-0.763636363636	$-1.354545x_2$	$-0.518182x_3$	$-0.545455x_{12}$

After cutting plane is added

x_4	13.4	$-8.4x_2$	$+4.1x_3$	$+7x_{12}$
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	$-3.2x_2$	$-0.6x_3$	$+5x_{12}$
x_{16}	-0.4	$+0.4x_2$	$+0.9x_3$	$+1x_{12}$
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	$+0.2x_2$	$+0.6x_3$	$+1x_{12}$
z	-0.763636363636	$-1.354545x_2$	$-0.518182x_3$	$-0.545455x_{12}$

Forming the dual dictionary:

y_2	1.35454545455	$+8.4y_4$	$+7.945455y_5$	$+6.590909y_6$	$+0.909091y_1$	$+0.663636y_8$	$+1.390909y_9$ $+3.5$
y_3	0.518181818182	$-4.1y_4$	$-3.218182y_5$	$-5.136364y_6$	$-0.363636y_1$	$+0.154545y_8$	$+3.263636y_9$ $+0.8$
y_{12}	0.545454545455	$-7y_4$	$-6.545455y_5$	$-4.090909y_6$	$-0.909091y_1$	$-2.363636y_8$	$-0.090909y_9$ -5.0
z	0.763636363636	$-13.4y_4$	$-10.063636y_5$	$-7.927273y_6$	$-1.272727y_1$	$-6.009091y_8$	$-3.827273y_9$ -2.9

The Final Dual Dictionary is:

y_2	0.657142857143	$+14.071429y_4$	$+12.457143y_5$	$+13.428571y_6$	$+0.814286y_{16}$	$+0.6y_8$	$+2.77142$
y_{26}	0.571428571429	$-3.285714y_4$	$-2.095238y_5$	$-6.269841y_6$	$-0.968254y_{16}$	$+1.333333y_8$	$+3.71428$
y_{21}	0.428571428571	$-6.714286y_4$	$-6.571429y_5$	$-2.619048y_6$	$-0.809524y_{16}$	$-3y_8$	-6.71428
z	1.64285714286	$-21.971429y_4$	$-17.42381y_5$	$-15.850794y_6$	$-1.15873y_{16}$	$-7.266667y_8$	-5.07142

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	$-0.6x_2$	$-1.333333x_{26}$	$+3x_{21}$
x_7	5.07142857143	$-2.771429x_2$	$-3.714286x_{26}$	$+6.714286x_{21}$
x_1	2.20634920635	$-1.428571x_2$	$+0.15873x_{26}$	$+0.952381x_{21}$
x_{11}	4.03650793651	$-2.514286x_2$	$-1.587302x_{26}$	$+4.47619x_{21}$
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	$-2.714286x_2$	$-3.253968x_{26}$	$+6.47619x_{21}$
x_9	0.411111111111	$+2.8x_2$	$-5.222222x_{26}$	$+1.666667x_{21}$
x_{17}	1.04126984127	$-0.085714x_2$	$+1.031746x_{26}$	$+0.190476x_{21}$
x_3	1.06349206349	$-1.285714x_2$	$+1.587302x_{26}$	$-0.47619x_{21}$
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	$-1x_2$	$+1.333333x_{26}$	$-x_{21}$
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	$-0.6x_2$	$-1.333333x_{26}$	$+3x_{21}$
x_7	5.07142857143	$-2.771429x_2$	$-3.714286x_{26}$	$+6.714286x_{21}$
x_1	2.20634920635	$-1.428571x_2$	$+0.15873x_{26}$	$+0.952381x_{21}$
x_{11}	4.03650793651	$-2.514286x_2$	$-1.587302x_{26}$	$+4.47619x_{21}$
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	$-2.714286x_2$	$-3.253968x_{26}$	$+6.47619x_{21}$
x_9	0.411111111111	$+2.8x_2$	$-5.222222x_{26}$	$+1.666667x_{21}$
x_{17}	1.04126984127	$-0.085714x_2$	$+1.031746x_{26}$	$+0.190476x_{21}$
x_3	1.06349206349	$-1.285714x_2$	$+1.587302x_{26}$	$-0.47619x_{21}$
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	$-1x_2$	$+1.333333x_{26}$	$-x_{21}$
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	$+0.6x_2$	$+0.333333x_{26}$	$+x_{21}$
x_{33}	-0.0714285714286	$+0.771429x_2$	$+0.714286x_{26}$	$+0.285714x_{21}$
x_{34}	-0.206349206349	$+0.428571x_2$	$+0.84127x_{26}$	$+0.047619x_{21}$
x_{35}	-0.0365079365079	$+0.514286x_2$	$+0.587302x_{26}$	$+0.52381x_{21}$
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	$+0.714286x_2$	$+0.253968x_{26}$	$+0.52381x_{21}$
x_{40}	-0.411111111111	$+0.2x_2$	$+0.222222x_{26}$	$+0.333333x_{21}$
x_{41}	-0.0412698412698	$+0.085714x_2$	$+0.968254x_{26}$	$+0.809524x_{21}$
x_{42}	-0.0634920634921	$+0.285714x_2$	$+0.412698x_{26}$	$+0.47619x_{21}$
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	$+1x_2$	$+0.666667x_{26}$	$+x_{21}$
x_{51}	-0.139682539683	$+0.628571x_2$	$+0.507937x_{26}$	$+0.047619x_{21}$

