Initial Dictionary

x_4	10.0	$-1.00x_1$		
x_5	10.0		$-1.00x_2$	
x_6	10.0			$-1.00x_3$
x_7	1.0	$+2.00x_1$	$+7.00x_2$	
x_8	3.0	$+1.00x_1$	$+2.00x_2$	$-5.00x_3$
x_9	7.0	$+1.00x_1$	$-1.00x_2$	$+3.00x_3$
z	0.0	$-1.00x_1$	$-1.00x_2$	$+5.00x_3$

No initialization required –¿ Proceed to Optimize.

x_3 enters and x_8 leaves

x_4	10.0	$-1.00x_1$		
x_5	10.0		$-1.00x_2$	
x_6	9.4	$-0.20x_1$	$-0.40x_2$	$+0.20x_8$
x_7	1.0	$+2.00x_1$	$+7.00x_2$	
x_3	0.6	$+0.20x_1$	$+0.40x_2$	$-0.20x_8$
x_9	8.8	$+1.60x_1$	$+0.20x_2$	$-0.60x_8$
z	3.0		$+1.00x_2$	$-1.00x_8$

x_2 enters and x_5 leaves

x_4	10.0	$-1.00x_1$		
x_2	10.0		$-1.00x_5$	
x_6	5.4	$-0.20x_1$	$+0.40x_5$	$+0.20x_8$
x_7	71.0	$+2.00x_1$	$-7.00x_5$	
x_3	4.6	$+0.20x_1$	$-0.40x_5$	$-0.20x_8$
x_9	10.8	$+1.60x_1$	$-0.20x_5$	$-0.60x_8$
z	13.0		$-1.00x_5$	$-1.00x_8$

Final Dictionary Final dictionary after first LP relaxation solve:

x_4	10.0	$-1.00x_1$		
x_2	10.0		$-1.00x_5$	
x_6	5.4	$-0.20x_1$	$+0.40x_5$	$+0.20x_8$
x_7	71.0	$+2.00x_1$	$-7.00x_5$	
x_3	4.6	$+0.20x_1$	$-0.40x_5$	$-0.20x_8$
x_9	10.8	$+1.60x_1$	$-0.20x_5$	$-0.60x_8$
z	13.0		$-1.00x_5$	$-1.00x_8$

After cutting plane is added

x_4	10.0	$-1.00x_1$		
x_2	10.0		$-1.00x_5$	
x_6	5.4	$-0.20x_1$	$+0.40x_5$	$+0.20x_8$
x_7	71.0	$+2.00x_1$	$-7.00x_5$	
x_3	4.6	$+0.20x_1$	$-0.40x_5$	$-0.20x_8$
x_9	10.8	$+1.60x_1$	$-0.20x_5$	$-0.60x_8$
x_{10}	-0.4	$+0.20x_1$	$+0.60x_5$	$+0.80x_8$
x_{11}	-0.6	$+0.80x_1$	$+0.40x_5$	$+0.20x_8$
x_{12}	-0.8	$+0.40x_1$	$+0.20x_5$	$+0.60x_8$
z	13.0		$-1.00x_5$	$-1.00x_8$

Forming the dual dictionary:

The Final Dual Dictionary is:

Final primal dictionary obtained:

x_4	8.0	$-5.00x_{10}$	$+3.00x_5$	$+4.00x_8$
x_2	10.0		$-1.00x_5$	
x_6	5.0	$-1.00x_{10}$	$+1.00x_5$	$+1.00x_8$
x_7	75.0	$+10.00x_{10}$	$-13.00x_5$	$-8.00x_8$
x_3	5.0	$+1.00x_{10}$	$-1.00x_5$	$-1.00x_8$
x_9	14.0	$+8.00x_{10}$	$-5.00x_5$	$-7.00x_8$
x_1	2.0	$+5.00x_{10}$	$-3.00x_5$	$-4.00x_8$
x_{11}	1.0	$+4.00x_{10}$	$-2.00x_5$	$-3.00x_8$
x_{12}	$-1.99840144433e-15$	$+2.00x_{10}$	$-1.00x_5$	$-1.00x_8$
z	13.0		$-1.00x_5$	$-1.00x_8$

Final answer: 13.000000 Done.Added 3 cuts