Forming the dual dictionary:

y_2	0.657142857143	$+14.071429y_4$	$+12.457143y_5$	$+13.428571y_6$	$+0.814286y_{16}$	$+0.6y_8$	$+2.77142$
y_{26}	0.571428571429	$-3.285714y_4$	$-2.095238y_5$	$-6.269841y_6$	$-0.968254y_{16}$	$+1.333333y_8$	$+3.71428$
y_{21}	0.428571428571	$-6.714286y_4$	$-6.571429y_5$	$-2.619048y_6$	$-0.809524y_{16}$	$-3y_8$	-6.71428
z	1.64285714286	$-21.971429y_4$	$-17.42381y_5$	$-15.850794y_6$	$-1.15873y_{16}$	$-7.266667y_8$	-5.07142

The Final Dual Dictionary is:

y_{32}	$-1.02140518266e-14$	$+17y_4$	$+2y_5$	$-8.333333y_6$	$+0.333333y_{16}$	$+16y_8$	$+38y_7$	$+3.333333$
y_{36}	3	$-47y_4$	$-46y_5$	$-18.333333y_6$	$-5.666667y_{16}$	$-21y_8$	$-47y_7$	-6.666667
y_2	0.1	$+12.6y_4$	$+9y_5$	$+21.833333y_6$	$+1.666667y_{16}$	$-5.1y_8$	$-11.3y_7$	$+0.666667$
z	3.3	$-43.4y_4$	$-37.5y_5$	$-28.2y_6$	$-4.2y_{16}$	$-14.6y_8$	$-20.9y_7$	$-5y_1$

Final primal dictionary obtained:

x_4	43.4	$-17x_{32}$	$+47x_{36}$	$-12.6x_2$
x_5	37.5	$-2x_{32}$	$+46x_{36}$	$-9x_2$
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	$-16x_{32}$	$+21x_{36}$	$+5.1x_2$
x_7	20.9	$-38x_{32}$	$+47x_{36}$	$+11.3x_2$
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	$-19x_{32}$	$+27x_{36}$	$+4.2x_2$
x_{13}	16.9	$-28x_{32}$	$+37x_{36}$	$+7.3x_2$
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	$-4x_{32}$	$+7x_{36}$	$+1.1x_2$
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	$-x_{32}$	$+5x_{36}$	$-1.5x_2$
x_{20}	2.5	$-3x_{32}$	$+5x_{36}$	$+1.3x_2$
x_{12}	3.7	$-6.333333x_{32}$	$+8.666667x_{36}$	$+2.133333x_2$
x_{22}	3.3	$-x_{32}$	$+5x_{36}$	$-1.5x_2$
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	$+4x_{32}$	$-x_{36}$	$-3.4x_2$
x_{27}	4.2	$-2.333333x_{32}$	$+6.666667x_{36}$	$-0.466667x_2$
x_{26}	0.8	$+3x_{32}$	$-x_{36}$	$-1.8x_2$
x_{29}	1.5	$+1x_{32}$	$+3x_{36}$	$-0.7x_2$
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	$+1x_{32}$	$+2x_{36}$	$-0.2x_2$
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	$+1x_{32}$	$+2x_{36}$	$-0.9x_2$
x_{37}	1.3	$-2x_{32}$	$+5x_{36}$	$+0.9x_2$
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	$-1x_{32}$	$+2x_{36}$	$+0.8x_2$
x_{44}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.8x_2$
x_{45}	1.9	$-1.666667x_{32}$	$+5.333333x_{36}$	$+0.066667x_2$
x_{46}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.8x_2$
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	$+2x_{32}$	$-x_{36}$	$-0.2x_2$
x_{51}	0.4	$+1.333333x_{32}$	$+0.333333x_{36}$	$-0.233333x_2$

After cutting plane is added

x_4	43.4	$-17x_{32}$	$+47x_{36}$	$-12.6x_2$
x_5	37.5	$-2x_{32}$	$+46x_{36}$	$-9x_2$
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	$-16x_{32}$	$+21x_{36}$	$+5.1x_2$
x_7	20.9	$-38x_{32}$	$+47x_{36}$	$+11.3x_2$
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	$-19x_{32}$	$+27x_{36}$	$+4.2x_2$
x_{13}	16.9	$-28x_{32}$	$+37x_{36}$	$+7.3x_2$
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	$-4x_{32}$	$+7x_{36}$	$+1.1x_2$
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	$-x_{32}$	$+5x_{36}$	$-1.5x_2$
x_{20}	2.5	$-3x_{32}$	$+5x_{36}$	$+1.3x_2$
x_{12}	3.7	$-6.333333x_{32}$	$+8.666667x_{36}$	$+2.133333x_2$
x_{22}	3.3	$-x_{32}$	$+5x_{36}$	$-1.5x_2$
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	$+4x_{32}$	$-x_{36}$	$-3.4x_2$
x_{27}	4.2	$-2.333333x_{32}$	$+6.666667x_{36}$	$-0.466667x_2$
x_{26}	0.8	$+3x_{32}$	$-x_{36}$	$-1.8x_2$
x_{29}	1.5	$+1x_{32}$	$+3x_{36}$	$-0.7x_2$
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	$+1x_{32}$	$+2x_{36}$	$-0.2x_2$
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	$+1x_{32}$	$+2x_{36}$	$-0.9x_2$
x_{37}	1.3	$-2x_{32}$	$+5x_{36}$	$+0.9x_2$
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	$-1x_{32}$	$+2x_{36}$	$+0.8x_2$
x_{44}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.8x_2$
x_{45}	1.9	$-1.666667x_{32}$	$+5.333333x_{36}$	$+0.066667x_2$
x_{46}	0.3	$-1x_{32}$	$+2x_{36}$	$+0.8x_2$
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	$+2x_{32}$	$-x_{36}$	$-0.2x_2$
x_{51}	0.4	$+1.333333x_{32}$	$+0.333333x_{36}$	$-0.233333x_2$

Forming the dual dictionary:

y_{32}	$-1.02140518266e-14$	$+17y_4$	$+2y_5$	$-8.333333y_6$	$+0.333333y_{16}$	$+16y_8$	$+38y_7$	$+3.333333$
y_{36}	3	$-47y_4$	$-46y_5$	$-18.333333y_6$	$-5.666667y_{16}$	$-21y_8$	$-47y_7$	-6.666667
y_2	0.1	$+12.6y_4$	$+9y_5$	$+21.833333y_6$	$+1.666667y_{16}$	$-5.1y_8$	$-11.3y_7$	$+0.666667$
z	3.3	$-43.4y_4$	$-37.5y_5$	$-28.2y_6$	$-4.2y_{16}$	$-14.6y_8$	$-20.9y_7$	$-5y_1$

The Final Dual Dictionary is:

y_{82}	2.74025289779	$+0.771075y_4$	$+0.026344y_1$	$-0.961538y_3$	$-2.270021y_{16}$	$-1.081665y_8$	$+1.43098$
y_6	0.00885142255005	$-0.862381y_4$	$-0.077977y_1$	$-0.153846y_3$	$-0.100738y_{16}$	$+0.041728y_8$	-0.715701
y_{13}	0.00263435194942	$-0.863804y_4$	$-0.142255y_1$	$+0.192308y_3$	$-0.041886y_{16}$	$-0.559009y_8$	-0.927292
z	3.82794520548	$-4.251233y_4$	$-0.389041y_1$	$-0.2y_3$	$-1.332329y_{16}$	$-6.653973y_8$	-1.216712

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	$-1.43098x_{82} +0.715701x_6 +0.927292x_{13}$
x_{48}	0.0298630136986	$+1.158325x_{82} -0.008641x_6 +0.045047x_{13}$
x_{11}	0.580547945205	$+0.366702x_{82} +0.034563x_6 +0.81981x_{13}$
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	$-0.307165x_{82} -0.05079x_6 +1.258693x_{13}$
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	$+1.488409x_{82} -0.00569x_6 -0.037408x_{13}$
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	$+1.82824x_{82} -0.011591x_6 +0.127503x_{13}$
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	$+1.42334x_{82} -0.033087x_6 +0.013962x_{13}$
x_9	0.660547945206	$-4.864067x_{82} -0.44236x_6 +0.665964x_{13}$
x_{33}	2.39506849315	$+2.968915x_{82} +0.012013x_6 -0.032139x_{13}$
x_{34}	1.60712328767	$+2.420969x_{82} +0.03393x_6 -0.073235x_{13}$
x_{35}	1.96684931507	$+2.737619x_{82} +0.016649x_6 +0.01686x_{13}$
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	$+3.475237x_{82} +0.033298x_6 +0.03372x_{13}$
x_{39}	1.51589041096	$+2.288198x_{82} -0.013066x_6 +0.04373x_{13}$
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	$+0.909115x_{82} -0.03098x_6 -0.00922x_{13}$
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	$+1.971549x_{82} +0.004215x_6 -0.046365x_{13}$

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	$-1.43098x_{82} +0.715701x_6 +0.927292x_{13}$
x_{48}	0.0298630136986	$+1.158325x_{82} -0.008641x_6 +0.045047x_{13}$
x_{11}	0.580547945205	$+0.366702x_{82} +0.034563x_6 +0.81981x_{13}$
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	$-0.307165x_{82} -0.05079x_6 +1.258693x_{13}$
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	$+1.488409x_{82} -0.00569x_6 -0.037408x_{13}$
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	$+1.82824x_{82} -0.011591x_6 +0.127503x_{13}$
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	$+1.42334x_{82} -0.033087x_6 +0.013962x_{13}$
x_9	0.660547945206	$-4.864067x_{82} -0.44236x_6 +0.665964x_{13}$
x_{33}	2.39506849315	$+2.968915x_{82} +0.012013x_6 -0.032139x_{13}$
x_{34}	1.60712328767	$+2.420969x_{82} +0.03393x_6 -0.073235x_{13}$
x_{35}	1.96684931507	$+2.737619x_{82} +0.016649x_6 +0.01686x_{13}$
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	$+3.475237x_{82} +0.033298x_6 +0.03372x_{13}$
x_{39}	1.51589041096	$+2.288198x_{82} -0.013066x_6 +0.04373x_{13}$
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	$+0.909115x_{82} -0.03098x_6 -0.00922x_{13}$
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	$+1.971549x_{82} +0.004215x_6 -0.046365x_{13}$

Forming the dual dictionary:

y_{82}	2.74025289779	$+0.771075y_4$	$+0.026344y_1$	$-0.961538y_3$	$-2.270021y_{16}$	$-1.081665y_8$	$+1.43098$	
y_6	0.00885142255005	$-0.862381y_4$	$-0.077977y_1$	$-0.153846y_3$	$-0.100738y_{16}$	$+0.041728y_8$	-0.715701	
y_{13}	0.00263435194942	$-0.863804y_4$	$-0.142255y_1$	$+0.192308y_3$	$-0.041886y_{16}$	$-0.559009y_8$	-0.927292	
z	3.82794520548	$-4.251233y_4$	$-0.389041y_1$	$-0.2y_3$	$-1.332329y_{16}$	$-6.653973y_8$	-1.216712	

The Final Dual Dictionary is:

y_{87}	8	$+26.25y_4$	$+2.5y_1$	$+23.75y_6$	$-4.25y_{16}$	$-2y_8$	$+25y_5$	$-3.5y_{48}$	$+3y_{11}$	$+1.75y_{10}$	$+$
y_3	0.3	$-1.3y_4$	$+y_1$	$-3.5y_6$	$-0.5y_{16}$	$+1.1y_8$	$-0.6y_5$	$+y_{48}$	$+1.4y_{11}$	$+1.1y_{10}$	$+$
y_{187}	3	$-38.5y_4$	$-5y_1$	$-22.5y_6$	$-5.5y_{16}$	$-13y_8$	$-36y_5$	$-2y_{48}$	$-2y_{11}$	$-17.5y_{10}$	$-$
z	6	$-41.925y_4$	$-5.25y_1$	$-22.075y_6$	$-6.075y_{16}$	$-18.9y_8$	$-36.6y_5$	$-1.65y_{48}$	$-19.8y_{11}$	$-17.475y_{10}$	-2

Final primal dictionary obtained:

$$
\begin{array}{c|c|c}
x_4 & 41.925 & -26.25x_{87} +1.3x_3 +38.5x_{187} \\
x_1 & 5.25 & -2.5x_{87} -x_3 +5x_{187} \\
x_6 & 22.075 & -23.75x_{87} +3.5x_3 +22.5x_{187} \\
x_{16} & 6.075 & +4.25x_{87} +0.5x_3 +5.5x_{187} \\
x_8 & 18.9 & +2x_{87} -1.1x_3 +13x_{187} \\
x_5 & 36.6 & -25x_{87} +0.6x_3 +36x_{187} \\
x_{48} & 1.65 & +3.5x_{87} -x_3 +2x_{187} \\
x_{11} & 19.8 & -3x_{87} -1.4x_3 +2x_{187} \\
x_{10} & 17.475 & -1.75x_{87} -1.1x_3 +17.5x_{187} \\
x_7 & 27.45 & -6.5x_{87} -2.9x_3 +28x_{187} \\
x_{14} & 15.55 & +1.5x_{87} -0.8x_3 +15x_{187} \\
x_{15} & 26.675 & -4.75x_{87} -2.6x_3 +27.5x_{187} \\
x_{21} & 5.1 & +4x_{87} -0.1x_3 +5x_{187} \\
x_{17} & 4.025 & +5.75x_{87} +0.6x_3 +2.5x_{187} \\
x_{32} & 1.325 & +4.75x_{87} +0.2x_3 +0.5x_{187} \\
x_{18} & 5.3 & +5x_{87} +0.5x_3 +5x_{187} \\
x_{20} & 4.725 & +4.75x_{87} -0.1x_3 +3.5x_{187} \\
x_{12} & 5.875 & +2.25x_{87} -0.4x_3 +5.5x_{187} \\
x_{22} & 5.3 & +5x_{87} +0.5x_3 +5x_{187} \\
x_{19} & 1.625 & +4.75x_{87} +0.6x_3 +0.5x_{187} \\
x_{24} & 5.525 & +5.75x_{87} +0.5x_3 +4.5x_{187} \\
x_{25} & 5.175 & +5.25x_{87} -0.1x_3 +4.5x_{187} \\
x_{23} & 1.7 & +2x_{87} +0.8x_3 +2x_{187} \\
x_{27} & 6.075 & +3.25x_{87} +0.2x_3 +5.5x_{187} \\
x_{26} & 2.075 & +5.25x_{87} +0.6x_3 +1.5x_{187} \\
x_{29} & 4.325 & +8.75x_{87} +0.5x_3 +3.5x_{187} \\
x_{30} & 3.25 & +7.5x_{87} +0.4x_3 +3x_{187} \\
x_{31} & 2.1 & +5x_{87} -x_3 +1x_{187} \\
x_{110} & 1.075 & +1.25x_{87} -x_3 +1.5x_{187} \\
x_{33} & 4.025 & +8.75x_{87} +0.4x_3 +2.5x_{187} \\
x_{34} & 2.425 & +6.75x_{87} +0.5x_3 +1.5x_{187} \\
x_{35} & 4.625 & +7.75x_{87} +0.3x_3 +3.5x_{187} \\
x_{36} & 0.85 & +2.5x_{87} +0.1x_3 +1x_{187} \\
x_{37} & 4.25 & +7.5x_{87} +0.1x_3 +4x_{187} \\
x_{38} & 5.35 & +9.5x_{87} +0.4x_3 +5x_{187} \\
x_{39} & 3.8 & +7x_{87} +0.1x_3 +3x_{187} \\
x_{40} & 2.05 & +3.5x_{87} +0.1x_3 +2x_{187} \\
x_{41} & 6.225 & +8.75x_{87} +0.5x_3 +5.5x_{187} \\
x_{42} & 3.65 & +5.5x_{87} +0.2x_3 +3x_{187} \\
x_{43} & 1.875 & +4.25x_{87} -x_3 +1.5x_{187} \\
x_{44} & 1.875 & +4.25x_{87} -x_3 +1.5x_{187} \\
x_{45} & 4.325 & +5.75x_{87} +0.2x_3 +4.5x_{187} \\
x_{46} & 1.875 & +4.25x_{87} -x_3 +1.5x_{187} \\
x_{47} & 1.95 & +5.5x_{87} -x_3 +1x_{187} \\
x_{57} & 0.15 & +3.5x_{87} +x_3 +x_{187} \\
x_{49} & 1.425 & +3.75x_{87} -x_3 +0.5x_{187} \\
x_{50} & 2.45 & +8.5x_{87} +0.4x_3 +1x_{187} \\
x_{51} & 2.1 & +6x_{87} +0.3x_3 +1x_{187}
\end{array}
$$

After cutting plane is added

x_4	41.925	$-26.25x_{87} +1.3x_3 +38.5x_{187}$
x_1	5.25	$-2.5x_{87} -x_3 +5x_{187}$
x_6	22.075	$-23.75x_{87} +3.5x_3 +22.5x_{187}$
x_{16}	6.075	$+4.25x_{87} +0.5x_3 +5.5x_{187}$
x_8	18.9	$+2x_{87} -1.1x_3 +13x_{187}$
x_5	36.6	$-25x_{87} +0.6x_3 +36x_{187}$
x_{48}	1.65	$+3.5x_{87} -x_3 +2x_{187}$
x_{11}	19.8	$-3x_{87} -1.4x_3 +2x_{187}$
x_{10}	17.475	$-1.75x_{87} -1.1x_3 +17.5x_{187}$
x_7	27.45	$-6.5x_{87} -2.9x_3 +28x_{187}$
x_{14}	15.55	$+1.5x_{87} -0.8x_3 +15x_{187}$
x_{15}	26.675	$-4.75x_{87} -2.6x_3 +27.5x_{187}$
x_{21}	5.1	$+4x_{87} -0.1x_3 +5x_{187}$
x_{17}	4.025	$+5.75x_{87} +0.6x_3 +2.5x_{187}$
x_{32}	1.325	$+4.75x_{87} +0.2x_3 +0.5x_{187}$
x_{18}	5.3	$+5x_{87} +0.5x_3 +5x_{187}$
x_{20}	4.725	$+4.75x_{87} -0.1x_3 +3.5x_{187}$
x_{12}	5.875	$+2.25x_{87} -0.4x_3 +5.5x_{187}$
x_{22}	5.3	$+5x_{87} +0.5x_3 +5x_{187}$
x_{19}	1.625	$+4.75x_{87} +0.6x_3 +0.5x_{187}$
x_{24}	5.525	$+5.75x_{87} +0.5x_3 +4.5x_{187}$
x_{25}	5.175	$+5.25x_{87} -0.1x_3 +4.5x_{187}$
x_{23}	1.7	$+2x_{87} +0.8x_3 +2x_{187}$
x_{27}	6.075	$+3.25x_{87} +0.2x_3 +5.5x_{187}$
x_{26}	2.075	$+5.25x_{87} +0.6x_3 +1.5x_{187}$
x_{29}	4.325	$+8.75x_{87} +0.5x_3 +3.5x_{187}$
x_{30}	3.25	$+7.5x_{87} +0.4x_3 +3x_{187}$
x_{31}	2.1	$+5x_{87} -x_3 +1x_{187}$
x_{110}	1.075	$+1.25x_{87} -x_3 +1.5x_{187}$
x_{33}	4.025	$+8.75x_{87} +0.4x_3 +2.5x_{187}$
x_{34}	2.425	$+6.75x_{87} +0.5x_3 +1.5x_{187}$
x_{35}	4.625	$+7.75x_{87} +0.3x_3 +3.5x_{187}$
x_{36}	0.85	$+2.5x_{87} +0.1x_3 +1x_{187}$
x_{37}	4.25	$+7.5x_{87} +0.1x_3 +4x_{187}$
x_{38}	5.35	$+9.5x_{87} +0.4x_3 +5x_{187}$
x_{39}	3.8	$+7x_{87} +0.1x_3 +3x_{187}$
x_{40}	2.05	$+3.5x_{87} +0.1x_3 +2x_{187}$
x_{41}	6.225	$+8.75x_{87} +0.5x_3 +5.5x_{187}$
x_{42}	3.65	$+5.5x_{87} +0.2x_3 +3x_{187}$
x_{43}	1.875	$+4.25x_{87} -x_3 +1.5x_{187}$
x_{44}	1.875	$+4.25x_{87} -x_3 +1.5x_{187}$
x_{45}	4.325	$+5.75x_{87} +0.2x_3 +4.5x_{187}$
x_{46}	1.875	$+4.25x_{87} -x_3 +1.5x_{187}$
x_{47}	1.95	$+5.5x_{87} -x_3 +1x_{187}$
x_{57}	0.15	$+3.5x_{87} +x_3 +x_{187}$
x_{49}	1.425	$+3.75x_{87} -x_3 +0.5x_{187}$
x_{50}	2.45	$+8.5x_{87} +0.4x_3 +1x_{187}$
x_{51}	2.1	$+6x_{87} +0.3x_3 +1x_{187}$

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Forming the dual dictionary:

y_{87}	8	$+26.25y_4$	$+2.5y_1$	$+23.75y_6$	$-4.25y_{16}$	$-2y_8$	$+25y_5$	$-3.5y_{48}$	$+3y_{11}$	$+1.75y_{10}$	$+$
y_3	0.3	$-1.3y_4$	$+y_1$	$-3.5y_6$	$-0.5y_{16}$	$+1.1y_8$	$-0.6y_5$	$+y_{48}$	$+1.4y_{11}$	$+1.1y_{10}$	$+$
y_{187}	3	$-38.5y_4$	$-5y_1$	$-22.5y_6$	$-5.5y_{16}$	$-13y_8$	$-36y_5$	$-2y_{48}$	$-2y_{11}$	$-17.5y_{10}$	$-$
z	6	$-41.925y_4$	$-5.25y_1$	$-22.075y_6$	$-6.075y_{16}$	$-18.9y_8$	$-36.6y_5$	$-1.65y_{48}$	$-19.8y_{11}$	$-17.475y_{10}$	-2

Unbounded Dictionary! The Final Dual Dictionary is:

y_{194}	96.9999999999	$-13y_1$	$-29y_{192}$	$-14y_{188}$	$-157y_{16}$	$-355y_8$	$-987y_4$	$-61y_{48}$	$-534y_{11}$	-46
y_3	20.1	$-33y_1$	$-6.7y_{192}$	$-4y_{188}$	$-36.8y_{16}$	$-84.7y_8$	$-255.4y_4$	$-13.2y_{48}$	$-130.6y_{11}$	-114
y_9	5.99999999999	$-1y_1$	$-2y_{192}$	$-1y_{188}$	$-11y_{16}$	$-26y_8$	$-77y_4$	$-4y_{48}$	$-4y_{11}$	-3
z	55.3999999999	$-67y_1$	$-13.4y_{192}$	$-5.9y_{188}$	$-83.1y_{16}$	$-190.5y_8$	$-508.3y_4$	$-32.2y_{48}$	$-275.9y_{11}$	-242

Dual is unbounded Primal is therefore infeasible

Problem is ILP infeasible Could not find an integer point

Done.